

The lwarp package

LATEX to HTML

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GitHub: https://github.com/bdtc/lwarp

Abstract

The lwarp package converts LATEX to HTML by using LATEX to process the user's document and directly generate HTML tags. External utility programs are only used for the final conversion of text and images. Math may be represented by svG images or MATHJAX. More than 500 LATEX packages and classes are supported, of which more than 90 also support MATHJAX.

Documents may be produced by DVI or PDF IATEX, LuaIATEX, XHIATEX; by several CJK engines, classes, and packages; or by customized systems such as perltex and pythontex. A *texlua* script automates compilation, index, glossary, and batch image processing, and also supports *latexmk*. Configuration is semi-automatic at the first manual compile. Support files are self-generated. Print and HTML versions of each document may coexist.

Assistance is provided for HTML import into EPUB conversion software and word processors.

Requirements include the commonly-available POPPLER utilities (included with MIKTEX) and PERL. Detailed installation instructions are included for each of the major operating systems and TEX distributions.

A quick-start tutorial is provided, as well as extensive documentation for special cases, a general index, and a troubleshooting index. Automatic error testing is provided for configuration files, package load order, and image generation.

svG math and many other generated images include LATEX expressions in the alt tags. MATHJAX may be used with advanced equation numbering under the direct control of lwarp.

Complicated tables are supported, which copy/paste well into LibreOffice Writer.

Supported classes and packages include memoir and koma-script, cleveref, caption, mdframed, siunitx, and many popular packages for tabulars, floats, graphics, theorems, the title page, bibliography, indexing, footnotes, and editorial work, as well as a number of CJK-related classes and packages.

TeX is a self-modifying tokenized macro-expansion language. Since lwarp is written directly in IATeX, it is able to interpret the document's meaning at a deeper level than external conversions which merely approximate TeX. html5 and css3 are leveraged to provide advanced features such as booktabs trim, multicolumns, side-by-side minipages, and JavaScript-free navigation.

For a quick-start tutorial, see section 5, Tutorial.

For a list of supported features, see table 2: Supported packages and features.

To update existing projects, see section 1: Updates.

Need help? See the General Index or the Troubleshooting Index.

Lwarp is still in development. Changes are likely.

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1 Updates

The following is a summary of updates to lwarp, highlighting new features and any special changes which must be made due to improvements or modifications in lwarp itself.

For a detailed list of the most recent changes, see the end of the Change History on page 1361.

v0.915: HTML list classes, meta tags.

- \bullet $\textsc{IATEX}\xspace$ lists now given the class itemize, enumerate, description, hanging.
- LATEX list labels now given the class listmarker.
- Added \HTMLKeywords for the keywords meta tag.
- Added \HTMLMeta and \HTMLAddMeta for custom meta tags.
- Added data-nosnippet to MATHJAX customization <div>s.
- Updated pdfpages to v0.5y.

v0.914: Detects changing packages.

- Now verifies many definitions before patching, warning of possible problems if the original has changed.
- Fix: fontawesome5 for X¬TLATEX, LuaLATEX.

v0.913: HTML sanitization for verbatims.

- Now at GitHub: https://github.com/bdtc/lwarp
- Added bibliography usage info to docs and tutorial.
- \verb now uses a css class of verb instead of texttt.
- Improved HTML sanitization for hyperlinks, fancybox, fancyvrb, fvextra, minted.
- Updated fancyvrb, fvextra, simplebnf.
- siunitx: Updated, and improved complex i,j.
- Added doipubmed.

v0.912: Updated for new LATEX label system.



- Due to changes in cross referencing, execute lwarpmk clean before recompiling.
- Fixed for updated kernel label system, name and back references.
- Updated memoir, tcolorbox.
- nameref: Now allowed to load before lwarp, such as by memoir.

v0.911: Updated mismath, tcolorbox.

v0.910: Updated fvextra, minted.

v0.909: \ref fix.

- Fixed \ref*, beamerarticle, lyluatex, realscripts.
- Updated mismath, nicematrix, pablance, pdfpages, simplebnf, tagpdf.

v0.908: Bug fix.

• Fixed obscure cross-reference issue, seen in some citations.

v0.907: Bug fix.

• Fixed svg images for Windows.

v0.906: Screen readers

- For each tabular, add a hidden HTML header cell to convince screen readers that the tables are data not layout. Also hide from the screen reader any final row used only to produce bottom borders.
- Adjusted svg math for a margin change in *pdfcrop*.
- Added \Ref.
- Added docs regarding math in custom environments. See section 8.7.

v0.905: Bug fixes, internal improvements.

- Fixed conflict between cleveref and splitidx.
- Improved coexistence with \AtEndDocument.
- acronym: Updated to v1.47, added hyper links.

v0.904a: Fixed missing lwarp-common-mathjax-siunitx package.

v0.904: Added siunitx v3.

- Fixed HTML tags inside non-Latin text.
- MATHJAX now defaults to svg rendering.
- Added siunitx v3. Updated siunitx-v2. See section 8.7.15 for limitations.
- Updated caption, chemmacros, fbox, hyperref, multicol, wrapfig2.

v0.903: Various updates and improvements.

lwarpmk

• Error if *pdftotext* not available. Ensures that POPPLER programs are installed.

core

• ps2pdf: Allow transparency due to recent changes in ps2pdf.

⚠ New images

- Due to changes in how automatically-generated svG image file names are computed, after lwarpmk html use lwarpmk cleanlimages a single time, and then lwarpmk limages to generate the new images.
- · Improved back refs.
- Fixed verbatim*.
- Various internal updates for recent LATEX release.

- cuted: Updated to v2.0.
- flushend: Updated to v4.0.
- mathalpha: Updated for v1.14+.
- minted: Updated to v2.6.
- cases: Updated to v3.2.
- siunitx with MathJax: Improved \per, \numlist, \SIlist, comma decimal points.
- Added showlabels, wrapfig2.

v0.902: beamerarticle, footnotes, paragraph tags.

core

- Fixed footnotes inside descriptions, minipages, amsthm, \nameref.
- Improved various paragraph tags.

packages

- Improved parnotes, sympytex.
- · Added beamerarticle.
- Updated luatexko, xetexko, tagpdf.

MATHJAX

• Added missing standard international text symbols for MATHJAX.

v0.901: Tabular columns, float caption css, MathJax packages.

core

- Added warpsvg to isolate svg math, as opposed to warpMathJax.
- · Improved float caption css for newer browsers.
- Improved emulation of \newcolumntype.
- Added \HTMLnewcolumntype. See section 7.6,
- >{\centering\arraybackslash}, etc. now sets HTML CSS text-align. Also detects \itshape, \bfseries, and \bfseries\itshape. See section 8.10.1.

MATHJAX

• Now uses MathJax 3.2 packages for centernot, colortbl, gensymb, mathtools, textcomp, upgreek.

packages

- dcolumn: Now works inside a lateximage.
- · Added mwe.
- Added lltjp-tascmac, which fixed ascmac.

v0.900: Package updates.

core

• Fix for detecting \usepackage{lwarp}.

packages

- amsmath: Fixed alignat with MATHJAX.
- changes: Updated to v4.2.1.
- froufrou: Updated to v1.4.0.
- lipsum: Updated to v2.3.

v0.899: Minor updates.

core

• *lwarpmk*: Warns if \usepackage{lwarp} is not detected.

packages

- graphics: Added support for keepaspectratio.
- keyfloat: Fix: lw with h.
- multicol: Improved css.

v0.898: Minor updates.

- Fewer underfull \hbox warnings.
- wrapfig: Improved integration with keyfloat.

v0.897: siunitx rollback.

docs

• Added a table of file extensions to use with \includegraphics. See

core

• Added tests for additional incompatible packages.

packages

• siunitx: Supports rollback to v2. Does not yet support v3.

- fixme: Improved to work if the user modifies layouts.
- float: Improved integration with newfloat, keyfloat.
- Added centerlastline, decorule, fancypar, froufrou, pbalance.
- Verified works as-is with fnpct.

v0.896: Back references, accessibility.

⚠ New labels

- Due to changes in cross referencing, execute lwarpmk clean before recompiling.
- Increased sectioning nesting stack depth. Error if overflow stack.
- Fixed footnotes at the end of the document, or inside a description label
- Added an error if using braces inside \usepackage options.

МатнЈах

• Fixed footnotes in bracket display math with MATHJAX.

theorems

• LATEX theorems, amsthm, ntheorem, theorem: Print theorem footnotes following theorems.

accessibility

- Added HTML <main> element to each page.
- Added ARIA math role to SVG math images, and note role to margin notes, footnotes, etc.

packages

- · Improved citation backreferences for various packages.
- chemfig: Updated to v1.6a.
- bigdelim: Updated to v2.8.
- xetexko: Updated to v3.1.
- hyperxmp: Fix: Accept and discard additional keys.
- hyperef: Fix: Added *autorefname macros.
- biblatex: Fix: Back references.
- tocloft: Fix: \cftpagenumbersoff, \cftpagenumberson.
- threeparttablex: Fix: \TPTL@tnotex.
- amsthm: Fix: Footnotes inside environment optional argument.
- listings: Fixed labels. Accepts but ignores escapes w/o error.
- pdflscape: Fix: Added landscape environment.
- Added ccicons, classicthesis, orcidlink.
- · Added enotez.
- Verified support for doi, doipubmed.

v0.895: Vector packages, greatly improved MATHJAX for siunitx.

core

• Fixed quotes in HTML tags while using old font packages with X∃IATEX and LuaIATEX.

MathJax packages

- Added \ifblank and \ifstrequal to MATHJAX emulation.
- multirow: Allow \par per v2.7.
- acro: Updated to v3.5.
- fancyhdr: Updated to v4.0.
- changes: Updated to v4.0.1.
- epsfig, rotating: Now work inside lateximage.

- amscdx: Verified to work with svg math. Warning added about use with MATHJAX.
- Added MathJax emulation for isomath, mattens, maybemath, skmath, tensor.
- Improved MathJax emulation for siunitx \ang, \num, \SI.
- Added epsf, impnattypo, isotope, lpic, luavlna, mdwmath, pinlabel, rlepsf, tikz-imagelabels, xevlna.
- Verified to work as-is: tensind.

v0.894: MATHJAX additions and improvements.

MATHJAX

- Improved warning message for enabling svg graphics for select math expressions while using MATHJAX.
- Accept and ignore a star for \hspace.
- Ignores \arabic, \number, \noalign.

packages

- Added MATHJAX emulation for backnaur, colortbl, nicematrix.
- booktabs: MathJax emulation now absorbs and discards trim.
- menukeys: Updated to v1.6.1.

v0.893: Minor fixes, more packages.

MATHJAX

• Added MathJax emulation for \mathnormal.

packages

- Fixed **pstricks** pspicture*.
- Fixed tikz font macros.
- braket: Now uses the MATHJAX extension.
- Added esvect, fixmath, keystroke, mathastext, menukeys, picinpar, plimsoll, repltext, selectp, seqsplit, simplebnf, statistics, swfigure.
- Added MathJax emulation for mathspec.
- Verified to work as-is for apxproof, syntaxdi, venndiagram.

v0.892: minted, fvextra, MATHJAX \left/\right.

MATHJAX

• fourier, libertinust1math, newpxmath, newtxmath, newtxsf, unicode-math: Added MathJax\left/\right support for additional delimiters.

packages

- textpos: Updated to v1.10.
- xcolor: Fixed optional args for \fcolorbox and related.
- Added fvextra, minted.

v0.891: MATHJAX additions and improvements.

core

- Now displays inline \verb text as \texttt.
- Fixed alltt and verbatims with LATEX lists.
- Now generates an error if nested each of warpHTML, warpprint, warpMathJax inside itself.

MATHJAX

• Added MathJax *textmacros* extension, allowing formatting inside \text.

- biblatex, hyperref: Added back page references.
- fancyvrb: Fixed BVerbatim with a label.
 - listings: Fixed MATHJAX with captions, improved HTML sanitation.
 - babel-french: Fixed \texorpdfstring conflict.

 Now honors Greek package options for mathdesign, mathpazo, mathptmx, newpxmath, newtxmath.

- Improved MathJax for colonequals, mathdesign, mathdots, mathfixs, mathtools, multiobjective, nicefrac, shuffle, units.
- unicode-math: Added Greek macros, as well as macros for the first several categories listed in texdoc unimath-symbols. Improved symbol shape macros with Greek. Improved documentation.
- Added bussproofs, cmbright, fourier, kpfonts, kpfonts-otf, libertinust1math, scalerel, txgreeks.

v0.89: Additional MathJax support.

core

- Adapted to upcoming LATEX kernel changes.
- Allows load of amsmath before lwarp.

lwarpmk

• Also removes *.bbl when cleaning aux files.

MATHIAX

MathJax: Neutralized \protect, \mathcode and related, ligatures.
 Fixed nested environments.

packages

- caption: Updated for v3.5, fix for label sep.
- thmtools: Updated for v0.72. Fixed swapnumber, margin.
- Improved MathJax for centernot, mathtools, mismath, Slunits, siunitx, statmath.
- Added MathJax emulation for accents, hepunits, hhtensor, mathalpha, mathdesign, mathpazo, mathptmx, mleftright, newpxmath, newtxmath, newtxsf, pxfonts, shuffle, txfonts, upgreek, ushort.
- Verified to work as-is: authoraftertitle.

v0.88: Indexing, boxing, theorems.

• Now has programmed support for more than 500 packages and classes, of which more than 60 also support MATHJAX.

core

- Fixed: \ref*, and also added MATHJAX emulation.
- If starting a new paragraph, \hrulefill creates a <div> with a thin horizontal line across the page. Use instead of \hrule.
- Fixed: Use \chaptername where appropriate.
- Fixed: Inline links causing extraneous paragraphs.

lwarpmk

• Added lwarpmk -v to print the version number.

. indexing

- Added the IndexRef option to control the display of index entries. See section 7.5.
- Added \IndexPageSeparator and \IndexRangeSeparator for custom index styles.
- Added support for gindex, xindex.
- Verified to work as-is with varindex.

- cleveref, varioref: Fix for starred macros.
- varioref: Removed page-related text from HTML output.
- xfakebold: Updated to v0.08, using pdfrender.
- caption, scrextend: Fixed \caption*.
- Added fbox, shadethm, tcolorbox, termcal, thmbox, thmtools.

v0.87: MATHJAX, bibliography packages.

core

MATHJAX

Removed

packages

\DeclareIfstar

 \triangle

- Added boolean FixSmallCaps for fonts which render small caps as all caps.
- Fixed \bibliography to use the HTML version's .bbl file. Previously the HTML bibliography relied on the print version's .bbl, thus would fail if the print document had not yet been created.
- Added \ifstar and \ifnextchar to MATHJAX, and removed \DeclareIfstar.
 See section 8.7.7.
- physics: Now supports the MATHJAX v3 extension.
- mathtools: Improved \underbrakcet, \overbracket for MathJax.
- nccmath: Improved \underrel for MathJax.
- mhchem: Now supports the MATHJAX v3 extension for \ce inside math.
- cancel: Now supports the MATHJAX v3 extension.
- embrac: Neutralized kerning for improved HTML conversion.
- Added citeref, drftcite, jurabib, multibib, splitbib.
- Verified to work as-is with bibtopic, collref, mciteplus.

v0.86: MATHJAX major updates.

core

- Fixed: Filename if named files with *, parens, period in section name.
- Fixed: Labels in eqnarray, lateximage.

MATHJAX

- Updated to MathJax v3. New repository.
- Fixed forward references for MATHJAX.
- Improved MathJax equation number formatting, now compatible with amsmath \numberwithin for chapters, sections, subsections, as well as amsmath subequations. See section 8.7.7.
- Added \DeclareIfstar to define starred TEX macros in MATHJAX. See section 8.7.7.
- Generates an error if \MathJaxFilename file does not exist.

packages

- mathtools, nccmath, physics: Added starred macros for MATHJAX.
- nccmath: Fixed \nr, \displaybreak for MATHJAX.
- xcolor: Fixed \textcolor with babel-french.

v0.85: fontspec

packages

• fontspec: Fixed core font change macros for world languages.

⚠ acro formats

- acro: Due to v3 changes, when defining acronym formats, use \textbf instead of \bfseries, etc.
- Fixed idxlayout, mathtools, titlesec, url.

v0.84: Previous/next page links, numerous fixes.

docs

- Added documentation of BlockClass and \InlineClass for css <div>s and s. See section 7.8.
- Added \LinkPrevious, \LinkNext page links. See section 7.6.
- Added \FirstPageBottom. Home page no longer shares \PageBottom. See section 7.6.
- Improved coexistence with comment, support for nested environments.

 \wedge

home page footer changed

core

- No longer requires but still supports the caption package.
- Improved filenames and HTML titles when using special characters.
- Change: Append -0 to section named Index previously _index to distinguish from index.html
- \bullet Fixed style tags for \multicolumn, \multirow.
- Fixed spacing in tabbing.
- Fixed lateximage for: quote, quotation, verse, center, flushleft, flushright, <par> tags, packages verbatim, alltt, epigraph.
- Fixed textcomp due to integration into LATEX kernel.
- Fixed \itshape, etc. Adapted to LATEX fontaxes integration.
- Fixed \@fnsymbol.
- · Warns about section names with dollar-delimited math.
- Warns about a containing a float, caption, section, mdframed, or other <div> object.
- Only warn about X_{\(\text{TEX}\)} logo and graphics if actually used \Xe.

lwarpmk packages

- lwarpmk clean also removes comment_*.cut.
- scrextend, scrartcl, scrbook: Added \titlehead, \subject, \subtitle, \publishers.
- titling: Fixed \printthanks.
- memoir, abstract: Fixed for updated memoir.
- memoir: Fixed \newcomment, pagenotes, crossreferences. Fixed setting a recursive name.
- Fixed or improved: amsthm, backref, biblatex, fixme, nfssext-cfr, ntheorem, parcolumns, realscripts, rotfloat, titling.
- Added boxedminipage, renamed from boxedminipage2e per author.
- Verified to work as-is with mcite.

v0.83: memoir fixes.

packages

- memoir: Various fixes and updates.
- physunits: Updated to v1.0.4.

v0.82: MathJax notes, xpinyin improvements, various updates.

MATHJAX

- Improved footnotes with MATHJAX.
- Added MathJax emulation for endnotes, marginnote, nccfoots, pagenote, parnotes, sidenotes.

- xpinyin: Added pinyin with modern HTML.
- luatexko: Added \dotemph, \ruby, \uline, etc.
- soul: Fixed \<.
- chemfig: Updated to v1.5.
- draftwatermark: Updated to v2.0.
- ulem: Fixed: \dashuline.
- amsmath: Fixed: \intertext with MathJax.
- endnotes: Fixed: Marks in print mode.
- tocvsec2, tableof: Verified to work as-is.
- Added etoc (nullified).



v0.81: MATHJAX speedup and additional emulations.

core

• Improved warning regarding svg math sizing/baselines and graphics/graphicx. See section 8.7.

MATHJAX

- Improved MathJax emulation processing speed.
- Added MathJax emulation for accsupp, axessibiltiy, colonequals, decimal, dotlessi, econometrics, engtlc, multiobjective, physunits, Slunits, stackrel, statmath.

packages

- axessibility: Updated to 2020/01/08 version.
- gridset: Updated to v0.3.
- Slunits: Fixed for math mode.
- Added DotArrow, nolbreaks, luamplib, returntogrid, statex2, tagpdf.
- Verified to work as-is with icomma, mathpunctspace, textualicomma.

v0.80: MATHIAX, biblatex.

MATHJAX

- Added docs and warning/info messages re: avoiding slow MATHJAX compilation. See section 8.7.7, Customizing MATHJAX.
- Added MathJax emulation for accessibility, autobreak, centernot, extarrows, fouridx, gensymb, leftidx, mathcomp, mathdots, mathfixs, mismath, nccmath, noitcrul, pdfcomment, relsize, rmathbr, subsupscripts, xfrac.
- Improved MathJax emulation for unicode-math.

packages

- biblatex, url: Now create hyperlinks.
- amsmath: Fix to center starred environments.
- xcolor, graphics: Made more macros robust.
- colortbl: Fix: Rule color in a lateximage.
- chemmacros: Updated to v5.10.
- Added fewerfloatpages, ghsystem, hhline, mismath, nccmath.

v0.79: MATHJAX, nested tabular.

МатнЈах

- Added or improved MATHJAX emulation for amsmath, ar, arydshln, bm, bigdelim, bigstrut, booktabs, braket, mathtools, multirow, physics, siunitx, slashed, unicode-math, xfakebold.
- Warn if using certain packages not supported by MATHJAX.

core

- · tabular: Now may be nested.
- minipage, \parbox, fminipage, \makebox, \framebox: Fix: Adjust for virtual page size.
- · Uses new iftex.

- graphicx: Fix: Negative angles.
- caption: Fix: \captionlistentry with longtable.
- multirow: Fix: Centered vertical alignment.
- siunitx: Fix: \square, \cubed.
- booktabs: Fix: memoir with lateximage.
- babel and polyglossia: Added troubleshooting warnings.
- fontawesome, fontawesome5: Supports text color and size.
- transparent: Fix: lateximages.
- epigraph: Updated to v1.5e.

- xurl: Updated to v0.08.
- subcaption: Fixed with memoir.
- floatrow: Fix: \linewidth. No longer require float, graphics.
- floatflt, wrapfig, niceframe: Fix: Adjust for virtual page size.
- Added widetable, witharrows, steinmetz.
- Added awesomebox, catoptions.
- Added svg, supports svg-extract.
- Added parcolumns, pdfcolparcolumns,
- Added parallel, pdfcolparallel.
- Added pdfcol, pdfcolfoot, pdfcolmk.

v0.78: Fixes for support files, alt tags, hyperlinks, and the 2019/10 LATEX release.

docs

- Docs: Improved documentation regarding package options. See section 8.1.
- Fix to overwrite existing support files using new filecontents environment.

packages

- breqn: Previously broken by the 2019/10 IATEX update, but now working again.
- graphics: Fix for \includegraphics alt tags.
- babel-french: Fix for hyperlinks.
- media9, movie15, multimedia: Fix for the 2019/10 LATEX update.
- accessibility: Added.

v0.77: Updates to fix recently-broken packages.

- booktabs: Updated to v1.6180339.
- chemformula: Updated to v4.15.

v0.76: MathJax, updates for LATEX 2019/10 release.

docs

MathJax packages • Docs: Expanded documentation regarding the use of multiple projects in the same directory. See section 5.18.

• MathJax: Updated to v2.7.6.

• xr: Updated to v5.05.

- xr-hyper: Updated to v6.1.
- Verified works as-is with xcite.
- acro: Updated to v2.10.

⚠ broken

Currently broken in print mode by the 2019/10 IATEX update, and waiting for fixes: breqn, grffile, multimedia, movie15.

v0.75: keyfloat, wrapfig

• \minipage: Fix for \linewidth.

packages

• keyfloat: Improved color control.

• wrapfig: Fix for \linewidth.

v0.74: Docs, svg math, lwarpmk, HTML alt and title text, lyluatex

docs

- Added to the tutorial the section What next?. See section 5.20.
- Added documentation about localization options. See section 7.1.
- Added documentation about accessibility options. See section 7.2.
- Renamed and updated HTML alt text macros:

HTML alt text

∴ changed names

Old	New
(hard coded as "image")	\ImageAltText
\mathimagename	\MathImageAltText
\packagediagramname	\PackageDiagramAltText

- Added \ImageAltText for the default HTML alt text for an image. See section 7.6.
- Added \ThisAltText, which may be used to assign a one-time HTML alt tag to the very next image generated by lwarp, such as a lateximage, picture, tikzpicture, an image generated by various chemistry or engineering packages, or an svG math image. This macro also adds a title tag to a reference or hyperlink. See section 7.6.

svg math

- Adjusted \LateximageFontScale default from .75 to 1.
- Fix: Font control for svg math.

misc

- Fix: Ignores negative \hspace.
- Warning if SideTOCDepth < FileDepth.

lwarpmk

- lwarpmk: lwarpmk clean removes additional files.
- *lwarpmk*: lwarpmk epstopdf and lwarpmk pdftosvg now honor directories.

packages

- lyluatex: Split images by system or per fullpage, improved margins and scaling.
- Tested to work as-is with mathspec, unicode-math.

v0.73: \include, memoir, koma-script, caption, xy, datatool, music scores.

- Fix for \include.
- Warning for a tabular inside a .
- \color: Added HTML support for rules and frames, but not inline text. Use \textcolor if possible.
- Improved many HTML tags, reducing *tidy* warnings. See Change History.

- memoir: Fixes for \frontmatter* and \mainmatter*. Added \book.
- koma-script: Fix for starred captions in the Toc.
- caption: Fix for starred captions.
- datatool: Added pie, bar, and plot charts.
- threeparttable: Added measuredfigure.
- intopdf: Updated to v0.2.1.
- tocdata: Updated to v2.03.
- quotchap: Updated to v1.2.
- versonotes: Updated to v0.4.
- backnaur: Now uses svg images. Updated to v3.1.
- xy: Fix for \xybox, improved xy, also now compatible with qcircuit.

- fancyvrb: Fix for label нтмL tags.
- Added stackengine.

music

- Added lyluatex. (Music scores.)
- musicography: Updated to 2019/05/28. Added support for lateximages.

v0.72: Font control, \multicolumn, xr and xr-hyper.

 Due to internal changes, images for inline svg math and lateximages will have new hash values, and will have to be regenerated using

Enter⇒ lwarpmk cleanlimages

and

Enter ⇒ lwarpmk limages

- Docs: Color-codes package names in the table of supported packages and features, table 2, according to each package's level of support by lwarp.
- \multicolumn: Fix for paragraph columns.

packages

- xr, xr-hyper: Fixes for references, \externaldocument.
- soulutf8: Fix: Loads soul for emulation.
- boxedminipage2e: Added support for lateximages.
- zhlineskip: Updated to v1.0e.
- Added fontaxes, slantsc, tabfigures.
- Added nfssext-cfr, thus supporting cfr-lm and several other font packages.
- Added backnaur, hypbmsec, minibox, pdfcrypt, shapepar.

v0.71: Error handling, multimedia, tabular.

- tabular: Added support for '*' columns. Fix for paragraph tags.
- quotation: Fix for нтмL tag.
- Docs: Added a section about error conditions tested by lwarp. See section 13.1.
- *lwarpmk*: If file lwarpmk.conf is an older version, or the incorrect operating system, displays the print command to use to recompile.

packages

- chemfig: Updated for v1.4.
- endfloat: Updated for v2.7.
- textpos: Updated for v1.9.1.

multimedia

• Added media9, movie15, multimedia.

v0.70: Error handling, MATHJAX, mathtools.

- Error handling for "Label(s) changed." Refuses to lwarpmk limages until recompile first.
- Fix: If Computer Modern font is used, ensures cm-super or lmodern is used.
- Fixes for \makebox.
- Fixes for \parbox inside a .
- MATHJAX: Updated to v2.7.5. Loads the autoload-all.js extension. Added \MathJaxFilename to select custom scripts.

packages

- textcomp, xunicode: Fix for \textinterrobang.
- mhchem: Works with MATHJAX. See section 414.
- changes: Updated to v3.1.2.
- Added autonum, changelayout, inputtrc, mathtools, metalogox.

v0.69: Error handling, many fixes, improved keyfloat / tocdata.

- Fix for HTML corruption of lateximage displays.
- \makebox, \framebox: Fix for (\langle width, height \rangle) arguments.
- fminipage: Honors \minipagefullwidth.

packages

- array, longtable: Fix for \tabularnewline.
- tabularx, tabulary: Fix to require the array package.
- supertabular, xtab: Fix to clear caption after use.
- graphics: Added a warning if used the \includegraphics scale option.
- multirow: Added an error if didn't use \mrowcell or \mcolrowcell when using \multirow or \multicolumnrow.
- keyfloat: Updated for v2.00, additional improvements.
- Added ctable, eqlist, eqparbox, ftcap, listliketab, minitoc, tocdata, topcapt.

v0.68: Error handling, tabulars, footnotes.

lwarpmk

- *lwarpmk*: Improved error handling for image generation if compile was incomplete.
- tabular: Fix for \warpprintonly.

packages

- longtable: Improved flexibility for \endhead, etc. Improved error reporting if \endhead, etc. incorrect for lwarp.
- threeparttable: Fix for caption type.
- hyperref: Fix for options with braces.
- morefloats: Fix to be loaded early for print output.
- listings: Updated for v1.7.
- Added bigfoot, fnpara, footnotebackref, manyfoot, tablefootnote, threeparttablex.
- Added layouts, niceframe, perpage, showtags.
- Prevented alg, algorithmic, pdfcprot, fncylab.

v0.67: Filename generation, symbol fonts.

docs

- Documentation fix for <project>-images, <project>-images.txt.
- Added discussion regarding section names. See section 8.4.

filenames

- Added \FilenameNullify and \FilenameSimplify for filename generation. See section 8.4.
- Core, textcomp, xunicode: Nullified additional symbols during filename generation.

- color: Fix for version number warnings.
- Added academicons, bbding, dingbat, eurosym, fontawesome, fontawesome5, marvosym, pifont, typicons.
- Added changes, easyReview, fitbox, foreign, gloss, karnaugh-map, multicap, nomencl, notes, struktex, umoline, xfakebold.
- Tested to work as-is with askmaps, curves, euro, karnaughmap, tikz-karnaugh.

v0.66: xr, multiple projects, image names/directory, HTML formatting

Reset the configuration

• Due to changes in *lwarpmk*, recompile any existing project a single time using pdflatex filename.tex or similar, after which lwarpmk may then be used with the new configuration files.

lateximage

• Adds options ImagesDirectory and ImagesName to assign directory and name prefixes for lateximage images. The new defaults include the jobname, allowing the image directories for multiple projects to coexist.

To reuse existing lateximage directories, add lwarp options

```
\usepackage[
  ImagesDirectory={lateximages},
  ImagesName={lateximage-}
]{lwarp}
```

If not reused, the existing lateximages directory and lateximages.txt file may be removed.

- Added \FilenameLimit to control the maximum length of the filenames generated by lwarp.
- · Improved filename generation when special characters or macros are used in section names.
- Fix for lwarpmk cleanlimages with WINDOWS.
- Fixes for floats in the home page.
- Improved css for definition lists, table notes.
- tabular: Fixes for \par in column specifier, minipage inside tabular.
- Indexing: Fix for a long line of multiple entries.
- \minipagefullwidth: Fix for global changes.
- Added \UseMinipageWidths and \IgnoreMinipageWidths. See section 8.3.3.

• Improved \fbox, \fboxBlock, \fminipage to use current text color.

- Improved HTML output formatting. • Added discussion regarding invalid HTML. See section 8.1.1.
- Added discussion regarding math in section names, \imagegraphics scale option. See section 6.
- Added discussion regarding international languages in section names. See section 8.14.

• caption: Fix for options clash.

- xr, xr-hyper: Now compatible.
- subcaption: Improved horizontal spacing.
- multicol: Fix for minipage inside multicols.
- multicolrule: Updated for v1.2.
- tocbasic: Minor update.
- acronym: Fix for acronym in float caption.
- kotexutf: Patch with pdflatex and new lwarp labels.
- extramarks, fancyhdr: Updated for v3.10.
- memoir: Added docs regarding version numbers. See section 8.13.
- zref: No longer required.
- Added ar, ed, indentfirst, nameauth, truncate.
- Verified to work as-is with changelog.
- Prevented colortab, epsf, hyper, picinpar, picins, sistyle, ucs.

existing projects

Possible filename

WINDOWS

tabular

minipage

colors HTML

docs

packages

filenames

changes

floats

lists, table notes

indexing

v0.65: css layout, alt tags, Japanese.

page layout

- Moved the sidetoc to the left side, allowing improved css for margin notes.
- Improved page layout css.

image alt tags

• graphicx \includegraphics: Added the alt key to assign an alt tag to an image. Default is "image", assigned to pass validation.

duplicate HTML files

• Detects and causes an error if duplicate HTML file names are generated, caused by identical or similar sectioning names.

fixes

- Fix for tabular*.
- · Fix for tabular border colors.
- Fixes \quad, \enskip, and figure captions to pass validation.

Japanese

- Added ltj* classes, bounddvi, gentombow, lltjext, plarydshln, plext, plextarydshln, plextcolortbl, pxatbegshi, pxeveryshi, pxftnright, pxjahyper, tascmac.
- Verified to work with plarray, plautopatch, plextarray, plextdelarray, pxgentombow, plsiunitx, pxpdfpages, pxpgfrcs, pxpgfmark.

packages

- Added support for fontspec \textsi and \sishape.
- Added multicol's \docolaction.
- Added embrac, footnoterange, multicolrule, versonotes.

v0.64: Koma-Script, Japanese, Chinese.

Japanese

- · Added utarticle and related classes.
- · Improved ujarticle and related classes.

Chinese

• Fix for biblatex with CTEX and other classes.

Koma-Script

- Fixes for scrlayer, scrlayer-scrpage.
- packages
- addlines: Updated to v0.3.
- Added bsheaders, gmeometric, marginal, rmpage, scrpage2.

v0.63: mdframed, Chinese, Japanese, Korean

localization

- Added \linkhomename: A user-definable name for the **Home** link.
- Documented \sidetocname: A user-definable name for the sidetoc.

fixes

• Fix: \LinkHome for print output.

optimizations

 Moved package load checks to the lwarp core to reduce the number of lwarp-* files.

packages

• mdframed: Fix with amsthm, improved titles and font control. Improved rule widths.

Chinese

- · Fixes for xeCJK.
- Added xpinyin, zhlineskip.
- · Verified to work with cjkpunct, upzhkinsoku, zhspacing.

Japanese

- Verified to work with zxjatype, luatexja, luatexja-fontspec.
- Added bxjsarticle and related classes.
- · Added ltjsarticle and related classes.
- Added pIATEX, upIATEX, ujarticle and related classes.
- Prevented utarticle and related classes.
- Prevented bxcjkatype.

Korean

• Verified to work with kotex, xetexko, luatexko.

v0.62: MiKTEX docs, HTML title, CTEX, xeCJK, bitpattern.

docs

• Docs: Setting a UTF-8 locale. See section 9.9.

MiKT_FX

• MiKTeX: Docs for MiKTeX Console and miktex-poppler-bin.

HTML <title>

• HTML subpage titles: Added \HTMLTitleBeforeSection and \HTMLTitleAfterSection to select whether the HTML <title> displays the website name before or after the section name. See section 7.6.

fixes

- · Fix for package options handling.
- Fixes for horizontal white space between fminipage, fcolorminipage, colorboxBlock, fcolorboxBlock.
- Logos: Fix for X\(\text{TEX}\) logo, improved css, made robust, improved searchengine optimization.
- $\[\$1\]$: Additional HTML $\$ if \$1 > 0 pt.
- Fixes for \includgraphics filename, and with FormatWP.
- Fix: css for \textup.
- Fix: Added \slshape.

Chinese

- Added ctex package and related classes, xeCJK.
- Prevented CJK, CJKutf8 unless xeCJK, ctex are used.
- packages
- chemfig: Docs for new macro \polymerdelim.
- asymptote: Docs for compilation.
- chngpage: Fix to load lwarp-changepage.
- algorithm2e: Fix with non-book classes.
- register: Updated to v1.8.
- nicefrac: Improved font control and css, honors nice and ugly.
- units: Improved font control and css, honors tight and loose.
- xfrac: Improved css.
- textcomp and xunicode: Fix conflicts with \textcircled.
- ulem: Improved compatibility with CJKulem, lateximage.
- MATHJAX and siunitx: Removed inoperable extension.
- Added bitpattern, pdfcomment, pdfmarginpar, tram, unitsdef, xechangebar.
- Added musicography, octave, semantic-markup.
- Added 2in1, flippdf, notespages, rviewport, twoup.

v0.61: Custom compilation, EPS-related packages, documentation, indexes.

docs

- Split index into multiple indexes.
- Improved documentation regarding font selection. See section 7.4.
- Added documentation regarding debugging options. See section 35.
- Added documentation regarding HTML entities inside program listings.
 See section 8.2.1.

custom compiling

• Added options to specify the shell commands to execute for lwarpmk print and lwarpmk html, allowing the use of lwarp with perltex, pythontex, etc. If not specified, these are set automatically depending on the LATEX engine, --shell-escape, and lwarp options. See section 9.

Δ				
\triangle	chan	ged	name	S

• Changed macro names to match \displaymathother, \displaymathnormal:

Old	New
\StartDynamicMath	\inlinemathother
\StopDynamicMath	\inlinemathnormal

fixes

- Fix: Paragraph tags in a tabular.
- Fix: supertabular and xtab captions.
- Fix: DVI LATEX \includegraphics EPS images.
- Fix: newfloat lists.
- Fix: css footnotes text align, minipage tabular and footnote margins.

packages

- Added epsfig, psfrag, psfragx, pstool.
- Added copyrightbox, pdfprivacy, thinsp, threadcol, uspace.
- Added chkfloat, cmdtrack, dprogress, lua-visual-debug, refcheck, srcltx, srctex, vpe, xbmks.

v0.60: Fixes for longtable, listings.

fixes

- longtable, etc.: Fixes for slowdown and memory management for very long tables.
- listings: Fix for HTML entities, and also when used inside a list.
- diagbox: Fix for incorrect нтмL par tags.

packages

- Added 2up, booklet.
- Added bophook, draftfigure, fullminipage, grid-system, layaureo.
- Added leading, widows-and-orphans.
- Added fancytabs, thumb, thumbs.

v0.59: DVI latex, MATHJAX, asymptote, pdftricks and pstricks, epstopdf, brqen.

ackslash Reset the configuration

• Due to changes in *lwarpmk*, recompile any existing project a single time using pdflatex filename.tex or similar, after which *lwarpmk* may then be used with the new configuration files.

lwarpmk

- Added an error if lwarpmk.conf's format has changed and the document must be recompiled.
- Added a warning if the lwarpmk.conf configuration file appears to be for the wrong operating system, in case files are transferred between systems.
- Added

lwarpmk epstopdf <list-of-EPS-files>

to quickly convert a document's EPs images to PDF or svg. See section 8.8.

dvi **late**x

• Added support for DVI *latex*. See section 7.5.

latexmk

• Fix for --shell-escape with *latexmk*.

math

- Updated MathJax script to v2.7.4.
- Fix: Mathjax chapter number removed from non-numeric tagged equations
- Added MATHJAX support for nicefrac, units.
- Fix for \[and \] with \displaymathnormal.

images

• Fix for \includegraphics filename expansion.

packages

- \includegraphics now works with .pdf and .eps filename extensions.
- Moved amsmath out of the lwarp core.
- Fix for chemformula \NMR.
- Added asymptote, pdftricks, pstricks, pst-eps.
- Added bregn, Slunits.
- Added bxpapersize, canoniclayout, draftcopy, fnbreak, nccfancyhdr.
- Added accsupp, axessibility.
- Added xunicode.
- Improved and now supports epstopdf.
- Tested to work as-is: eepic, sepfootnotes.

docs

• Added information about setting up a development version of lwarp.

v0.58: Extensive improvements in indexing, glossaries. Adds PDF-inclusion packages.

Reset the configuration

• Due to changes in lwarpmk, recompile any existing project a single time using pdflatex filename.tex or similar, after which lwarpmk may then be used with the new configuration files.

lwarpmk glossaries

- *lwarpmk*: Added the -p option to specify the project name.
- lwarpmk: Now uses makeglossaries for glossary generation, allowing the processing of multiple glossaries at once.
- Added lwarp option GlossaryCmd to specify the shell command used by lwarpmk printglossary and lwarpmk htmlglossary. Defaults to makeglossaries.

index and glossary

- Docs: Extra indexing options. See section 8.6.15.
- Added support for makeindex. (Previously supported only xindy.) Also added indexing packages listed below.
- Added lwarp options PrintIndexCmd, HTMLIndexCmd, and LatexmkIndexCmd to specify shell commands used by lwarpmk printindex, lwarpmk htmlindex, and *latexmk*. May be preset with the makeindex or xindy lwarp options. See section 7.5.
- Added lwarp options makeindex and xindy to set PrintIndexCmd, HTMLIndexCmd, and LatexmkIndexCmd to sensible values for a typical single index. See section 7.5.
- Added lwarp option makeindexStyle to tell lwarpmk to use a custom style instead of lwarp.ist. See section 8.6.21.

• Replaced each \csuse with \@nameuse for improved error detection.

• Fix for index entries with \see, \seealso, \emph, \textbf, etc.

- Additional internal print/HTML macro selection improvements.
- Fix: \printindex finishes pending \index writes first.
- Fixes for memoir: makeidx, ccaption, multiple indexes, \specialindex.

packages

misc. fixes

- Fixes for komascript: Indexing improvements.
- Added imakeidx, index, repeatindex, splitidx.
- Added attachfile, attachfile2, intopdf, pdfpages, pdfx.
- Added cases.
- Tested to work as-is: notes2bib, hvindex.

v0.57: algorithm2e, float styles, tabular packages, internal improvements.

• Added support for MATHJAX equations with \footnote, \footnotemark.

MathJax math macros

• Added \StartDefiningMath and \StopDefiningMath for use when defining macros in the preamble which contain \$. See section 8.7.9.

dynamic math

• Added \inlinemathother and \inlinemathnormal to delimit math expressions which depend on a variable condition such as a counter. Such expressions will not be hashed for reuse, and will be converted to svG math images even when MATHJAX is enabled. See section 8.7.10.

new name
lateximage alt tags

- Renamed \EndDefiningTabulars to \StopDefiningTabulars.
- Improved localization for lateximage HTML alt tags. For svG math images, the alt tag under some conditions will be set to \MathImageAltText, which defaults to math image. For packages, the alt tag is set using the package name followed by \PackageDiagramAltText, which defaults to diagram. Ex:

(-xy- diagram)

See section 7.6.

- Fix: Improved print/HTML macro selection.
- misc. fixes Fix: \href text catcodes.
 - Fix: \subref text.
 - Fixes: Colored \rule and \boxframe.

packages

- float, rotfloat: Adds support for float styles ruled and boxed.
- float: Fix: Do not create \l@<type> until \listof is used.
- marginnote: Fix: Long optional argument.
- ellipsis: Adds \midwordellipsis.
- breakurl: Fix for text catcodes.
- Added algorithm2e, register, ltablex, xltabular, xellipsis, trimclip, errata, vowel, xpiano.
- Prevents glossary.
- Tested to work as-is with gauss, phonrule, piano, Slunits, tikzcodeblocks.

v0.56: Shell escape, tabular packages.

lwarpmk

Added

lwarpmk pdftosvg <list-of-PDF-files>
to quickly convert a document's PDF images to svG, for use with HTML.
See section 8.8.

• Added support for --shell-escape. See section 7.3.

tabular

- Added support for array w and W columns.
- Fix: \multicolumn parameter handling.
- Added support for double \hlines, \midrules, and vertical rules.
- Added support for arydshin dashed lines with HTML tabular, but reverts to plain rules for lateximage and svG math array.

misc. fixes

- Fix: \thinspace.
- Fix: paralist compact environments.

- Added parnotes, quoting, lua-check-hyphen, tocenter, underscore.
- Added bibunits.
- Tested to work as-is with babelbib, bodegraph, fast-diagram, nicematrix, structmech.

v0.55: Various fixes.

misc fixes

- Fix: Extraneous space in file links, which also prevented *Calibre* EPUB conversions.
- Fix: Float optional argument regression.
- Fix: \ForceHTMLTOC with \phantomsection.
- Fix: Overfull boxes in lateximages.
- Fix: QED symbols in lateximage.

packages

- koma-script: Fix: Figure with \centering, etc.
- Added clrdblpg.

v0.54: Float \centering, improved image checks.

Reset the configuration

• Due to changes in *lwarpmk*, recompile any existing project a single time using pdflatex filename.tex or similar, after which *lwarpmk* may then be used with the new configuration files.

lwarpmk

polyglossia

- lwarpmk limages checks for the presence of the HTML version of the document and valid image references before attempting to create the lateximages.
- *lwarpmk*: Improved error message if configuration file does not exist.
- Added documentation for avoiding error with BibTeX and \etalchar.
 See section 8.6.9.
- Added documentation regarding polyglossia. See section 8.15.4.
- Added documentation regarding the use of macros in section names.
 See section 8.1.
- Renamed and added package options:

Old Package Option	New Package Option
xdyFilename	xindyStyle
IndexLanguage	xindyLanguage
-	xindyCodepage
-	pdftotextEnc

Use these options along with inputenc or inputenx to process documents in an encoding other than UTF-8. See section 7.4.

• Floats now honor \centering, \raggedright, \raggedleft, and their ragged2e equivalents, when placed directly after:

\begin{floattype}
\centering

misc. fixes

- tikz: \pgfpicture, fit, align, font.
- ragged2e: \centering etc.
- hyperref: \hypertarget was creating duplicate of \label.
- hyperref: Active chars inside \hyperref, \hyperlink.
- hyperref: \ref inside \hyperlink caused a nested HTML link.
- glossaries: Fix when not using babel or polyglossia.
- textcomp: \textperthousand.
- LATEX core verse environment: line spacing.

 \triangle

• Removed \citetitle, adjusted \attribution.

Вътъх

macros in section names document encoding

△ New and revised encoding options

floats with \centering, etc.

packages

- memoir: Minor update for v3.7g.
- Added inputenx, bibunits, chngpage, forest, magaz, gridset.
- Prevents loading ae, aecc, tlenc, and wasysym.

v0.53: Improved image checks.

lwarpmk

- *lwarpmk*: Added a warning about corrupted images due to the need to recompile the document one more time.
- lwarpmk: Added the lwarpmk cleanlimages command.
- Added documentation for lwarpmk cleanlimages and lwarpmk pdftohtml.

v0.52: Improved footnotes, svg math.

documentation

- Improved install instructions regarding lwarp_baseline_marker.png.
- Added documentation regarding footnotes in section headings, and footnotes with \VerbatimFootnotes from fancybox, fancyvrb. See section 8.5.4.
- Added documentation regarding font selection when using X∃L4TEX or LuaL4TEX with fontspec and traditional font packages. See section 7.4.

SVG math

- Fix: Limit the number of background tasks when generating lateximages.
- Added user-adjustable svg math font scaling. See section 84.3.
- Added warnings if lwarp_baseline_marker.png is not present, or if graphicx or graphics is not loaded.
- Improved \ensuremath hashing expansion.
- Fix: equation* with split.
- tabbing now works inside a lateximage. Use for math in tabbing.

MathJax

- Fix: MathJax script was not executing in some conditions.
- Added \CustomizeMathJax to add custom functions. See section 8.7.

footnotes

- Fix: Footnote numbering when using HTMLDebugComments.
- Fix: Footnote paragraph tags.
- Fix: FootnoteDepth defaults to \subsubsection.

misc. fixes

- Fix: \kill in a lateximage.
- Fix: \FileDepth, misc. others, when input encoding is not utf8.
- Fix: \texorpdfstring in a section name.

- hyperref emulation: Fix for #, %, &, ~, _ characters in URLs.
- fancybox, fancyvrb: Initial support for \VerbatimFootnotes.
- nicefrac: Added with fix for \ensuremath.
- graphicx: Fix for option defaults. Added v1.1a/b options.
- endfloat: Updated for v2.6.
- url: Fixes for active characters.

2 Introduction

The lwarp project aims to allow a rich LATEX document to be converted to a reasonable HTML5 interpretation, with only minor intervention on the user's part. No attempt has been made to force LATEX to provide for every HTML-related possibility, and HTML cannot exactly render every possible LATEX concept. Where compromise is necessary, it is desirable to allow the print output to remain typographically rich, and compromise only in the HTML conversion.

Several "modern" features of HTML5, css3, and svG are employed to allow a fairly feature-rich document without relying on the use of JAVASCRIPT. Limited testing on older browsers shows that these new features degrade gracefully.

lwarp is a native IATEX package, and operates by either patching or emulating various functions. Source-level compatibility is a major goal, but occasional user intervention is required in certain cases.

As a package running directly in LATEX, lwarp has some advantages over other methods of HTML conversion. TEX itself is still used, allowing a wider range of TEX trickery to be understood. Lua expressions are still available with LuaTEX. Entire categories of LATEX packages work as-is when used with lwarp: definitions, file handling, utilities, internal data structures and calculations, specialized math-mode typesetting for various fields of science and engineering, and anything generating plain-text output. Blocks of PDF output may be automatically converted to svG images while using the same font and spacing as the original print document, directly supporting TikZ and picture. Numerous packages are easily adapted for HTML versions, either by loading and patching the originals, or by creating nullified or emulated replacements, and all without resorting to external programming. As a result, several hundred packages have already been adapted (table 2), and an uncounted number more work as-is.

Packages have been selected according to several criteria: perceived importance, popularity lists, recent CTAN updates, CTAN topics, mention in other packages, support by other HTML conversion methods, and from sample documents taken from public archives. These include some "obsolete" packages as well.¹

Assistance is also provided for modifying the HTML output to suit the creation of EPUB documents, and for modifying the HTML output to ease import into a word processor.

pdflatex, *xelatex*, or *lualatex* may be used, allowing lwarp to process the usual image formats. While generating HTML output, svg files are used in place of PDF. Other formats such as PNG and JPG are used as-is.

¹An amazing number of decades-old packages are still in use today.

svg images may be used for math, and are also used for picture, TikZ, and similar environments. The svg format has better browser and e-book support than MathmL (as of this writing), while still allowing for high-quality display and printing of images (again, subject to potentially bug-ridden² browser support).

Furthermore, svg images allow math to be presented with the same precise formatting as in the print version. Math is accompanied by <alt> tags holding the LATEX source for the expression, allowing it to be copy/pasted into other documents.³ Custom LATEX macros may be used as-is in math expressions, since the math is evaluated entirely inside LATEX. An MD5 hash is used to combine multiple instances of the same inline math expression into a single image file, which then needs to be converted to svg only a single time.

The MathJax JavaScript display engine may be selected for math display instead of using svG images. Subject to browser support and Internet access, MathJax allows an html page to display math without relying on a large number of external image files.⁴ lwarp maintains LATEX control for cross-referencing and equation numbering, and attempts to force MathJax to tag equations accordingly.

A *texlua* program called *lwarpmk* is used to process either the print or HTML version of the document. A few external utility programs are used to finish the conversion from a LATEX-generated PDF file which happens to have HTML5 tags, to a number of HTML5 plain-text files and accompanying images.

lwarp automatically generates the extra files necessary for the HTML conversion, such as css and .xdy files, and configuration files for the utility <code>lwarpmk</code>. Also included is a parallel version of the user's source document, <code><sourcename>-html.tex</code>, which selects <code>HTML</code> output and then inputs the user's own source. This process allows both the printed and <code>HTML</code> versions to co-exist side-by-side, each with their own auxiliary files.

When requesting packages during HTML conversion, lwarp first looks to see if it has its own modified version to use instead of the standard LATEX version. These lwarp-packagename.sty files contain code used to emulate or replace functions for HTML output.

²FireFox has had an on-again/off-again bug for quite some time regarding printing svGs at high resolution.

³There seems to be some debate as to whether MathmL is actually an improvement over LATEX for sharing math. The author has no particular opinion on the matter, except to say that in this case LATEX is much easier to implement!

⁴One svG image file per math expression, except that duplicate inline math expressions are combined into a single file according to the MD5 hash function of its contents. A common scientific paper can easily include several thousand files, and in one case the MD5 hash cut the number of files in half and the rendering time by 30%.

2.1 **Typesetting conventions**

Font weight, family, and style are used to indicate various objects:

Table 1: Typesetting conventions

package program option	IATEX package. Program's executable name. Program or package option.
filename Brand Name	File name in the operating system. Proper name for a program, operating system, etc.
commands code \macroname environment counter boolean	Commands to be entered by the user. Program code. LATEX macro. LATEX environment. LATEX counter. LATEX boolean.
<pre><element> attribute</element></pre>	нтмL element. нтмL attribute.
User Interface ACRO	A user-interface item. Acronym.

subjects

Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph. These are often the targets of index entries.

Prog Lwarp

index entries

Black-colored tags in the left marign are used to identify programming objects such as files, packages, environments, booleans, and counters. Items without a tag are command macros. Each of these also appears in the index as individual entries, and are also listed together under "files", "packages", "environments", "booleans", and "counters".



warnings Special warnings are marked with a warning icon.

2.2 Supported packages and features

Table 2 lists some of the various LATEX features and packages which may be used.

Package names are colored according to their support level:

name: Supported as-is.

name: Modified to work with HTML output, and perhaps also as print output in svG math or lateximage environments.

name: Emulated for HTML output.

name: Ignored for HTML output, but provides source-level compatibility.

MJ: Supported as-is for MATHJAX, subject to limitations.

^{MJ}: Emulated for MATHJAX using custom macros, subject to limitations.

 $^{\mathrm{MJ}}$: Ignored by MathJax, but may be used in the document source. May be converted to svG images.

Table 2: LATEX lwarp package — Supported features

Category	Status and supported features.
Engines:	DVI LATEX, PDF LATEX, XHLATEX, LUALATEX, UPLATEX
LATEX compiling:	latexmk, make, etc.
External compiling:	perltex, pythontex, sympytex
Classes:	article, book, report, scrartcl, scrbook, scrreprt, memoir, CJK-related as listed below.
Koma-script:	scrextend, scrhack, scrlayer. Others as listed below.
Memoir:	memhfixc
Beamer:	beamerarticle, but not the beamer class.
Languages:	babel, cjkpunct, impnattypo, luavlna, polyglossia, xeCJK, xevlna.
Chinese:	CTEX, ctex, upzhkinsoku, xpinyin, zhlineskip, zhspacing.
Japanese:	upIATeX, LuaTeX-ja, gentombow, lltjext, plarray, plarydshln, plautopatch, plext, plextarray, plextarydshln, plextcolortbl, plextdelarray, pxatbegshi, pxeveryshi, pxftnright, pxgentombow, pxjahyper, pxpdfpages, pxpgfrcs, pxpgfmark, tascmac, zxjatype. bxjsarticle and related, ltjsarticle and related, luatexja, luatexja-fontspec, ujarticle and related, utarticle and related.
Korean:	kotex, luatexko, xetexko.

2in1, 2up, a4, a4wide, a5comb, addlines, Page layout: anysize, atbegshi, balance, blowup, booklet, bophook, bounddvi, bxpapersize, canoniclayout, centerlastline, changelayout, changepage, chngpage, clrdblpg, continue, draftcopy, draftfigure, draftwatermark, ebook, everyshi, fancyhdr, fancytabs, flippdf, fullminipage, fullpage, fwlw, geometry, gmeometric, grid, grid-system, gridset, layaureo, layout, layouts, leading, Iscape, Itxgrid, nccfancyhdr, notespages, nowidow, pagegrid, pagesel, parallel, parcolumns, pdfcolparallel, pbalance, pdfcolparcolumns, pdfcrypt, pdflscape, pdfprivacy, preview, ragged2e, returntogrid, rmpage, scrlayer-scrpage, scrpage2, setspace, selectp, textarea, threadcol, thumb, thumbs, titleps, tocenter, turnthepage, twoup, typearea, underlin, vmargin, watermark, widows-and-orphans, zwpagelayout. Sectioning: Adds FileDepth for splitting the HTML output. Files may be numbered sequentially or named according to section name. Common short words and punctuation are removed from the filenames. anonchap, bsheaders, decorule, fncychap, froufrou, hypbmsec, indentfirst, quotchap, section, sectionbreak, secdot, sectsty, titlesec, tocvsec2. Table of contents, Supported, with hyperlinks. etoc, minitoc, figures, tables: multitoc, shorttoc, tableof, titletoc, tocbasic, tocbibind, tocdata, tocloft, tocstyle, tocvsec2. Title page: \maketitle, titlepage, authblk, authoraftertitle, titling. Front & back matter: abstract, appendix. Indexing: makeindex, xindy, and xindex are supported, with hyperlinks. gindex, hvindex, idxlayout, imakeidx, index, makeidx, repeatindex, splitidx, varindex, xindex. Glossary: gloss, glossaries and xindy, nomencl. Bibliography: babelbib, bibtopic, backref, biblatex, bibunits, chapterbib, cite, citeref, collref, drftcite, hypernat, jurabib, mcite, mciteplus, multibib, natbib, notes2bib, splitbib, showtags. Cross-references: bookmark, breakurl, cleveref, fancyref. hypdestopt, hyperref, perpage, prettyref, titleref, url, varioref, xcite, xr, xr-hyper, xurl, zref. Margin notes: marginal, marginfit, marginfix, scrlayer-notecolumn, versonotes.

Footnotes: Adds FootnoteDepth to print footnotes at section

breaks. MATHJAX emulation for \footnote, and also as marked in the following: bigfoot, dblfnote, endheads, endnotes^{MJ}, enotez^{MJ}, fixfoot, fnbreak, fnpara, fnpct, fnpos, footmisc, footnote, footnotebackref, footnoterange, footnpag, manyfoot, marginnote^{MJ}, nccfoots^{MJ}, pagenote^{MJ}, parnotes^{MJ}, pdfcolfoot, pfnote,

sepfootnotes, sidenotes^{MJ}, tablefootnote.

Math: Converted to svG images with HTML <alt> tags

containing the LATEX source for the math expression. MathJax supported as an alternative. amsmath $^{\rm MJ}$: $\mathcal{A}_{M}\mathcal{S}$ environments are supported. User-defined macros are available during conver-

son, due to native LATEX processing.

Theorems: Native IATEX theorems, amsthm, apxproof, ntheorem, shadethm, theorem, thmbox,

thmtools.

Additional math: Math fonts via svg images, accents^{MJ}, amscd^{MJ},

amscdx, autobreak^{MJ}, autonum, backnaur^{MJ}, bm^{MJ}, braket^{MJ}, breqn^{MJ}, bussproofs^{MJ}, cases^{MJ}, centernot^{MJ}, cmbright^{MJ}, colonequals^{MJ}, decimal^{MJ}, delarray, DotArrow^{MJ}, dotlessi^{MJ}, dotlessj^{MJ}, esvect^{MJ}, extarrows^{MJ}, fixmath^{MJ}, fouridx^{MJ}, fourier^{MJ}, guass, hhtensor^{MJ}, icomma^{MJ}, isomath^{MJ}, jkmath, kpfonts^{MJ}, kpfonts-otf^{MJ}, leftidx^{MJ}, libertinust1math^{MJ}, mathalbha^{MJ}

 $\begin{array}{lll} \text{mathalpha}^{MJ}, & \text{mathastext}^{MJ}, & \text{mathcomp}^{MJ}, \\ \text{mathdesign}^{MJ}, & \text{mathdots}^{MJ}, & \text{mathfixs}^{MJ}, \\ \text{mathpazo}^{MJ}, & \text{mathptmx}^{MJ}, & \text{mathpunctspace}^{MJ}, \\ \text{mathspec}^{MJ}, & \text{mathtools}^{MJ}, & \text{mattens}^{MJ}, \end{array}$

maybemath $^{\mathrm{MJ}}$, mdwmath $^{\mathrm{MJ}}$, mismath $^{\mathrm{MJ}}$, mleftright $^{\mathrm{MJ}}$, multiobjective $^{\mathrm{MJ}}$, nccmath $^{\mathrm{MJ}}$, nicematrix $^{\mathrm{MJ}}$, noitcrul $^{\mathrm{MJ}}$, newpxmath $^{\mathrm{MJ}}$, newtxmath $^{\mathrm{MJ}}$, newtxsf $^{\mathrm{MJ}}$, pb-diagram, pxfonts $^{\mathrm{MJ}}$,

resizegather^{MJ}, rmathbr^{MJ}, scalerel^{MJ}, shuffle^{MJ}, skmath^{MJ}, stackrel^{MJ}, statex2^{MJ}, statistics, statmath^{MJ}, subsupscripts^{MJ}, tensind, tensor^{MJ}, textualicomma^{MJ}, txfonts^{MJ}, txgreeks^{MJ}.

unicode-math^{MJ}, upgreek^{MJ}, ushort^{MJ}, witharrows^{MJ}, xfakebold^{MJ}, xy. Many others

work as-is.

Display math with Complicated math objects in display math, such displaymathother: as tikz-cd, etc.

Units and fractions: $\mathsf{nicefrac}^{MJ}$, $\mathsf{Slunits}^{MJ}$, $\mathsf{siunitx}^{MJ}$, units^{MJ} , units^{MJ} , units^{MJ} , units^{MJ}

xfrac^{MJ}.

Floats:	Appear where declared. capt-of, caption, cutwin, dblfloatfix, endfloat, fewerfloatpages, fix2col, flafter, float, floatflt, floatrow, fltrace, ftcap, hypcap, keyfloat, morefloats, multicap, newfloat, nonfloat, picinpar, placeins, rotfloat, stfloats, subcaption, subfig, subfigure, subfloat, swfigure, topcapt, trivfloat, wrapfig, wrapfig2.
Tabular:	tabular environment, array $^{\mathrm{MJ}}$, arydshln $^{\mathrm{MJ}}$, bigdelim $^{\mathrm{MJ}}$, bigstrut $^{\mathrm{MJ}}$, booktabs $^{\mathrm{MJ}}$, colortbl $^{\mathrm{MJ}}$, ctable, dcolumn, diagbox, hhline $^{\mathrm{MJ}}$, longtable, ltablex, ltxtable, multirow $^{\mathrm{MJ}}$, supertabular, tabularx, tabulary, threeparttable, threeparttablex, widetable, xltabular, xtab.
Graphics:	graphics and graphicx. \includegraphics supports width, height, origin, angle, and scale tags, and adds class. References to PDF files are changed to svG, other image types are accepted as well. \rotatebox and \scalebox are supported as well as HTML can handle. rotating is emulated but all objects are unrotated in HTML. picture, tikz, and xy are converted to an svG image. asymptote, curves, datatool, eepic, epsf, epsfig, epstopdf, figsize, fitbox, grffile, lpic, luamplib, media9, movie15, multimedia, overpic, pict2e, pinlabel, psfrag, psfragx, pst-eps, pstool, pstricks, rlepsf, rviewport, svg, svg-extract, tikz, tikz-3dplot, tikz-imagelabels, xy
xcolor:	Full package color names, any color models, and mixing. \textcolor, \colorbox, \fcolorbox. Enhanced for HTML compatibility.
Lists:	Standard LATEX environments, enumerate, enumitem, eqlist, hang, listliketab, paralist.
Environments:	Standard IATEX environments.
Paragraphs, minipage, \parbox:	Some HTML5-imposed limitations. Nested minipages are supported. eqparbox, fancypar, minibox, pbox, shapepar.
Quotations:	copyrightbox, csquotes, epigraph, quoting, verse.
Verbatim:	fancyvrb, fvextra, moreverb, shortvrb, verbatim.
Frames:	boxedminipage, boxedminipage2e, fancybox, fbox $^{\rm MJ}$, framed, mdframed, niceframe, shadow, tcolorbox $^{\rm MJ}$, vertbars.
Multi-columns:	adjmulticol, multicol, multicolrule, vwcol.
Margins:	fullwidth, hanging, midpage.
Line numbering:	fnlineno, lineno.

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Direct formatting:	\emph, \textsuperscript, \textbf, etc are supported. \bfseries, etc. are only supported in some cases. cancel ^{MJ} , ellipsis, embrac, enparen, hyphenat, lettrine, lips, lua-check-hyphen, luacolor, magaz, moresize, nolbreaks, normalcolor, pdfcol, pdfcolmk, pdfrender, realscripts, relsize ^{MJ} , scalefnt, seqsplit ^{MJ} , soul, soulpos, soulutf8, stackengine, textfit, thinsp, trimclip, truncate, ulem, umoline, underscore, uspace, xellipsis.
Acronyms:	acro, acronym.
Ordinals:	engord, fmtcount, nth.
Text ligatures:	Ligatures for symbols are supported. Ligatures for f, q, t are intentionally turned off because many simpler browsers do not display them correctly. Modern full-featured browsers re-create these ligatures on-the-fly.
Horizontal space:	нтмь output for thin-unbreakable, unbreakable, \enskip, , \qquad, \hspace.
Rules:	\rule with width, height, raise, text color.
HTML reserved characters:	\&, \textless, and \textgreater are converted to HTML entities.
Fonts: Symbols:	Used as-is. Appear in svg math expressions or embedded image environments. fontaxes, nfssext-cfr, slantsc, tabfigures. Tested to work as-is: Special font macros in cfr-lm and others which use nfssext-cfr. Also see the math section for math and MATHJAX support for math font packages. Native IATEX diacriticals, academicons, amssymb ^{MJ} , bbding, ccicons, chemgreek, dingbat, euro, eurosym, fontawesome,
	fontawesome5, gensymb $^{\mathrm{MJ}}$, latexsym $^{\mathrm{MJ}}$, marvosym, metalogo, metalogox, pifont, textalpha, textcomp $^{\mathrm{MJ}}$, textgreek, typicons, xunicode.
Files:	attachfile, attachfile2, hyperxmp, inputtrc, intopdf, pdfpages, pdfx, xmpincl.

Science and engineering:	algorithm2e, algorithmicx, ar ^{MJ} , askmaps, axodraw2, bitpattern, blochsphere, bodegraph, bohr, bytefield, chemfig, chemformula, chemgreek, chemmacros, chemnum, circuitikz, doipubmed, econometrics ^{MJ} , elements, engtlc ^{MJ} , fast-diagram, ghsystem, hepnicenames, heppennames, hepunits ^{MJ} , isotope ^{MJ} , karnaughmap, karnaugh-map, keystroke, listings, listingsutf8, linop, menukeys, mhchem ^{MJ} , minted, pgfgantt, phfqit, physics ^{MJ} , physunits ^{MJ} , plimsoll ^{MJ} , qcircuit, register, simplebnf, simpler-wick, slashed ^{MJ} , steinmetz ^{MJ} , structmech, struktex, syntaxdi, tikz-karnaugh, tikzcodeblocks, venndiagram
Arts and humanities:	foreign, forest, lyluatex, musicography, nameauth, octave, phonrule, piano, schemata, semantic-markup, tikz-dependency, vowel, xpiano
Academic:	academicons, classicthesis, doi, doipubmed, orcidlink $^{\rm MJ}$, termcal
Admonitions:	awesomebox, notes.
Editorial:	changebar, changelog, changes, easy-todo, easyReview, ed, errata, fixme, fixmetodonotes, pdfcomment ^{MJ} , pdfmarginpar, todo, todonotes, tram, xechangebar.
Accessibility:	accessibility $^{\mathrm{MJ}}$, accsupp $^{\mathrm{MJ}}$, axessibility $^{\mathrm{MJ}}$, pdfcomment $^{\mathrm{MJ}}$, repltext $^{\mathrm{MJ}}$, tagpdf.
Package handling:	catoptions.
Debug:	chkfloat, cmdtrack, dprogress, lipsum, lua-visual-debug, mwe, refcheck, showlabels, showkeys, srcltx, srctex, vpe, xbmks.
Working as-is:	Various utility, calculation, file, and text-only packages, such as calc, fileerr, somedefs, trace, xspace. Also, most math-only packages, including specialized typesetting for various fields of science and engineering.

3 Alternatives

Summarized below are several other ways to convert a LaTeX or other document to HTML. Where an existing LaTeX document is to be converted to HTML, lwarp may be a good choice. For new projects with a large number of documents, it may be worth investigating the alternatives before decided which path to take.

3.1 internet class

internet (*Cls*) The closest to lwarp in design principle is the internet class by Andrew Stacey—an interesting project which directly produces several versions of markdown, and also HTML and EPUB. https://github.com/loopspace/latex-to-internet

3.2 ТеХ4нт

```
TeX4ht (Prog) http://tug.org/tex4ht/
htlatex (Prog)
```

This system uses native LATEX processing to produce a DVI file containing special commands, and then uses additional post-processing for the HTML conversion by way of numerous configuration files. In some cases lwarp provides a better HTML conversion, and it supports a different set of packages. TeX4ht produces several other forms of output beyond HTML, including ODT and a direct path to EPUB, and is still being developed.

3.3 Translators

These systems use external programs to translate a subset of LATEX syntax into HTML. Search for each on CTAN (http:\ctan.org).

3.4 ASCIIDOC and ASCIIDOCTOR

AsciiDoc is one of the most capable markup languages, providing enough features to produce the typical technical-writing document with cross-references, and it writes LATEX and HTML.

AsciiDoc (Prog) Asciidoctor: http://asciidoctor.org/ (More active.)

AsciiDoctor (Prog) AsciiDoc: http://asciidoc.org/ (The original project.)

3.4.1 ASCIIDOCTOR-LATEX

The Asciidoctor-LaTeX project is developing additional LATeX-related features.

Asciidoctor-LateX:

Asciidoctor-LaTeX (*Prog*)

http://www.noteshare.io/book/asciidoctor-latex-manual https://github.com/asciidoctor/asciidoctor-latex

3.5 PANDOC

Pandoc (Prog) A markup system which also reads and writes LATEX and HTML.

Pandoc: http://pandoc.org/

(Watch for improvements in cross-references to figures and tables.)

3.6 Word processors

Word (*Prog*)
LibreOffice (*Prog*)
OpenOffice (*Prog*)

It should be noted that the popular word processors have advanced through the years in their abilities to represent math with a LATEX-ish input syntax, unicode math fonts, and high-quality output, and also generate HTML with varying success. See recent developments in Microsoft [®] *Word* [®] and LibreOffice TM *Writer*.

Likewise, several professional systems exist whose abilities have been advancing in the areas of typesetting, cross-referencing, and HTML generation. See Address ®

3.7 Commercial systems

FrameMaker [®], Adobe InDesign [®], and Madcap Flare TM.

Adobe (*Prog*)

FrameMaker (*Prog*)

InDesign (*Prog*)

Flare (Prog)

Madcap (*Prog*)

3.8 Comparisons

AsciiDoc, Pandoc, and various other markup languages typically have a syntax which tries to be natural and human-readable, but the use of advanced features tends to require many combinations of special characters, resulting in a complicated mess of syntax. By contrast, LATEX spells things out in readable words but takes longer to type, although integrated editors exist which can provide faster

entry and a graphic user interface. For those functions which are covered by the typical markup language it is arguable that LATEX is comparably easy to learn, while LATEX provides many more advanced features where needed, along with a large number of pre-existing packages which provide solutions to numerous common tasks.

Text-based document-markup systems share some of the advantages of LATEX vs. a typical word processor. Documents formats are stable. The documents themselves are portable, work well with revision control, do not crash or become corrupted, and are easily generated under program control. Formatting commands are visible, cross-referencing is automatic, and editing is responsive. Search/replace with regular expressions provides a powerful tool for the manipulation of both document contents and structure. Markup systems and some commercial systems allow printed output through a LATEX back end, yielding high-quality results especially when the LATEX template is adjusted, but they lose the ability to use LATEX macros and other LATEX source-document features.

The effort required to customize the output of each markup system varies. For print output, LATEX configuration files are usually used. For html output, a css file will be available, but additional configuration may require editing some form of control file with a different syntax, such as XML. In the case of lwarp, css is used, and much html output is adjusted through the usual LATEX optional macro parameters, but further customization may require patching LATEX code.

The popular word processors and professional document systems each has a large base of after-market support including pre-designed styles and templates, and often include content-management systems for topic reuse.

4 Installation

Table 3 shows the tools which are used for the \LaTeX to \LaTeX to \LaTeX to note cases, these will be available via the standard package-installation tools.

Detailed installation instructions follow.

Table 3: Required software programs

Provided by your LATEX distribution:

From TEXLive: http://tug.org/texlive/.

LATEX: pdflatex, xelatex, or lualatex. The lwarp package: This package.

The *lwarpmk* utility: Provided along with this package. This should be an operating-system executable in the same way that *pdflatex* or *latexmk* is. It is possible to have the *lwarp* package generate a local copy of *lwarpmk* called *lwarpmk*. Lua. See table 4.

luatex: Used by the *lwarpmk* program to simplify and automate document generation.

xindy: The *xindy* program is used by lwarp to create indexes. On a MiKTEX system this may have to be acquired separately, but it is part of the regular installer as of mid 2015.

latexmk: Optionally used by *lwarpmk* to compile L^ATEX code. On a MiKTEX system, *Perl* may need to be installed first.

pdfcrop: Used to pull images out of the LATEX PDF.

POPPLER PDF utilities:

pdftotext: Used to convert PDF to text.

pdfseparate: Used to pull images out of the LATEX PDF.

pdftocairo: Used to convert images to svg.

These might be provided by your operating-system package manager, and MiKTFX provides miktex-poppler-bin-* packages.

From Poppler: poppler.freedesktop.org.

For MacOS®, see https://brew.sh/, install *Homebrew*, then

 $Enter \Rightarrow$ brew install poppler

For WINDOWS, see MikTEX miktex-poppler-bin-*, or:

https://sourceforge.net/projects/poppler-win32/ and:

http://blog.alivate.com.au/poppler-windows/

Perl:

This may be provided by your operating-system package manager, and may be required for some of the POPPLER PDF utilities.

strawberryperl.com (recommended), perl.org

Automatically downloaded from the internet as required:

MATHJAX: Optionally used to display math. From: mathjax.org

4.1 Installing the lwarp package

There are several ways to install lwarp. These are listed here with the preferred methods listed first:

Pre-installed: Try entering into a command line:

```
Enter ⇒ kpsewhich lwarp.sty
```

If a path to lwarp.sty is shown, then lwarp is already installed and you may skip to the next section.

TEX Live: If using a TEX Live distribution, try installing via *tlmgr*:

```
Enter ⇒ tlmgr install lwarp
```

MiKT_FX:

- 1. For newer versions of MiKTEX, install or update lwarp using the *MiKTeX Console* program.
- 2. For older versions of MiKTEX, to install lwarp the first time, use the MiKTeX Package Manager (Admin). To update lwarp, use MiKTeX Update (Admin).
- 3. Either way, also update the package miktex-misc, which will install and update the *lwarpmk* executable.

Operating-system package: The operating-system package manager may already have lwarp, perhaps as part of a set of TFX-related packages.

CTAN TDS archive: lwarp may be downloaded from the Comprehensive TEX Archive:

- 1. See http://ctan.org/pkg/lwarp for the lwarp package.
- 2. Download the TDS archive: lwarp.tds.zip
- 3. Find the T_EX local directory:

TEX Live:

```
Enter ⇒ kpsewhich -var-value TEXMFLOCAL
```

MiKTEX:

In the **Settings** window, **Roots** tab, look for a local TDs root.

This should be something like:

```
/usr/local/texlive/texmf-local/
```

- 4. Unpack the archive in the TDS local directory.
- 5. Renew the cache:

```
\begin{array}{rcl} & \text{Enter} \Rightarrow & \textbf{mktexlsr} \\ & --\text{or} -- & \\ & & \text{Enter} \Rightarrow & \textbf{texhash} \end{array}
```

Or, for Windows MiKTEX, start the program called *MiKTeX Settings (Admin)* and click on the button called **Refresh FNDB**.

CTAN .dtx and .ins files: Another form of TEX package is .dtx and .ins source files. These files are used to create the documentation and .sty files.

- 1. See http://ctan.org/pkg/lwarp for the lwarp package.
- 2. Download the zip archive lwarp.zip into your own lwarp directory.
- 3. Unpack lwarp.zip.

- 4. Locate the contents lwarp.dtx and lwarp.ins
- 5. Create the .sty files:

```
Enter ⇒ pdflatex lwarp.ins
```

6. Create the documentation:

```
pdflatex lwarp.dtx (several times)
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
makeindex -s gind.ist lwarp.idx
pdflatex lwarp.dtx (several times)
```

7. Copy the .sty files somewhere such as the TEX Live local tree found in the previous CTAN TDS section, under the subdirectory:

```
<texlocal>/tex/latex/local/lwarp
```

- 8. Copy lwarp_baseline_marker.png and lwarp_baseline_marker.eps to the same place as the .sty files.
- 9. Copy the documentation lwarp.pdf to a source directory in the local tree, such as:

```
<texlocal>/doc/local/lwarp
```

10. Renew the cache:

```
Enter ⇒ mktexlsr
— or —

Enter ⇒ texhash
```

Or, for Windows MiKTEX, start the program called *MiKTeX Settings (Admin)* and click on the button called **Refresh FNDB**.

- 11. See section 4.2.1 to generate your local copy of *lwarpmk*.
- 12. Once the local version of lwarpmk. lua is installed, it may be made available system-wide as per section 4.2.

Project-local CTAN .dtx and .ins files: The .dtx and .ins files may be downloaded to a project directory, then compiled right there, alongside the document source files. The resultant *.sty and lwarpmk.lua files may be used as-is, so long as they are in the same directory as the document source. The files lwarp_baseline_marker.png and lwarp_baseline_marker.eps must also be copied as well. This approach is especially useful if you would like to temporarily test lwarp before deciding whether to permanently install it.

Just testing!

4.2 Installing the *lwarpmk* utility

(Note: If lwarpmk is not already installed, it is easiest to use a local copy instead of installing it system-wide. See section 4.2.1.)

After the lwarp package is installed, you may need to setup the *lwarpmk* utility:

- 1. At a command line, try executing **Lwarpmk**. If the *lwarpmk* help message appears, then *lwarpmk* is already set up. If not, it is easiest to generate and use a local copy. See section 4.2.1.
- 2. For MiKTEX, try updating the miktex-misc package. This may install the *lwarpmk* executable for you.

Otherwise, continue with the following:

3. Locate the file lwarpmk.lua, which should be in the scripts directory of the TDS tree. On a TEX Live or MiKTEX system you may use

```
Enter ⇒ kpsewhich lwarpmk.lua
```

(If the file is not found, you may also generate a local copy and use it instead. See section 4.2.1.)

4. Create lwarpmk:

Unix: Create a symbolic link and make it executable:

(a) Locate the TEX Live binaries:

Enter ⇒ kpsewhich -var-value TEXMFROOT

This will be something like:

/usr/local/texlive/<year>

The binaries are then located in the bin/<arch> directory under the root:

/usr/local/texlive/<year>/bin/<architecture>/

In this directory you will find programs such as *pdflatex* and *makeindex*.

(b) In the binaries directory, create a new symbolic link from the binaries directory to lwarpmk.lua:

Enter ⇒ ln -s <pathtolwarpmk.lua> lwarpmk

(c) Make the link executable:

Enter ⇒ chmod 0755 lwarpmk

WINDOWS TEX Live: Create a new lwarpmk.exe file:

- (a) Locate the TEX Live binaries as shown above for UNIX.
- (b) In the binaries directory, make a *copy* of runscript.exe and call it lwarpmk.exe This will call the copy of lwarpmk.lua which is in the scripts directory of the distribution.

WINDOWS MIKTEX: Create a new lwarpmk.bat file:

(a) Locate the MiKTEX binaries. These will be in a directory such as:

C:\Program Files\MiKTeX 2.9\miktex\bin\x64

In this directory you will find programs such as pdflatex.exe and makeindex.exe.

(b) Create a new file named lwarpmk.bat containing:

texlua "C:\Program Files\MiKTeX 2.9\scripts\lwarp\lwarp.texlua" %* This will call the copy of lwarpmk.lua which is in the scripts directory of the distribution.

4.2.1 Using a local copy of lwarpmk

It is also possible to use a local version of *lwarpmk*:

1. When compiling the tutorial in section 5, use the lwarpmk option for the lwarp package:

\usepackage[lwarpmk]{lwarp}

- 2. When the tutorial is compiled with *pdflatex*, the file lwarpmk.lua will be generated along with the other configuration files.
- 3. lwarpmk.lua may be used for this project:

Unix:

```
    (a) Make lwarpmk.lua executable:
        Enter ⇒ chmod 0755 lwarpmk.lua
    (b) Compile documents with
        Enter ⇒ ./lwarpmk.lua html
        Enter ⇒ ./lwarpmk.lua print
        etc.
```

(c) It may be useful to rename or link to a version without the .lua suffix.

WINDOWS:

Compile documents with either of the following, depending on which command shell is being used:

```
Enter ⇒ texlua lwarpmk.lua html
Enter ⇒ texlua lwarpmk.lua print
etc.
Or:
Enter ⇒ lwarpmk html
Enter ⇒ lwarpmk print
etc.
```

4.3 Installing additional utilities

To test for the existence of the additional utilities:

Enter the following in a command line. If each programs' version is displayed, then that utility is already installed. See table 3 on page 77.

```
Enter ⇒ luatex --version

Enter ⇒ xindy --version

Enter ⇒ latexmk --version

Enter ⇒ perl --version

Enter ⇒ pdfcrop --version

Enter ⇒ pdftotext -v

Enter ⇒ pdfseparate --version

Enter ⇒ pdftocairo -v
```

To install xindy, latexmk, and pdfcrop:

The TEX utilities *xindy*, *latexmk*, and *pdfcrop* may be installed in *TexLive* with *tlmgr*, installed by *MiKTeX*, provided by your operating system's package manager, or downloaded from the *CTAN* archive:

```
http://ctan.org/pkg/xindy
http://ctan.org/pkg/latexmk
http://ctan.org/pkg/pdfcrop
```

pdftotext (*Prog*) [requirement] pdfseparate (*Prog*) [requirement] pdftocairo (*Prog*) [requirement]

To install the Poppler utilities to a Unix/Linux system:

The tools from the POPPLER project should be provided by your operating system's package manager.

To install the POPPLER utilities to a MACOS machine:

```
1. Install Homebrew from https://brew.sh/:
```

/usr/bin/ruby -e "\$(curilntefs\$L https://raw.githubusercontent.com/Homebrew/install/master/install)"

2. Install the Poppler utilities:

Enter ⇒ brew install poppler

To install the POPPLER utilities to a WINDOWS machine:

If using MikTEX, install a miktex-poppler-bin-* package. Otherwise:

- 1. See table 3 on page 77.
- 2. Download and extract the POPPLER utilities *pdftotext*, *pdfseparate*, and *pdfseparate* to a directory, such as Poppler.
- 3. In the **Start** window, type "Path" to search for results related to Path. Or, open the control panel and search for "Path".
- 4. Choose **Edit the system environment variables** in the control panel.
- 5. Choose the **Environment Variables** button.
- 6. Choose the **Path** variable, then the **Edit** button.
- 7. Choose the **New** button to make an additional entry.
- 8. Enter the bin directory of the POPPLER utilities, such as:

 C:\Users\<myname>\Desktop\Poppler\poppler-0.5_x86\poppler-0.5\bin

 Be sure to include \bin.
- 9. Click **Ok** when done.

perl (Prog) [requirement] To install PERL to a WINDOWS machine:

- 1. Download and install a version of Perl, such as Straweberry Perl, to a directory without a space in its name, such as C:\Strawberry.
- 2. Edit the **Path** as seen above for the POPPLER utilities.
- 3. Enter the bin directory of the *perl* utility, such as:

C:\Strawberry\perl\bin

Be sure to include \bin.

4. Click **Ok** when done.

Any utilities installed by hand must be added to the PATH.

5 Tutorial

This section shows an example of how to create an lwarp document.

Need help?

See the General Index for "how-to", and the Troubleshooting Index if something doesn't work. A Troubleshooting section is also available. The Index of Objects contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

5.1 Starting a new project

1. Create a new project directory called tutorial.

tutorial.tex(file)

2. Inside the tutorial directory, create a new file called tutorial.tex. This may be done several ways:

Copy from the documentation PDF:

A listing is in fig. 1, which may be copied/pasted from the figure directly into your own editor, depending on the quality of the PDF viewer and editor, or:

Copy from the lwarp documentation directory:

Another copy may be found by entering into a command line:

```
Enter⇒ texdoc -l lwarp_tutorial.txt
```

This should be in the doc/latex/lwarp/ directory along with this PDF documentation. Copy lwarp_tutorial.txt directly into your tutorial directory, renamed as tutorial.tex.

When using Windows, use an editor other than Notepad, since Notepad does not accept the end-of-line from a Unix text file.

3. Compile the project:

```
Enter ⇒ pdflatex tutorial.tex
(several times)
```

(xelatex or lualatex may be used as well. lwarp also supports DVI latex for use with .eps images.)

4. View the resulting tutorial.pdf with a PDF viewer.

A number of new files are created when tutorial.tex is compiled, as shown in table 4. These files are created by the lwarp package.

(Two of the new files are configuration files for the helper program <code>lwarpmk</code>. Whenever a print version of the document is created, the configuration files for <code>lwarpmk</code> are updated to record the operating system, <code>LATEX</code> engine (<code>latex</code>, <code>pdflatex</code>, <code>xelatex</code>, or <code>lualatex</code>), the filenames of the source code and <code>html</code> output, and whether the additional helper program <code>latexmk</code> will be used to compile the document.)

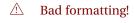


Figure 1: tutorial.tex listing

Note: There are two pages!

```
% Save this as tutorial.tex for the lwarp package tutorial.
\documentclass{book}
\usepackage{iftex}
% --- LOAD FONT SELECTION AND ENCODING BEFORE LOADING LWARP ---
\ifPDFTeX
\usepackage{lmodern}
                                % pdflatex or dvi latex
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\else
\usepackage{fontspec}
                               % XeLaTeX or LuaLaTeX
\fi
% --- LWARP IS LOADED NEXT ---
\usepackage[
   HomeHTMLFilename=index,
                               % Filename of the homepage.
   HTMLFilename={node-},
                               % Filename prefix of other pages.
   IndexLanguage=english,
                               % Language for xindy index, glossary.
    latexmk,
                               % Use latexmk to compile.
% OSWindows,
                               % Force Windows. (Usually automatic.)
    mathjax,
                               % Use MathJax to display math.
]{lwarp}
% \boolfalse{FileSectionNames} % If false, numbers the files.
% --- LOAD PDFLATEX MATH FONTS HERE ---
% --- OTHER PACKAGES ARE LOADED AFTER LWARP ---
\usepackage{makeidx} \makeindex
\usepackage{xcolor}
                                % (Demonstration purposes only.)
\usepackage{hyperref,cleveref} % LOAD THESE LAST!
% --- LATEX AND HTML CUSTOMIZATION ---
\title{The Lwarp Tutorial}
\author{Some Author}
                               % Include subsections in the \TOC.
\setcounter{tocdepth}{2}
\setcounter{secnumdepth}{2}
                               % Number down to subsections.
\setcounter{FileDepth}{1}
                               % Split \HTML\ files at sections
\booltrue{CombineHigherDepths} % Combine parts/chapters/sections
\setcounter{SideTOCDepth}{1}
                               % Include subsections in the side\TOC
\HTMLTitle{Webpage Title}
                               % Overrides \title for the web page.
\HTMLAuthor{Some Author}
                               % Sets the HTML meta author tag.
\HTMLLanguage{en-US}
                               % Sets the HTML meta language.
\HTMLDescription{A description.}% Sets the HTML meta description.
\HTMLFirstPageTop{Name and \fbox{HOMEPAGE LOGO}}
\HTMLPageTop{\fbox{LOGO}}}
\HTMLPageBottom{Contact Information and Copyright}
\CSSFilename{lwarp_sagebrush.css}
\begin{document}
\maketitle
                               % Or titlepage/titlingpage environment.
```

```
% An article abstract would go here.
                                % MUST BE BEFORE THE FIRST SECTION BREAK!
\tableofcontents
\listoffigures
\chapter{First chapter}
\section{A section}
This is some text which is indexed.\index{Some text.}
\subsection{A subsection}
See \cref{fig:withtext}.
\begin{figure}\begin{center}
\fbox{\textcolor{blue!50!green}{Text in a figure.}}
\caption{A figure with text\label{fig:withtext}}
\end{center}\end{figure}
\section{Some math}
Inline math: r = r_0 + vt - \frac{1}{2}at^2
followed by display math:
\begin{equation}
a^2 + b^2 = c^2
\end{equation}
\verb|\begin{warpprint}| & % For print output ... \\
\cleardoublepage % ... a common method to place index entry into TOC.
\phantomsection
\addcontentsline{toc}{chapter}{\indexname}
\end{warpprint}
\ForceHTMLPage
                    % HTML index will be on its own page.
\ForceHTMLTOC
                    \% HTML index will have its own toc entry.
\printindex
\end{document}
```

Table 4: Configuration files created by print version

- tutorial.pdf: The PDF output from LATEX. The print version of the document.
- tutorial_html.tex: A small .tex file used to create a parallel html version of the document, which co-exists with usual the PDF version, and which will have its own auxiliary files. In this way, both PDF and HTML documents may co-exist side-by-side.
- **Auxiliary files:** The usual LATEX files .aux, .log, .out, .toc, .lof, .idx. When an HTML version of the document is created, _html versions of the auxiliary files will also be generated.
- lwarpmk.conf: A configuration file for *lwarpmk*, which is used to automate the compilation of PDF or HTML versions of the document.
- tutorial.lwarpmkconf: Another configuration file used by *lwarpmk*, which is only useful if you wish to have several projects residing in the same directory.
- .css files: lwarp.css, lwarp_formal.css, lwarp_sagebrush.css These files are standard for lwarp, and are not meant to be modified by the user.
- sample_project.css: An example of a user-customized css file, which may be used for project-specific changes to the lwarp defaults.
- lwarp.ist: Used by lwarp while creating an index using makeindex. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp.xdy: Used by lwarp while creating an index using *xindy*. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp_one_limage.txt: For WINDOWS only. Used to process svg images in the background. Copied to lwarp_one_limage.cmd when images are generated.
- lwarp_mathjax.txt: Inserted into the HTML files when MATHJAX is used to display math. Do not modify, see \MathJaxFilename instead.
- comment_*.cut: Temporary files used by lwarp to conditionally process blocks of text. These files may be ignored.

When the lwarpmk option is given to the lwarp package:

lwarpmk.lua: A local copy of the lwarpmk utility.

On Unix-related operating systems this file must be made executable: chmod u+x lwarpmk.lua

This may be useful to have to archive with a project for future use.

5.2 Compiling the print version with *lwarpmk*

The *lwarpmk* utility program is used to compile either the printed or the HTML version of the document.

lwarpmk print is used to recompile a printed version of the document.

- If you have not yet done so, add \usepackage{\lumber{lwarp}} to the document, then compile the project a single time using pdflatex, lualatex, or xelatex. This generates the file lwarpmk.conf, which then allows the lwarpmk program to be used.
- 2. Re-compile the print version:

```
Enter ⇒ lwarpmk print
```

lwarpmk prints an introduction then checks to see if the document must be recompiled. If it seems that the files are up-to-date, then *lwarpmk* informs you of that fact and then exits.

- 3. Make a small change in the original document, such as adding a space character.
- 4. Recompile again.

```
Enter ⇒ lwarpmk print
```

The document is recompiled when a change is seen in the source. Several compilations may be necessary to resolve cross-references.

5. Force a recompile to occur.

```
Enter \Rightarrow lwarpmk again
```

Enter ⇒ lwarpmk print

lwarpmk again updates the date code for the file, triggering a recompile the next time the document is made.⁵

6. Process the index.⁶ ⁷

```
Enter ⇒ lwarpmk printindex
```

7. Recompile again to include the index.

```
Enter ⇒ lwarpmk print
```

8. To force a single recompile when needed, even if no changes were detected:

```
Enter ⇒ lwarpmk print1
```

Note that the HTML customization commands are ignored while making the print version.

⁵Although, when using the utility *latexmk* (introduced later), the changed date is ignored and an actual change in contents must occur to cause a recompile.

 $^{^6}$ The command lwarpmk printglossary is also available to process a glossary produced with the glossaries package. See section 8.6.13.

⁷Also see section 8.6.16 for index options.

5.3 Compiling the HTML version with lwarpmk

lwarpmk html is used to recompile an HTML version of the document.

If you have not yet done so, add \usepackage{\lumber{lwarp}} to the document, then
compile the project a single time using pdflatex, lualatex, or xelatex. This
generates the file lwarpmk.conf, which then allows the lwarpmk program to
be used.

2. Compile the HTML version:

Enter ⇒ lwarpmk html

- (a) *lwarpmk* uses LATEX to process tutorial_html.tex to create tutorial_html.pdf.
- (b) *pdftotext* is then used to convert to the file tutorial_html.html. This file is a plain-text file containing HTML tags and content for the entire document.
- (c) *lwarpmk* manually splits tutorial_html.html into individual HTML files according to the HTML settings. For this tutorial, the result is tutorial.html (the home page), along with First-chapter.html⁸, Some-math.html, and the document's index in _Index.html.⁹
- 3. View the HTML page in a web browser.

Open the file tutorial.html in a web browser.

math images

Note that math images have not yet been generated, so math is still displayed as its alt tag, which is set to the plain-text LATEX source for that expression. Math may be displayed as svG images (section 5.4) or by a MATHJAX script (section 5.5).

4. Force a recompile:

 $Enter \Rightarrow$ lwarpmk again $Enter \Rightarrow$ lwarpmk html $Enter \Rightarrow$ lwarpmk print

5. Process the HTML index and recompile: 1011

Enter ⇒ lwarpmk htmlindex

Enter ⇒ lwarpmk html

_Index.html is updated for the new LATEX index.

- 6. Reload the web page to see the added index.
- 7. To force a single recompile when needed, even if no changes were detected:

 $Enter \Rightarrow lwarpmk html1$

⁸First-chapter.html also contains the first section, even though the second section is its own HTML page. This behavior is controlled by the boolean CombineHigherDepths.

⁹index.html is commonly used as a homepage, so the document index is in _Index.html.

 $^{^{10}}$ The command lwarpmk htmlglossary is also available to process a glossary produced with the glossaries package. See section 8.6.13.

¹¹Also see section 8.6.16 for index options.

Generating the svg images

math as svg images

By default lwarp represents math as svG images, with the LATEX source included in alt attributes. In this way, the math is displayed as it was drawn by LATEX, and the LATEX source may be copied and pasted into other documents.

picture and TikZ lwarp uses the same mechanism for picture and TikZ environments.

1. Create the svg images:

Enter \Rightarrow lwarpmk limages lwarpmk html Enter \Rightarrow

- 2. Move to the tutorial's HTML math page and reload the document in the browser.
- 3. The math images are displayed using the same font and formatting as the printed version.
- 4. Copy/paste a math expression into a text editor to see the LATEX source.

⚠

adding/removing When a math expression, picture, or TikZ environment is added or removed, the svG images must be re-created by entering lwarpmk limages to maintain the proper image-file associations. Inline svg math may be hashed and thus not need to be recreated, but display math and objects such as TikZ may move to new image numbers when the document is changed.

recompile first

Before attempting to create the svg image files, *lwarpmk* verifies that the HTML version of the document exists and has correct internal image references. 12 If it is necessary to recompile the document's HTML version one more time, lwarpmk usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the LATEX recompile warnings.

HTML instead of images

If HTML appears where an svg image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

page counter

Incorrect svg images will also occur if the document changes the page counter:

\setcounter{page}{<value>}

The page counter must *not* be adjusted by the user.

Lots of files!

Expressing math as svG images has the advantage of representing the math exactly as LATEX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, lwarp uses an MD5 hash on its LATEX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as picture and TikZ require one image file each. For a document with a large amount of math, see section 5.5 to use MATHJAX instead.

¹²This becomes important when dealing with a document containing thousands of images.

5.5 Using MATHJAX for math

math with MathJax Math may also be represented using the MathJax Javascript project.

1. In the tutorial's source code, uncomment the mathjax package option for lwarp:

mathjax, % Use MathJax to display math.

2. Recompile

Enter ⇒ lwarpmk html

3. Reload the math page.



MATHJAX requires web access unless a local copy of MATHJAX is available, and it also requires that JAVASCRIPT is enabled for the web page. The math is rendered by MATHJAX. Right-click on math to see several options for rendering, and for copying the LATEX source.

While using MathJax has many advantages, it may not be able to represent complex expressions or spacing adjustments as well as IATEX, and it may not support some math-related packages.

5.6 Changing the css style

For a formal css style, add to the preamble:

```
\usepackage{lwarp}
...
\CSSFilename{lwarp_formal.css}
...
\begin{document}
```

For a modern css style, lwarp_sagebrush.css is also provided:

```
\CSSFilename{lwarp_sagebrush.css}
```

See section 7.7 for more information about modifying the css styling of the document.

5.7 Customizing the HTML output

A number of settings may be made to control the HTML output, including filename generation, automatic compilation, math output, document splitting, meta data, and page headers and footers.

See section 7.6 for more information.

5.8 Using latexmk

latexmk is a LATEX utility used to monitor changes in source files and recompile as needed.

1. In the tutorial's source code uncomment the latexmk option for the lwarp package:

```
latexmk, % Use latexmk to compile.
```

2. Recompile the printed version of the document.

```
Enter ⇒ lwarpmk print
```

lwarp updates its own configuration files (lwarpmk.conf and tutorial.lwarpmkconf) whenever the printed version of the document is compiled. These configuration files remember that lwarpmk should use latexmk to compile the document.

3. Recompile the document.

```
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk print} and/or \operatorname{Enter} \Rightarrow \quad \text{lwarpmk html}
```

Changes are detected by comparing checksums rather than modification times, so lwarpmk again will not trigger a recompile, but *latexmk* has a much better awareness of changes than the *lwarpmk* utility does and it is likely to correctly know when to recompile. A recompile may be forced by making a small change to the source, and a single recompile may be forced with:

forced single-pass recompile

```
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk print1} and/or \operatorname{Enter} \Rightarrow \quad \text{lwarpmk html1}
```

5.9 Using XHIATEX or LualATEX

XHIATEX or LuaIATEX may be used instead of IATEX.

1. Remove the auxiliary files for the project:

```
Enter \Rightarrow lwarpmk cleanall
```

2. Use *xelatex* or *lualatex* to compile the printed version a single time.

```
\operatorname{Enter} \Rightarrow xelatex tutorial.tex -- \operatorname{or} -- \operatorname{Enter} \Rightarrow lualatex tutorial.tex
```

When the compile occurs, the configuration files for *lwarpmk* are modified to remember which TEX engine was used. XHATEX or LualATEX will be used for future runs of *lwarpmk*.

3. To recompile the document:

```
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk print}
-and-
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk html}
```

4. Also remember to update the indexes and recompile again:

```
Enter ⇒ lwarpmk htmlindex
Enter ⇒ lwarpmk html
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk print
```

5.10 Using DVI LATEX

Traditional DVI LaTeX may also be used along with .eps image files. An svG version of each image must also be provided. *lwarpmk* may be used to convert image formats.

To convert EPS files to PDF:

```
Enter ⇒ lwarpmk epstopdf *.eps (or a list of files)
```

To convert PDF files to svg:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of files)
```

bitmapped fonts See section 7.4 regarding font selection to avoid the use of bitmapped fonts.

5.11 Using a bibliography

To process the bibliography for the HTML version:

```
Enter \Rightarrow  bibtex <filename>_html
```

or

```
Enter \Rightarrow  biber <filename>_html
```

To see the bibliography in the нтмL version:

```
Enter ⇒ lwarpmk html1
```

as many times as neccesary.

5.12 Using a glossary

lwarp supports the gloss and glossaries packages, although this tutorial does not supply an example.

5.12.1 gloss package

See section 8.6.12.

5.12.2 glossaries package

To process the glossary for the print version:

```
Enter \Rightarrow  lwarpmk printglossary
```

To process the glossary for the HTML version:

```
Enter \Rightarrow lwarpmk htmlglossary
```

In each case, the document will have to be recompiled afterwards:

```
Enter ⇒ lwarpmk html1
```

 $Enter \Rightarrow lwarpmk html$

Enter ⇒ lwarpmk print1

Enter ⇒ lwarpmk print

See section 8.6.13 to set options for processing glossaries.

5.13 Cleaning auxiliary files

To remove the auxiliary files .aux, .toc, .lof, .lot, .idx, .ind, .log, and .gl*, and a few others:

```
Enter ⇒ lwarpmk clean
```

5.14 Cleaning auxiliary and output files

To remove the auxiliary files, and also remove the .pdf and .html files:

```
Enter ⇒ lwarpmk cleanall
```

5.15 Cleaning the images from the project>-images directory

```
Enter ⇒ lwarpmk cleanlimages
```

5.16 Converting PDF or EPS images to SVG

HTML cannot display PDF or EPS images, so any external PDF graphics images must be converted to svg format. *pdftocairo* and *epstopdf* may be used one image at a time, but *lwarpmk* also provides a way to convert PDF or EPS images in bulk:

```
\operatorname{Enter} \Rightarrow \operatorname{lwarpmk} \operatorname{epstopdf} \star.\operatorname{eps} (or a list of files)
\operatorname{Enter} \Rightarrow \operatorname{lwarpmk} \operatorname{pdftosvg} \star.\operatorname{pdf} (or a list of files)
```

Be sure to always provide svg files for HTML output.

5.17 Creating HTML from an incomplete compile

During testing it may be useful to finish the HTML conversion even when the document had errors and did not compile successfully. To attempt an HTML conversion of an incomplete document:

```
Enter ⇒ lwarpmk pdftohtml [-p project]
```

5.18 Processing multiple projects in the same directory

riangle xr, xr-hyper, xcite

It is possible to have several projects in the same directory. *lwarpmk* has an optional parameter which is the document to compile.

To create each project:

```
Enter ⇒ pdflatex project_a
```

```
Enter ⇒ pdflatex project_b
```

Each project is given its own configuration file:

```
project_a.lwarpmkconf, project_b.lwarpmkconf
```

To compile each project with lwarkmk:

```
Enter ⇒ lwarpmk print -p project_a
```

Enter ⇒ lwarpmk print -p project_b

Enter ⇒ lwarpmk html -p project_a

Enter ⇒ lwarpmk html -p project_b

To generate each project's images:

```
Enter ⇒ lwarpmk limages -p project_a
```

To clean each project's images:

```
Enter \Rightarrow lwarpmk cleanlimages -p project_a
```

Enter ⇒ lwarpmk cleanlimages -p project_b

To clean each project's auxiliary files:

```
Enter ⇒ lwarpmk cleanall -p project_a
```

Enter ⇒ lwarpmk cleanall -p project_b

If using *bibtex*, for example, the HTML version must also be processed:

```
Enter ⇒ bibtex project_a_html
```

5.19 Using the make utility

lwarpmk has an action which may be useful for integration with the common make utility:

```
lwarpmk pdftohtml [-p project]
```

make may be used to compile the code to PDF with HTML tags (project_html.pdf), then *lwarpmk* may be used to convert each target to HTML files.

5.20 What next?

How do I do something? See the General Index.

Something do not work! See the Troubleshooting Index or section 13: Troubleshooting.

Package options: See section 29, Package options.

HTML and filename settings: See section 7.6, Customizing the HTML output.

Footnote placement: See section 7.6, Customizing the HTML output.

Title page, indexing, glossaries: See section 8.6, Front and back matter.

Shell escape: See section 7.3, Shell escape.

css customization: See section 7.7, Customizing the css.

MATHJAX customization: See section 8.7.7, Customizing MATHJAX.

Localization: (languages) — See section 7.1, Localization.

Accessibility: (alt and title tags) — See section 7.2, Accessibility.

Converting an existing document: See section 6, Converting an existing document.

EPUB conversion: See section 10, EPUB conversion.

Word processor conversion: See section 11, Word-processor conversion.

6 Converting an existing document

To convert an existing document for use with lwarp:

- 1. Arrange the document in the following order:
 - (a) Declare the \documentclass.
 - (b) Load text fonts.
 - (c) Load inputenc or inputenx, fontenc, or fontspec.
 - (d) Load lwarp.
 - (e) Load remaining packages.
- 2. Modify the document:
 - (a) If using named HTML files, in section names use paren math \(x+y\) instead of dollar math \$x+y\$. (Dollar math works, but appears in the filename.) Or, use a short name for the TOC entry without the math, or use \texorpdfstring from the hyperref package:

\section{Some math \texorpdfstring{\$1+2=3\$}{three}}

(b) Avoid using the \includegraphics scale option. Change:

```
\includegraphics[scale=<xx>]{ . . . }
```

to:

\includegraphics[width=<yy>\linewidth]{ . . . }

- (c) Possible changes to tabular environments include: * columns, multirow, longtable, supertabular, xtab, bigdelim. See section 8.10.1.
- (d) If using braces in package options, such as with caption, see section 8.1.
- (e) Possible option clashes with memoir. See section 8.13.
- (f) If using indexes, see section 8.6.16.
- (g) If using many indexes, glossaries, .aux files, etc., see section 8.6.16 regarding morewrites. If morewrites is already used, be sure to add the setup with allocate=10.
- (h) Other changes as per Special cases and limitations, section 8.
- 3. Convert any PDF images to svg. See section 8.8.
- 4. Manually compile the print version with *latex*, *pdflatex*, *lualatex*, or *xelatex*.
- 5. lwarpmk print to finish the print version.
- 6. lwarpmk html to create the HTML version.
- 7. lwarpmk limages to create the svG images of any svG math, lateximage, ${
 m Ti}k{
 m Z}$, etc.

Need help?

See the General Index for "how-to", and the Troubleshooting Index if something doesn't work. A Troubleshooting section is also available. The Index of Objects contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.



math in section names



⚠ tabular

 \triangle package options

Table 5: Localization settings

Object names: LATEX provides redefinable names for various objects, and lwarp adds a few more. Use \renewcommand to change these.

\abstractname: This macro is honored by lwarp.

\linkhomename: Displayed by the link to the homepage.

\linkpreviousname: Displayed by the link to the previous page

\linknextname: Displayed by the link to the next page. **\sidetocname:** Displayed at the head of the sidetoc.

HTML settings: See table 8 and section 7.6 for details.

\HTMLLanguage: The language to declare for each web page.

\ImageAltText, \MathImageAltText, \PackageDiagramAltText, \AltTextOpen, \AltTextClose: The defaults used for HTML alt text for images. See section 7.2.

\CSSFilename: The name of the css file to use.

\MathJaxFilename: The name of the MATHJAX script to use.

Package options:

ImagesName and ImagesDirectory: These options control the filenames used by lwarp when it automatically generates images. See table 7 and section 7.5.

xindyStyle, xindyLanguage, xindyCodepage: When using *xindy*, these options may be set according to local use. See section **8.6.22**.

pdftotextEnc: To adjust the encoding of *pdftotext*.

7 Additional details

7.1 Localization

Regional localization is supported by lwarp via the package options and macros shown in table 5.

7.2 Accessibility

lwarp provides several methods for improving access to the document using tools such as text-only browsers, copy/paste, text-to-speech readers, or Braille readers. lwarp can use the HTML alt text attribute for images, as describe below. lwarp can also use the HTML title attribute, which usually generates a pop-up text. lwarp can add this to a reference or hyperlink. lwarp also uses standard HTML5 elements which are pre-assigned ARIA roles for increased accessibility, and lwarp assigns the math role for svg math images, and the note role for footnotes, end notes, margin paragraphs and notes, etc. MATHJAX also has provisions for improved accessibility as well. See table 6.

Table 6: Accessibiltiy settings

\ImageAltText: The default HTML alt text for \includegraphics and lateximages. Set with \renewcommand.

\includegraphics alt key: For \includegraphics, lwarp adds the alt key/ value. For example:

```
\includegraphics[alt={Some text.}]{filename}
```

- **svg math:** For simple svg math, lwarp places the LATEX math expression in the alt text, so that the LATEX expression may be copied and pasted to another document as plain text.
- \MathImageAltText: For complicated svg math, such as enclosed in \InlineMathOther/\InlineMathNormal, or \DisplayMathOther/\DisplayMathNormal, the HTML alt text will be set to \MathImageAltText. Set with \renewcommand.
- **MATHJAX:** For MATHJAX, the accessibility tools provided by MATHJAX are enabled by default by lwarp's MATHJAX scripts.
- **\PackageDiagramAltText:** Various packages create diagrams which lwarp converts into svg images. These are given alt text set to \PackageDiagramAltText. Set with \renewcommand.
- **\ThisAltText:** The HTML alt text of the next image may be set with:

```
\ThisAltText{Custom text about the image.}
<SVG math, Tikz, picture, etc.>
```

The next single image will be generated with the given text, and the following images will revert to back to their defaults.

 $\verb|\ThisAltText| may also be used to assign an \verb|\HTML| title to the next reference or hyperlink.$

```
\ThisAltText{Custom text about the link.}
Text ... \ref{label_name} ... text.
```

See section 7.6.

\AltTextOpen and \AltTextClose: By default, HTML alt text is enclosed by parentheses. This may be changed by redefining \AltTextOpen and \AltTextClose. Set with \renewcommand.

Shell escape 7.3

 $-\/-$ shell-escape (Opt)

Some documents require the use of an external program, which is allowed when using the --shell-escape command-line option. When the document is first compiled manually, and also whenever the print version is recompiled, lwarp detects and remembers whether shell escape is enabled. If so, it will also be enabled when the document is recompiled with *lwarpmk*.

7.4 Font and UTF-8 support

type 3 bitmapped fonts

lwarp uses pdftotext to convert PDF output into UTF-8-encoded text. This process requires that UTF-8 information be embedded in the PDF file, which may prevent the use of older "type 3" bit-mapped fonts, and of older packages such as ae. The lwarp option pdftotextEnc may be useful in some situations. See section 7.5.

vector fonts Computer Modern

pdflatex

DVI latex cm-super (Pkg) While using DVI latex or PDF pdflatex, if no font-related package is specified then the default Computer Modern font is used, which may be a "type 3" bit-mapped font which may not convert well to plain text. A "type 1" vector font is required.

To use the updated cm-super's type 1 fonts instead of Computer Modern, install the cm-super font package.

lmodern (Pkg)

To use Latin Modern instead, add

\usepackage{lmodern}

to the preamble.

dejavu (Pkg)

Another useful option is the Deja Vu series of fonts, which have an increased coverage of language and glyphs:

\usepackage{dejavu}

latex, pdflatex, T1, UTF8

While using DVI latex or PDF pdflatex, lwarp automatically loads fontenc with T1 encoding, fontenc may be loaded with an additional encoding after lwarp, inputenc is automatically loaded with UTF8 encoding if it has not yet been loaded, but may also be specified with another encoding such as latin1. See the next section regarding index encoding.

xelatex, lualatex, fontspec

XHATEX and LualATEX users must use the fontspec package. Do NOT use fontenc!

Place fontspec or fontenc, xunicode, and other font and UTF-8 related commands after the \documentclass command and before \usepackage{\lwarp}.

package conflicts

In some cases, a package conflict may require that a font package be loaded after lwarp, which should work as well:

- 1. documentclass{article/book/report} comes first, followed by any of:
- 2. Font and UTF-8 related commands:
 - For XalateX or LualateX:
 - fontspec and font choices

lwarp sets the following to turn off TEX ligatures during the generation of HTML tags, and turn off common ligatures in regular text,

fontspec (Pkg)

ligatures

> since older browsers may not display them correctly and newer browsers can automatically re-create them.

\defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}} \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}} \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}

• For pdflatex:

- (a) \usepackage{lmodern}, or other font-related packages
- (b) \usepackage[T1]{fontenc}
- (c) \usepackage[utf8]{inputenc}, or latin1, etc. Or use inputenx.
- (d) \usepackage{newunicodechar} along with related definitions.
- (e) To assist with the PDF-HTML conversion:
 - i. \input glyphtounicode.tex
 - ii. \input glyphtounicode-cmr.tex% from the pdfx package
 - iii. \pdfgentounicode=1
- (f) Another option to assist with the PDF-HTML conversion, such as the dotless $j(\j)$:
 - \usepackage{cmap} — or —
 - \usepackage{mmap} __ or __
 - \usepackage[noTeX]{mmap}
- (g) \usepackage{textcomp}
- 3. \usepackage{newtxmath} or other math-related font packages. Many of these load amsmath, which may now be loaded before lwarp.
- 4. \usepackage{\lwarp} (section 7.5) is placed after any of the above, followed by:

 ⚠ fontspec with monospaced fonts

5. \setmonofont{TeX Gyre Cursor} or similar may be required if using X¬TATEX or LuaIATEX and fontspec along with traditional font packages such as txfonts, newtxtext, etc. This is required to turn off the monospaced font's ligatures with fontspec after loading the traditional font packages. Monospaced output ligatures must be turned off to produce the correct HTML characters. Any monospace font with built-in ligatures may require these ligatures to be

disabled for HTML. In one example, JETBRAIN MONO, it is required to use

\setmonofont{JetBrains Mono}[%

Contextuals=AlternateOff,

After lwarp is loaded, the ligature may be re-enabled for print mode by using \setmonofont again inside a warpprint environment.

6. ... the rest of the preamble and the main document.

UTF-8 locale In some cases, an external program may require a UTF-8 "locale". See section 9.9.

7.4.1 Indexes, glossaries, and encoding

lwarp supports makeindex, xindy, xindex, and glossaries, gloss, and nomencl.

See section 8.6.15 for indexing, and section 8.6.13 for the glossaries package.

lmodern(Pkg)fontenc (Pkg)

inputenc (Pkg)

inputenx (Pkg)

newunicodechar (Pkg)

glyphtounicode.tex(file)

dotless j cmap(Pkg)

mmap(Pkg)

textcomp(Pkg)

JETBRAIN MONO HTML corrupted

lwarp package loading and options **7.5**

lwarp supports book, report, and article classes, as well as the equivalent Komascript classes and memoir, and various CJK-related classes and packages.

Load the lwarp package immediately after the font and UTF-8 setup commands.

Package options may be set while loading lwarp, or later with

\lwarpsetup{\key=value, ...\}

lwarp(Pkg)lwarp package options are as follows:

mathsvg and mathjax: Selects svg images or MATHJAX for math display. See secmathsvg(Opt)tion 8.7. mathjax(Opt)

Default: mathsvg

latexmk: Tells *lwarpmk* to use *latexmk* to recompile the document several times if latexmk(Opt)necessary. Otherwise, lwarpmk attempts to determing for itself whether to Default: false recompile. See section 7.6.

dvips: Tells lwarpmk to use dvips and ps2pdf to convert DVI output to PDF. dvips(Opt)

Default: false

dvipdfm (*Opt*) **dvipdfm:** Tells *lwarpmk* to use *dvipdfm* to convert DVI output to PDF.

Default: false

dvipdfmx: Tells *lwarpmk* to use *dvipdfmx* to convert DVI output to PDF. dvipdfmx(Opt)

Default: false

HomeHTMLFilename (Opt)HomeHTMLFilename:

Default: \BaseJobname

Filename of the homepage, without the ".html" suffix. Defaults to the \BaseJobname. A common setting is:

HomeHTMLFilename=index

filename underscores

causing the homepage to be the file index.html. Underscores are allowed in HomeHTMLFilename and HTMLFilename options, but may need to be escaped elsewhere, such as when appearing in a list:

```
\item [\href{file\_name.pdf}{text}] \
```

See section 7.6.1 for examples of naming and numbering HTML files.

Default: <empty>

HTMLFilename (Opt) HTMLFilename: A filename prefix for the rest of the HTML web pages. Useful for numbered web pages with a common prefix. May be empty. See section 7.6.1 for examples of naming and numbering HTML files.

ImagesName (Opt)Default: image**ImagesName:** The prefix for the images automatically generated by lwarp for objects such as svg math and lateximages.

ImagesDirectory(Opt)Default: \jobname-images

ImagesDirectory: The directory for the images automatically generated by lwarp for objects such as svg math and lateximages. By default, these images will appear in a directory named <jobname>-images, and the images will be named and numbered image-<nn>.

Table 7: Lwarp package options

Option	Description
mathsvg	Show math using svg images.
mathjax	Show math using MATHJAX.
latexmk	Use <i>latexmk</i> for compiling documents.
dvips	Use <i>dvips</i> and <i>ps2pdf</i> to convert DVI documents.
dvipdfm	Use <i>dvipdfm</i> to convert DVI documents.
dvipdfmx	Use <i>dvipdfmx</i> to convert DVI documents.
HomeHTMLFilename	The filename of the home page.
HTMLFilename	A prefix for the filenames of the remaining web pages.
ImagesName	A prefix for the filenames of generated images.
ImagesDirectory	The directory used to hold generated images.
PrintLatexCmd	The shell commands for lwarpmk print.
HTMLLatexCmd	The shell commands for lwarpmk html.
For indexing (section 8.6.16) and glossaries (section 8.6.13):	
makeindex	Use makeindex to generate indices.
makeindexStyle	Set a custom style for makeindex.
xindy	Use xindy to generate indices.
xindyStyle	Set a custom style for <i>xindy</i> .
xindyLanguage	The <i>xindy</i> language option used for index generation.
xindyCodepage	The <i>xindy</i> codepage option used for index generation.
xindex	Use xindex to generate indices.
xindexConfig	Set a custom configuration file for xindex.
PrintIndexCmd	Shell commands executed by lwarpmk printindex.
HTMLIndexCmd	Shell commands executed by lwarpmk htmlindex.
LatexmkIndexCmd	Shell commands executed by <i>latexmk</i> .
IndexRef	How to format index links.
GlossaryCmd	Shell command executed by lwarpmk printglossary and lwarpmk htmlglossary.
Seldom necessary:	
OSWindows	Force compatibility with MS-WINDOWS.
pdftotextEnc	Set the encoding for <i>pdftotext</i> .
lwarpmk	Generate a local copy of lwarpmk.lua.
Used internally by lwarp:	
warpprint	Generate print output, and also generate configuration files.
warpHTML	Generate HTML output.
BaseJobname	The \jobname to use. Set to the \jobname of the printed version even while generating HTML.
warpdisable	Disables most of lwarp for testing purposes.

Default: <automatic>

PrintLatexCmd (Opt) PrintLatexCmd: Sets the shell commands executed by Lwarpmk print. If not specified, will automatically be set according to the detected LATEX engine and the use of --shell-escape.

Default: <automatic>

HTMLLatexCmd (Opt) HTMLLatexCmd: Sets the shell commands executed by lwarpmk html. If not specified, will automatically be set according to the detected LATEX engine and the use of --shell-escape.

Default: makeindex

makeindex (Opt) makeindex: Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use makeindex when generating indexes with lwarpmk printindex, lwarpmk htmlindex, or *latexmk*. If neither makeindex nor xindy is used, makeindex is assumed.

Default: lwarp.ist

makeindexStyle (Opt) makeindexStyle: If you wish to use a custom .ist file for index generation, see section 8.6.21.

Default: makeindex

xindy (Opt) xindy: Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use xindy when generating indexes with lwarpmk printindex, lwarpmk htmlindex, or latexmk.

Default: lwarp.xdy

xindyStyle (Opt) xindyStyle: If you wish to use a custom .xdy file for index generation, see section 8.6.22.

xindyLanguage (Opt) xindyLanguage: If using an index or glossary, see section 29.

Default: english

xindyCodepage (Opt) xindyCodepage: If using an index, see section 29.

Default: utf8

Default: makeindex

xindex (Opt) xindex: Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use xindex when generating indexes with lwarpmk printindex, lwarpmk htmlindex, or latexmk.

Default: <empty>

xindexConfig (Opt) xindexConfig: If you wish to use a custom xindex-*. lua file for index generation, see section 8.6.23.

Default: <automatic>

PrintIndexCmd (Opt) PrintIndexCmd: Sets the shell commands executed by lwarpmk printindex. If not specified, will be set by the selection of makeindex or xindy. May be used to specify the creation of multiple indexes. See section 8.6.16.

Examples:

```
makeindex -s lwarp.ist projectname.idx
                                                    (makeindex)
xindy -M lwarp.xdy -L english -C utf8 projectname.idx
                                                         (xindy)
```

automatic setting

The use of the makeindex or xindy options sets PrintIndexCmd to sensible values for each of those programs while compiling a single index. lwarp's makeindexStyle, xindyStyle, xindyLanguage, and xindyCodepage options will be used if specified.

 \triangle xindy

If specifying PrintIndexCmd manually, be sure to assign an xindy language and codepage with the -L and -C xindy options, as the lwarp xindyLanguage and xindyCodepage options are not used for the PrintIndexCmd option when it is set manually.

This option is stored in the configuration files lwarpmk.conf and *.lwarpmkconf, and is then passed by the lwarpmk printindex command to the operating system to compile the print indexes. Since the command string is parsed by T_FX, written to a file, read from the file by LuaT_FX, and finally passed to the operating system, any attempt at quoting will be problematic. For complicated commands, it would be best to create a shell script, and simply refer to the script with the lwarp PrintIndexCmd option.

Default: <automatic>

HTMLIndexCmd (Opt) HTMLIndexCmd: Sets the shell commands executed by lwarpmk htmlindex. If not specified, will be set by the selection of makeindex or xindy. May be used to specify the creation of multiple indexes. See section 8.6.16.

filenames

Example settings are similar to PrintIndexCmd, but append _html to the filenames:

```
makeindex -s lwarp.ist projectname_html.idx
                                                   (makeindex)
xindy -M lwarp.xdy -L english -C utf8 projectname_html.idx
(xindy)
```

automatic setting

The use of the makeindex or xindy options sets HTMLIndexCmd to sensible values for each of those programs while compiling a single index. lwarp's makeindexStyle, xindyStyle, xindyLanguage, and xindyCodepage options will be used if specified.

xindy

If specifying HTMLIndexCmd manually, be sure to assign an xindy language and codepage with the -L and -C xindy options, as the lwarp xindyLanguage and xindyCodepage options are not used for the HTMLIndexCmd option when it is set manually.

As with PrintIndexCmd, to generate complicated indexes it may be worthwhile to use a shell script, then refer to that script with HTMLIndexCmd.

Default: <automatic>

LatexmkIndexCmd (Opt) LatexmkIndexCmd: Sets the shell commands executed by latexmk. Unlike PrintIndexCmd and HTMLIndexCmd, LatexmkIndexCmd does not include any filenames, which will be provided instead by *latexmk*. See section 8.6.16.

Example settings are similar to PrintIndexCmd, but without a filename:

```
(makeindex)
makeindex -s lwarp.ist
xindy -M lwarp.xdy -L english -C utf8
                                                          (xindv)
```

automatic setting

The use of the makeindex or xindy options sets LatexmkIndexCmd to either of the two settings show above. lwarp's makeindexStyle, xindyStyle, xindyLanguage, and xindyCodepage options will be used if specified. Unlike PrintIndexCmd and HTMLIndexCmd, latexmk uses either of the single-line settings of LatexmkIndexCmd shown above to compile each of multiple indexes if necessary.

xindy

If specifying LatexmkIndexCmd manually, be sure to assign an xindy language and codepage with the -L and -C xindy options, as the lwarp xindyLanguage and xindyCodepage options are not used for the LatexmkIndexCmd option when it is set manually.

Default: cref

IndexRef (Opt) IndexRef: Describes how to display the index entries for HTML output. Possible values are ref, nameref, refnameref, cref, crefnameref, autoref, or a text string such as (link) or (*) for each index entry reference. (Adding parentheses around a single character makes the link larger and easier to click on.) The default is cref, which is available even if the print document does

not use cleveref, as the lwarp package relies on cleveref during HTML output. Option autoref gives the same results as cref.

\ref and \cref to starred or otherwise unknown links will display as (*) instead of ??.

 \triangle ?? If using cref (the default), and if a reference appears as ?? with a nonfunctional link, use cleveref's \crefname to give a name to that type of label.

In general, crefnameref gives the most information, but the index can become quite verbose. Using (*) or similar yields a very compact index.

GlossaryCmd (Opt) Default: makeglossaries

GlossaryCmd: Sets the shell command executed by lwarpmk printglossary and lwarpmk htmlglossary. The print or HTML glossary filename is appended to this command. See section 8.6.13.

OSWindows (Opt) OSWindows: lwarp attempts to automatically sense WINDOWS, but it may be forced with this option. See section 7.9.

Default: UTF-8

pdftotextEnc (Opt) pdftotextEnc: Used to specify the encoding used by pdftotext during the PDF-HTML conversion. In most situations, the default is the correct choice.

lwarpmk (Opt) lwarpmk: If you wish to have lwarp generate a local copy of lwarpmk. Lua for archival or local-installation purposes, compile the print version with the lwarpmk option set. See section 29.

> The following options are used internally by lwarp, and usually are not used in the user's document:

warpHTML (Opt)

warpprint (Opt) warpprint and warpHTML: Usually controlled by lwarpmk, and not set in the document. Select the warpprint option to generate print output (default), or the warpHTML option to generate HTML5 output. The default is print output, so the print version may be compiled with the usual pdflatex, etc. When lwarp is loaded in print mode, it creates <project>_html.tex, which sets the warpHTML option before calling the user's source code project>.tex. In this way, <project>. tex can \usepackage{lwarp} without any options to create a printed version, while <project>_html.tex will create an нтмL version.

BaseJobname (Opt)Default: \jobname

BaseJobname: Not intended for the user. Used internally by lwarp when creating the *_html . tex file used to compile the HTML version. See section 29.

warpdisable (Opt) warpdisable: Internally disables both warpprint and warpHTML. This disables most of lwarp, which may be useful for testing purposes to see whether lwarp is causing a problem.

7.6 Customizing the HTML output

⚠ Placement!

Table 8 shows several settings may be used to customize the HTML output. Watch for the correct placement of each!

Note that if changes are made, it is best to first:

1. Clear all the HTML, PDF, and auxiliary files:

Enter ⇒ lwarpmk cleanall

2. Recompile the print version in order to recreate the configuration files for *lwarpmk*:

Enter ⇒ lwarpmk print

3. Finally, recompile the HTML version with the new settings:

Enter ⇒ lwarpmk html

Placed in the preamble before \begin{document}:

\HTMLFirstPageTop

Default: <empty>

\HTMLFirstPageTop: $\{\langle contents \rangle\}$ A user-definable custom action applied to the top of the home page. Useful for logos, etc. \LinkNext may be used to link to the next web page. Defaults empty. Ignored in print output.

\HTMLFirstPageBottom
Default: <empty>

\HTMLFirstPageBottom: {\langle contents \rangle} A user-definable custom action applied to the bottom of the home page. Useful for logos, etc. \LinkNext may be used to link to the next web page. Defaults empty. Ignored in print output.

\linkhomename Default: Home **\linkhomename:** Name of the link to the home page. Paragraphs are allowed. Redefine with \renewcommand.

\linkpreviousname
Default: Previous

\linkpreviousname: Name of the link to the previous page. Paragraphs are allowed. Redefine with \renewcommand.

\linknextname
Default: Next

\linknextname: Name of the link to the next page. Paragraphs are allowed. Redefine with \renewcommand.

tocdepth (Ctr)

tocdepth: Sectioning depth of the table of contents. See section 16 for a list of LATEX stack depths.

SideTOCDepth (*Ctr*)

Default: 1

SideTOCDepth: Sectioning depth of the sideToc. Defaults to 1, causing the sideToc to show sections but not subsections.

sideтос

Each subpage of the website has its own small table of contents on the side (the "sidetoc"). Its depth is set by SideTOCDepth. This sidetoc is only shown if the browser display is wide enough. When using a narrow web browser window, "responsive web design" is used to show the sidetoc at the top of the page, as well as a link back to **Home** at the top and bottom.

It is recommended to set:

SideTOCDepth = FileDepth

Table 8: HTML settings

Macro/Cntr/Bool	Loc*	Description
\linkhomename	P	Name of the link to the homepage.
\linkpreviousname	P	Name of the link to the previous page.
\linknextname	P	Name of the link to the next page.
SideTOCDepth	P	Sectioning depth of the sidetoc.
\sidetocname	P	Name of the sideroc.
FileDepth	P	Sectioning depth of the file splits.
CombineHigherDepths	P	Combine higher section levels.
FileSectionNames	P	Use section names for file names, else use numbers.
\FilenameLimit	P	Maximum length of the generated filenames.
FootnoteDepth	P	Sectioning depth of footnotes.
\abstractname	P	The name of the abstract.
\ImageAltText	PD	\includegraphics and other images' alt tag.
$ThisAltText {\langle text \rangle}$	PD	Assigns an alt/title tag for the next image or link.
\MathImageAltText	PD	The svg math image lateximage alt tag.
\PackageDiagramAltText	PD	The suffix for a package's lateximage alt tags.
\AltTextOpen	PD	Start an HTML alt tag.
\AltTextClose	PD	End an нтмL alt tag.
\CSSFilename	PS	The css for the following files.
\MathJaxFilename	PS	The MathJax script for the following files.
\HTMLLanguage	PS	The нтмL lang tag.
\HTMLTitle	PS	The homepage's <title>, overriding \title.</td></tr><tr><td>\HTMLTitleBeforeSection</td><td>PS</td><td>Set subpage <title>s to
\HTMLTitle - sectionname</td></tr><tr><td>\HTMLTitleAfterSection</td><td>PS</td><td>Set subpage <title>s to
sectioname - \HTMLTitle</td></tr><tr><td>\HTMLAuthor</td><td>PS</td><td>The HTML author meta tag, overriding \author.</td></tr><tr><td>\HTMLDescription</td><td>PS</td><td>The HTML meta description tag.</td></tr><tr><td>\HTMLKeywords</td><td>PS</td><td>The HTML meta keywords tag.</td></tr><tr><td>\HTMLMeta</td><td>PS</td><td>Clear and set the custom meta tag.</td></tr><tr><td>\HTMLAddMeta</td><td>PS</td><td>Add another meta tag.</td></tr><tr><td>\HTMLFirstPageTop</td><td>P</td><td>Heading for the home page.</td></tr><tr><td>\HTMLFirstPageBottom</td><td>P</td><td>Footer for the home page.</td></tr><tr><td>\HTMLPageTop</td><td>PS</td><td>Heading for the other pages.</td></tr><tr><td>\HTMLPageBottom</td><td>PS</td><td>Footer for the other pages.</td></tr><tr><td>\HTMLnewcolumntype</td><td>D</td><td>\newcolumntype for HTML.</td></tr><tr><td>\IndexPageSeparator</td><td>P</td><td>Index page list separator.</td></tr><tr><td>\IndexRangeSeparator</td><td>P</td><td>Index page range separator.</td></tr><tr><td>FixSmallCaps</td><td>P</td><td>Set true if small caps rendered as all caps.</td></tr><tr><td>HTMLDebugComments</td><td>P</td><td>Boolean to generate HTML comments.</td></tr><tr><td></td><td></td><td></td></tr></tbody></table></title>

^{*} **P:** Preamble, **D:** Anywhere in the document. **S:** Before a section.

SideTOCDepth = FileDepth+1

inaccessible pages

If SideTOCDepth < FileDepth, web pages will be inaccessible via the sidetoc.

\sidetocname Default: Contents **\sidetocname:** Name of the sidetoc. Paragraphs are allowed. Redefine with \renewcommand.

FileDepth (Ctr) Default: -5 **FileDepth:** Sectioning depth of file splits. Defaults to -5, causing the entire HTML website to be one single file.

- To place the entire file into one HTML page, use: \setcounter{FileDepth}{-5}
- To split the HTML file at \section depth, use: \setcounter{FileDepth}{1}
- To ensure that the HTML pages/files are accessible: Place a \tableofcontents somewhere before the first section break (therefore in the "home page"), and set tocdepth >= FileDepth

 Λ

CombineHigherDepths: Combine a higher section with its first lower subsections, down to the FileDepth. Defaults to true. Set to false to simulate the concept of a chapter opening on its own page, for example.

The file splits are controlled by the counter FileDepth and the boolean CombineHigherDepths. Setting FileDepth to 0 splits the file at chapters, 1 at sections, etc. CombineHigherDepths controls whether to combine pages at levels higher than the chosen FileDepth, such as in this tutorial where the page which opens the chapter also contains the first section. Be careful to set tocdepth and SideTOCDepth to allow access to each page of the website. Set tocdepth and SideTOCDepth to be greater than or equal to FileDepth.

When making changes to the file structure, it is possible to end up with the web browser pointing to an old file which is no longer in use. When this occurs, changes to the web site will not appear in the browser, even if reloading the page, because that page is no longer in use. It is best to return to the home page, clean the files (lwarpmk cleanall), change FileDepth and/or CombineHigherDepths, then finally recompile and

renavigate to the desired page using the new file structure. FileSectionNames: If true, web page filenames are derived from a sanitized version of the section names. If false, web pages are numbered. Either way, the HTMLFilename option is used as a prefix. See section 7.6.1 for examples of naming and numbering HTML files. The user must ensure that filenames are unique after being sanitized. For example, math in the section name is removed before creating the filename, so the rest

\FilenameLimit: The maximum length of the filenames generated by lwarp. ".html" is added to this length. Redefine with \renewcommand.

of the filename must be sufficiently unique to avoid name collisions.

FootnoteDepth: Determines where to place pending footnotes. 3 places footnotes before each break down to the \subsubsection level. 1 places footnotes before each \section break. Any pending footnotes are also placed at the bottom of each page before each file break.

FixSmallCaps: Set true if SMALL CAPS are rendering in all caps ("SMALL

CombineHigherDepths (bool)

Default: true

Inaccesible pages!

Lost in an old page!

FileSectionNames (bool) Default: true

Unique filename!

\FilenameLimit Default: 80

FootnoteDepth (Ctr) Default: 3

FixSmallCaps (bool)

Default: false

CAPS"). May be required for some fonts (erewhon, utopia, fbb, et al.), and packages such as embrac.

HTMLDebugComments (bool)

Default: false

HTMLDebugComments: Set true to generate HTML comments, such as which section or <div> is being opened or closed.

\abstractname
Default: Abstract

\abstractname: The name of the abstract. This may also be over-written by the babel package. Defaults to "Abstract". Redefine with \renewcommand.

\IndexPageSeparator

Default: ", "

\IndexPageSeparator: Index page list separator. Adjust to match index style file. If using gindex, this is set automatically to gindex's \indexpagessep.

\IndexRangeSeparator
Default: "--"

\IndexRangeSeparator: Index page range separator. Adjust to match index style file. If using gindex, this is set automatically to gindex's \indexrangesep.

Placed before \begin{document}, or before any sectioning command which causes a file break:

\CSSFilename
Default: lwarp.css

\CSSFilename: {\langle filename.css\rangle \} Sets the css file to use for the following files. May be changed before each sectioning command which would cause a file split.

The css styles of the web pages are set by the \CSSFilename command. If \CSSFilename is not used, a default plain style is used to mimic printed LATEX output. lwarp_sagebrush.css is a semi-fancy colored style as shown in this tutorial. Change it to lwarp_formal.css for a more formal look, or comment out the \CSSFilename command to see the default. \CSSFilename may be used before each file break to set the css for individual pages of the website.

 $\label{lem:mathjaxFilename} $$ \operatorname{Default: lwarp_mathjax.txt} $$ $$$

\MathJaxFilename: {\langle filename \rangle \} Sets the MathJax script file to use for the following files. May be changed before each sectioning command which would cause a file split.

The MathJax script file is copied into the head of each html file. This may be used to point to a local repository, add extensions, or change the script somewhere in the middle of the document. \MathJaxFilename may be used before each file break to set the script file for individual pages of the website.

\HTMLLanguage
Default: en-US

\HTMLLanguage: $\{\langle langauge \rangle\}$ The HTML file's HTML lang meta tag. Defaults to en-US.

\HTMLTitle
Default: \thetitle

\HTMLTitle: $\{\langle title \rangle\}$ Overrides \title for the HTML header's meta title. Defaults to \thetitle, which is set by \title, or empty otherwise. Unlike the author, \thetitle is set by \title even if not using the titling package.

\HTMLTitleBeforeSection
Default: \HTMLTitleBeforeSection

\HTMLTitleBeforeSection: Sets subpage <title> tags to show the website title followed by the section name.

 \HTMLTitleAfterSection

\HTMLTitleAfterSection: Sets subpage <title> tags to show the section name followed by the website title.

custom <title>

To customize subpage <title>s, redefine \land theHTMLTitleSection, which defaults to:

```
\def\theHTMLTitleSection{%
  \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
}
```

\HTMLAuthor
Default: \theauthor

\HTMLAuthor: {\(\author\)\} The HTML header's meta author. Defaults to \\theauthor, which is set by \\author if using the titling package, but is empty otherwise. There are several ways to represent the author and affiliations, especially if using the autholk package, most of which do not result in a sensible \\theauthor, so \\HTMLAuthor is useful to create a list of authors without their affiliations.

\HTMLDescription
Default: <empty>

\HTMLDescription: $\{\langle description \rangle\}$ Sets the HTML description tag for the following files. May be changed before each sectioning command which would cause a file split.

\HTMLKeywords
Default: <empty>

\HTMLKeywords: $\{\langle keywords \rangle\}$ Sets the HTML keywords tag for the following files. May be changed before each sectioning command which would cause a file split.

\HTMLMeta
Default: <empty>

\HTMLMeta: $\{\langle name \rangle\}$ $\{\langle contents \rangle\}$ Clears then sets a new user-definable custom meta tag used for the following pages. Replaces any prior custom meta tags previously set by \HTMLMeta and \HTMLAddMeta.

\HTMLAddMeta
Default: <empty>

\HTMLAddMeta: $\{\langle name \rangle\}$ $\{\langle contents \rangle\}$ Add to the user-definable custom meta tags for the following pages. May be used more than once to add multiple tags. Use \HTMLMeta to empty and start over with a new tag.

\HTMLPageTop
Default: <empty>

\HTMLPageTop: {\langle contents\rangle} A user-definable custom action applied to the top of pages other than the home page. Useful for logos, etc. Defaults empty. \LinkHome may be used to place a link back to the homepage, as well as \LinkPrevious and \LinkNext. Ignored in print output.

\HTMLPageBottom
Default: <empty>

\https://decomposition.com/html/PageBottom: {\langle contents\rangle} A user-definable custom action applied to the bottom of pages other than the home page. Useful for authors, copyright notices, contact information, etc. Defaults empty. \LinkHome may be used to place a link back to the homepage, as well as \LinkPrevious and \LinkNext. Ignored in print output.

\LinkHome

\LinkHome: Creates a link to the home page. Usually used in \HTMLPageTop and related.

\LinkPrevious

\LinkPrevious: Creates a link to the previous HTML page, unless already at the home page. Usually used in \HTMLPageTop and related.

\LinkNext

\LinkNext: Creates a link to the next HTML page, unless already at the end. Usually used in \HTMLPageTop and related.

Placed in the home page before the first sectioning command which causes a file break:

\tableofcontents

TOC on the homepage!

\tableofcontents: Used to place a table of contents on the home page. This command must be used before the first file split, so that a way is available to navigate to other files from the homepage.

Links to each chapter/section are provided, as selected by tocdepth.

Placed in the document wherever necessary:

\ImageAltText
Default: image

\ImageAltText: Redefine with \renewcommand. \includegraphics and other images are assigned an HTML alt tag according to \ImageAltText along with \AltTextOpen and \AltTextClose. This text is visible in the

browser if images are not loaded, and appears when the text is copied and pasted. The default is "image", and it may be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following \includegraphics and other images.

\ThisAltText

\ThisAltText: {\langle text \rangle} \ThisAltText can be used to assign an HTML alt text attribute to the next image generated by a lateximage, picture, tikzpicture, or any other similar environment which generates an image, or the next svg math expression. This tag is cleared after use. The tag is also cleared after each MATHJAX expression, in case the user changes between svg math and MATHJAX.

\ThisAltText also may be used to add an HTML title to a reference or hyperlink, such as a \ref, \cref, \href, \url, \hyperref, or \hyperlink. In each case, the alternative text is cleared after use.

\MathImageAltText
Default: math image

\MathImageAltText: Redefine with \renewcommand. When creating an svg math image, its HTML alt tag may be set to the math expression, which may be hashed for image reuse. In the case of \ensuremath or after \inlinemathother, where the contents require a unique image for each instance of the same expression, the alt tag is set to \MathImageAltText, along with \AltTextOpen and \AltTextClose, and the image is not reused.

This alt expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "math image", and it may be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following svg math images.

\PackageDiagramAltText
Default: diagram

\PackageDiagramAltText: Redefine with \renewcommand. For many packages, the output is placed inside a lateximage with an HTML alt tag set to the package name followed by \PackageDiagramAltText. For example:

(-xy- diagram)

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "diagram", and may it be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.

\AltTextOpen

Default: (
\AltTextClose

Default:)

\AltTextOpen: Redefine with \renewcommand.

\AltTextClose: Redefine with \renewcommand. HTML alt text is enclosed by the macros \AltTextOpen and \AltTextClose, which default to an opening and closing parenthesis.

\HTMLnewcolumntype

\HTMLnewcolumntype: \newcolumntype may not always work with lwarp for HTML output, since it often involves TEX boxes and fills. To provide a simplified column type for HTML, add \HTMLnewcolumntype in addition.

warpprint (env.)

warpprint: An environment which is only used while generating print output. Place inside anything which does not apply to HTML and which may cause problems with lwarp. If lwarp knows about and emulates or supports a package then its related macros, lengths, counters, etc. probably won't have to be placed inside a warpprint environment, but

unknown packages may cause problems which may be isolated from lwarp using this environment.

 \triangle

Do not place anything else on the same line as \end{warpprint}. Also do not nest warpprint inside itself.

warpHTML (env.)

warpHTML: An environment which is only included while generating HTML output. This is useful for website logos and other items which have no purpose in printed output.

 \triangle

Do not place anything else on the same line as \end{warpHTML}. Also do not nest warpHTML inside itself.

\warpprintonly

\warpprintonly: $\{\langle contents \rangle\}$ A macro version of the warpprint environment.

\warpHTMLonly

\warpHTMLonly: $\{\langle contents \rangle\}$ A macro version of the warpHTML environment.

7.6.1 Example HTML file naming

Examples of ways to name or number HTML files:

Numbered HTML nodes:

Example: Homepage index.html, and node-1, node-2. 13

```
\usepackage[
    HomeHTMLFilename=index,
    HTMLFilename={node-}
]{lwarp}
\boolfalse{FileSectionNames}
```

Named HTML sections, no prefix:

Example: index.html, and About.html, Products.html

```
\usepackage[
    HomeHTMLFilename=index,
    HTMLFilename={}
]{lwarp}
\booltrue{FileSectionNames}
```

Named HTML sections, with prefix:

Example: Homepage mywebsite.html, and additional pages such as mywebsite-About.html, mywebsite-Products, etc.

```
\usepackage[
    HomeHTMLFilename=mywebsite,
    HTMLFilename={mywebsite-}
]{lwarp}
\booltrue{FileSectionNames}
```

 $^{^{13}\}mbox{See}$ \SetHTMLFileNumber to number in groups by chapter, for example.

7.7 Customizing the css

\CSSFilename
Default: lwarp.css

 $\{\langle filename \rangle\}$

\CSSFilename may be used to choose which .css file is used to display each page of the web site. Use \CSSFilename before \begin{document} to assign the style of the home page. If different parts of the website should have different styles, call \CSSFilename again before each section heading which creates a new file. This may be changed numerous times throughout the file, resulting in different HTML pages having different css files assigned:

```
...
\CSSFilename{myCSS.css}
\chapter{Another Chapter}
```

The styles provided by lwarp include:

lwarp.css: A default style if \CSSFilename is not used. This style is comparable to
 a plain LATEX document. To set this style, you may use \CSSFilename{lwarp.css},
 or no \CSSFilename call at all.

lwarp_formal.css: A formal style with a serif fonts and a traditional look.

lwarp_sagebrush.css: A style with muted colors, gradient backgrounds, additional borders, and rounded corners.

To see each style in use, change the \CSSFilename entry in the tutorial, lwarpmk html again, and then reload the tutorial webpage.

Custom css

A customized style may also be created. For each new project a file called sample_project.css is generated. This may be renamed to <project>.css then used by assigning \CSSFilename{<project>.css}.

⚠ Rename it!

Note that sample_project.css is overwritten whenever lwarp is loaded in print mode. It is therefore important to rename the file to something like project>.css before using it, so that your own changes are not overwritten.

lwarp.css (file)
project.css (file)

It is best to make a local project-specific css file such as project.css, containing only things which are different from lwarp.css. The file project.css should refer to lwarp.css as follows:

project.css (file)
sample_project.css (file)

```
/* ( --- Start of project.css --- ) */
/* ( --- A sample project-specific CSS file for lwarp --- ) */

/* Uncomment one of the following: */
@import url("lwarp.css") ;
/* @import url("lwarp_formal.css") ; */
/* @import url("lwarp_sagebrush.css") ; */
```

```
/* Project-specific CSS setting follow here. */
/* . . . */
/* ( --- End of project.css --- ) */
```

Finally use \CSSFilename{<project>.css} in the document to activate the custom css.

7.8 Assigning css classes and styles

HTML CSS classes and styles may be assigned to fragments of the document.

```
BlockClass (env.) [\langle style \rangle] \{\langle class \rangle\}
```

An entire block of text, including paragraphs, may be assigned a css class and optional css style using the BlockClass environment. The result is placed inside a $\langle \text{div} \rangle$. A BlockClass may nest other BlockClasses or $\langle \text{InlineClasses} \rangle$.

```
\label{lineClass} $$(\langle wp\ css\ style\rangle) \ [\langle web\ css\ style\rangle] \ \{\langle css\ class\rangle\} \ \{\langle text\rangle\}$$
```

A section of text without paragraphs may be assinged a css class and optional css style using the \InlineClass macro. The result is placed inside a . \InlineClass may be nested, but per the HTML standard it must not contain BlockClass, nor may it contain a paragraph, nor several other objects such as HTML figures. \InlineClass also accepts a second optional parameter, enclosed inside parentheses, which assigns the style while generating output for a word processor, while ignoring the web style.

Nullified versions of BlockClass and \InlineClass are provided for the print version, so they may be used in the document without placing them inside warpHTML or \Arrowvert of \Arrowvert or \Arrowvert or \Arrowvert or \Arrowvert or \Arrowvert of \Arrowvert or \Arrowve

lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX

is the default (collectively referred to as "UNIX" in the configuration files), and

7.9 Selecting the operating system

Unix (*Prog*)

Mac OS (Prog)

Linux (Prog)

MS-Windows (Prog)

1111dows (170g)

Windows (*Prog*)
OSWindows (*Opt*)

MS-Windows is supported as well.

If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.

When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean usingOSWindows is set true. This boolean may be tested by the user for later use.

7.10 Selecting actions for print, HTML, or MATHJAX output

The following environments and macros are used to select actions which only apply to either traditional IATEX print-formatted PDF generation, or to HTML generation, or to HTML with MATHJAX.

For most of built-in LATEX and many additional packages there is user-level source code support or emulation, so no special handling will be required. For those cases

which lwarp does not handle by itself, the following environments and macros may be used to isolate sections of code for print-only or HTML-only.

These environments are also useful for creating a special version of the titlepage for print and another for HTML.

warpHTML (env.)

Anything which is to be done only for HTML5 output is surrounded by a warpHTML environment:

\begin{warpHTML}

... something to be done only during \HTML\ generation \end{warpHTML}

\end{warpHTML}

Do *not* place anything else on the same line as \end{warpHTML}. The exact phrase is used to mark the end of the environment. Do not nest warpHTML inside itself. warpMathJax may be used inside warpHTML.

warpprint (env.)

nesting

Anything which is to be done only for print output is surrounded by a warpprint environment:

\begin{warpprint}

... something to be done only during traditional \PDF\ generation \end{warpprint}

nesting

\end{\text{warpprint}} As above, do not place anything else on the line with \end{\text{warpprint}}. Do not nest warpprint inside itself.

warpall (env.) Anything which is to be done for any output may be surrounded by a warpall environment. Doing so is optional.

\begin{warpall}

... something to be done during print \PDF\ or \HTML\ output \end{warpall}

nesting

\end{\text{warpall}} As above, do not place anything else on the line with \end{\text{warpall}}. Do not nest warpall inside itself.

Macros are also provided for print-only or HTML-only code:

\warpprintonly $\{\langle actions \rangle\}$

Performs the given actions only when print output is being generated.

\warpHTMLonly $\{\langle actions \rangle\}$

Performs the given actions only when HTML output is being generated.

warpMathJax (env.)

Anything which is to be done only while using HTML output with MATHJAX is surrounded by a warpMathJax environment. Usually, this is \CustomizeMathJax, used to add emulation macros. \end{warpMathJax} must appear on its own line. Do not nest warpMathJax inside itself. warpMathJax may be used inside warpHTML.

\end{warpMathJax}

warpsvg (env.)

Anything which is to be done only while using print output or HTML output with svg math is surrounded by a warpsvg environment. \end{warpsvg} must appear on its own line. Do not nest warpsvg inside itself. warpsvg may be used inside warpHTML.

\LWR@formatted

To define macros or environments which behave differently depending on print or HTML output, see section 36.

7.11 Commands to be placed into the warpprint environment

Certain print-related commands should always be placed inside a warpprint environment, or may need other special handling. These are unrelated to HTML output, but are hard to isolate automatically. For example:

- Paragraph formatting: \parindent \parskip
- Manual page positions such as the textpos package, which is emulated but only in a limited way.
- Anything changing the page counter. lwarp requires that the page counter not be adjusted during HTML output.

Some packages require additional setup commands. Where these packages are emulated for HTML, setup commands may work for the emulated HTML output as well as for print output. See the details for each package in this document for more information.

Also see section 13: Troubleshooting.

7.12 Title page

In the preamble, place an additional block of code to set the following:

```
\title{Document Title} % One line only
\author{Author One\affiliation{Affiliation One} \and
    Author Two\affiliation{Affiliation Two} }
\date{Optional date}
```

The title is used in the meta tags in the HTML files, unless overridden by \HTMLTitle, and the rest are used in \maketitle. To use a \subtitle or \published field, see section 69.8.

\maketitle Use \maketitle just after the \begin{document}, as this will establish the title of the homepage. Optionally, use a titlepage environment instead.

titlepage (*env.*) The titlepage environment may be used to hold a custom title page. The titlepage will be set in a <div> class titlepage, and \printtitle, etc. may be used inside this environment.

titlingpage (*env.*) Another form of custom title page, where \maketitle is allowed, and additional information may be included as well.

\title $\{\langle title \rangle\}$

HTML corrupted newlines

Avoid newlines in the \title; these will interfere with the file break and css detection. Use a \subtitle command instead (section 69.8). The title will appear in the document \maketitle as a heading <h1>. The HTML meta title tag will also have this title, unless \HTMLTitle is used to set the meta title to something else instead.

\author $\{\langle author \rangle\}$

In \author, \protect may be needed before some formatting commands. In HTML, the author will appear in a <div> of class author in the \maketitle. If the titling package is used, the author will also appear in a HTML meta tag, but \HTMLAuthor may be necessary to create a plain list of names if \author had affiliations added. \affiliation is a new addition to lwarp.

\date $\{\langle date \rangle\}$

\date works as expected. In HTML, this will appear in a <div> class titledate.

 $\{\langle text \rangle\}$ \thanks

> \thanks are allowed in the titlepage fields, and will be rendered as HTML notes at the bottom of the title page.

HTML page meta descriptions

\HTMLDescription

 $\{\langle A \ description \ of \ the \ web \ page. \rangle\}$

Default: (none) limitations

Each page of HTML output should have its own HTML meta description, which usually shows up in web search results. Usually limited to around 150 characters in length, and should not include the ASCII double quote character (").

placement

Use \HTMLDescription just before \begin{document} to set the description of the home page, and also just before each sectioning command such as \chapter or \section where a new file will be generated, depending on FileDepth. For example, if FileDepth is 1, use \HTMLDescription just before each \section command, and that description will be placed inside the HTML page for that \section. The same descrition will be used for all following HTML files as well, until reset by a new \HTMLDescription. It is best to use a unique description for each HTML file.

disabling To disable the generation of HTML description meta tags, use:

\HTMLDescription{}

7.14 HTML page meta keywords

\HTMLKeywords

 $\{\langle Keywords for the web page. \rangle\}$

Default: (none)

\HTMLKeywords behaves like \HTMLDescription, but adds нтмL meta keywords for the following web pages.

disabling To disable the generation of HTML keyword meta tags, use:

\HTMLKeywords{}

7.15 HTML homepage meta title

\HTMLTitle

 $\{\langle title \rangle\}$

Default: \HTMLtitle{\thetitle}

Sets the contents of the web page <meta name="title"> element. May be set empty to cancel the meta title tag.

See section 7.6 for \httmlTitleBeforeSection and \httmlTitleAfterSection, used to set the title for \mbox{html} subpages.

7.16 HTML page meta author

\HTMLAuthor

 $\{\langle author \rangle\}$

Default: \HTMLAuthor{\theauthor}

Sets the contents of the web page <meta name="author"> element. May be set empty to cancel the meta author tag.

\author may be used to create a list of authors and their affiliations, in several formats if using authblk, and these may not successfully parse properly into a sensible list for \theauthor. \HTMLAuthor may be used to set the meta tag to a simple list of names.

8 Special cases and limitations

Some commonly-used LATEX expressions should be modified as follows to allow for a smooth conversion to both HTML and print-formatted outputs.

Need help?

See the General Index for "how-to", and the Troubleshooting Index if something doesn't work. A Troubleshooting section is also available. The Index of Objects contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

8.1 Things to avoid

In the document, avoid the following:

Package options: Package options may cause problems with lwarp, especially if they include curley braces.

If selecting options with braces in \usepackage does not work:

```
\usepackage[font={it,small}]{caption}% does not work
```

 \dots try instead selecting the package options before loading lwarp:

 $\verb|\PassOptionsToPackage{font=\{it,small\}}{caption}|$

. . .

\usepackage{lwarp}

\usepackage{caption}

... or try setting package options after the package has been loaded:

\usepackage{caption}

\captionsetup{font={it,small}}

page counter: Do not adjust the page counter. If doing so is required for the print version, place the adjustment inside a warpprint environment.

Custom math environment macros: Do not use expressions such as \beq as a replacement for \begin{equation}.

Custom macros in section, figure, table names: Custom macros which appear in sectioning commands or float captions then appear in the .toc, .lof, and .lot lists, and should be made robust using \newrobustcmd or \robustify from etoolbox, xparse, etc.

When setting FileSectionNames to true to name the HTML files from the section names, the file names are created from sanitized versions of the chapter or section names, but the section names must be plain text or something which expands into plain text. Robust macros will not work at the sectioning level which is used for file names, but a robust macro or other complicated name may be used for the manditory argument of \chapter, \section, etc., if a plain-text version is also included in the optional argument:

\chapter[Plain Name]{\ARobustMacro{Fancy Name}}

8.1.1 Invalid HTML

Additionally, some objects are valid LATEX, but invalid HTML. An example is a tabular inside \textbf, since HTML does not allow a table inside a span. lwarp

will create the table, and the browser may support it, but the result is technically invalid.

8.2 **Formatting**

8.2.1 Text formatting

\bfseries, etc. \textbf, etc. are supported, but \bfseries, etc. work only in some situations.

HTML special chars &, <, and > have special meanings in HTML. If \&, \textless, and \textgreater are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim

program listings

For program listings, the listings package is supported, and its literate option is used to automatically convert &, <, and > to proper HTML entities.

minted sanitizes HTML automatically by its colorizing, which splits the special characters from the rest of the tag.

verbatim

The fancyvrb and fvextra packages automatically sanitize HTML entities, but the core LATEX verbatim-related environments do not, nor does the verbatim package, so care must be taken to avoid accidentally including valid HTML code inside these environments. It may be sufficient to add a space on either side of &, <, and >.

gobble fancyvrb does not sanitize HTML when using the gobble option.

8.2.2 Small caps

FixSmallCaps (bool)

Some fonts, such as erewhon, utopia, or fbb, and some packages such as embrac, copy/paste "SMALL CAPS" as all caps ("SMALL CAPS"), which lwarp then reads as all caps, so the text is printed in all caps. If small caps are being rendered as all caps, set:

\booltrue{FixSmallCaps}

CJK fonts Some CJK fonts may not work if FixSmallCaps is set true.

8.2.3 Horizontal and vertical space and rules

\hspace is converted to an inline HTML span of the given width, except that 0 \hspace width is ignored, a width of .16667em is converted to an HTML thin breakable space (U+2009), and a \fill is converted to a \qquad.

\vspace is ignored for HTML. \vspace

~ and \, are converted to HTML entities.

\kern and \hskip are entered into the HTML PDF output as-is, then interpreted by \kern pdftotext, and thus usually appear as a single space. \hskip

\rule \rule is converted to an HTML rule of the same dimensions, of the currently

selected text color.

\hrule \vrule

Both \hrule and \vrule are ignored for HTML. To create a horizontal dividing rule across the page, use \hrulefill in its own paragraph.

\hrulefill

\hrulefill usually creates a one-inch rule, similar to a "fill in the blank". If it is used at the start of a new paragraph, it creates a <div> with a thin horizontal border across the page, as would often be done with \hrule.

8.2.4 Text alignment

Use the environments center, flushright, flushleft instead of the macros \centering, \raggedright, \raggedleft.

figure & table \centering, etc. are honored in a figure or table if they are the first command alignment inside the float:

```
\begin{table*}
\centering
\caption{A Table}
```

8.2.5 Accents

Native LATEX accents such as \" will work, but many more kinds of accents are available when using Unicode-aware XAIATEX and LuaIATEX. If using accents in section names which will become file names, it is recommended to use the LATEX accents such as \" and \v instead of Unicode accents. The LATEX accents will have the accents stripped when creating the filenames, whereas the Unicode accents will appear in the file names, which may cause issues with some operating systems.

8.2.6 textcomp package

textcomp(Pkg)

Some textcomp symbols do not have Unicode equivalents, and thus are not sup-

missing symbols

Many textcomp symbols are not supported by many system/browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

8.2.7 Superscripts and other non-math uses of math mode

Use $\text{textsuperscript}\{x\}$ instead of x

8.2.8 Empty \item followed by a new line of text or a nested list:

lists Use a trailing backslash: \item[label] \

8.2.9 Filenames and URLs in lists or footnotes

filename underscore Escape underscores in the filenames:

\item[\href{file_name.pdf}{text}]

8.2.10 relsize package

relsize (Pkg)

For HTML, only the inline macros are supported: \textlarger, \textsmaller, and \textscale. Each becomes an inline span of a modified font-size.

\relsize, \larger, \smaller, and \relscale are ignored.

While creating svg math for HTML, the original definitions are temporarilty restored, and so should work as expected.

not small

The HTML browser's setting for minumum font size may limit how small the output will be displayed.

8.3 **Boxes and minipages**

8.3.1 Marginpars

\marginpar

 $[\langle left \rangle] \{\langle right \rangle\}$ \marginpar may contains paragraphs, but in order to remain inline with the surrounding text lwarp nullifies block-related macros inside the \marginpar. Paragraph breaks are converted to
 tags.

\marginparBlock

 $[\langle left \rangle] \{\langle right \rangle\}$ To include block-related macros, use \marginparBlock, which takes the same arguments but creates a <div> instead of a . A line break will occur in the text where the \marginBlock occurs.

8.3.2 Save Boxes



нтм_L corrupted



T_FX boxes are placed inline and do not allow line breaks, so boxes with long contents may overflow the line during HTML conversion. lwarp uses methods which help avoid this problem.

⚠

minipage, \parbox \savebox and related do not (yet) support minipage or \parbox.

8.3.3 Minipages

A line of text with an inline minipage or \parbox will have the minipage or \parbox placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

placement

minipages and \parboxes will be placed side-by-side in HTML unless you place a \newline between them.

side-by-side

Side-by-side minipages may be separated by \quad, \quad, \enskip, \hspace, \hfill, or a \rule. When inside a center environment, the result is similar in

print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.

minipage in a span

There is limited support for minipages inside an HTML . An HTML <div> cannot appear inside a . While in a , minipages, and \parboxes, and any enclosed lists have limited HTML tags, resulting in an "inline" format, without markup except for HTML breaks. Use \newline or \par for an HTML break.

minipage size

When using minipage, \parbox, and fminipage, a virtual 6×9 inch text area is used for \linewidth, \textwidth, and \textheight, both for sizing the minipage, and also for its contents.

if width is \linewidth

If a minipage or \parbox is assigned a width of exactly \linewidth, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if HTML

A new macro \minipagefullwidth requests that, during HTML output, the next single minipage or \parbox be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version's width makes no sense in HTML.

tabular, multicols

\UseMinipageWidths \IgnoreMinipageWidths

Inside a tabular or multicols environment, where the width depends on the browser window, \minipagefullwidth is effectively used by default for every minipage or \parbox inside the environment. \UseMinipageWidths may be used to tell lwarp to honor the specified widths of all following minipages and \parboxes until the end of the local scope, and \IgnoreMinipageWidths may be used to tell lwarp to ignore the specified widths.

multicol Inside a multicols, \linewidth is divided by the specified number of columns.

text alignment Nested minipages adopt their parent's text alignment in HTML, whereas in regular LATEX PDF output they do not. Use a flushleft or similar environment in the child minipage to force a text alignment.

8.3.4 Side-by-side minipages

Place side-by-side minipages inside a center environment, with horizontal space between them, such as \quad, \qquad, \hspace, or \hfill. The result is similar in print and HTML. Do not use space commands at the start or end of the line.

8.3.5 Framed minipages and other environments

\fbox can only be used around inline items during HTML output, but HTML cannot place a block element such as a <div> for a minipage or a list inside of a . Several options are provided for framing an object, depending on which kind of object and which packages are loaded:

\fbox

For a framed object, options include:

\fboxBlock

fminipage (env.)

To remove the frame in HTML output: Place the \fbox command and its closing brace inside warpprint environments. This will nullify the frame for HTML output.

For inline text:

To frame the contents inline with some formatting losses in HTML: This is the default action of \fbox when enclosing a minipage. During HTML output,

\fbox nullifies the HTML tags for minipage, \parbox, and lists. The contents are included as inline text inside the \fbox's of class framebox. For lists, line breaks are converted to HTML breaks. The result is a plain-text inline version of the contents, framed inline with the surrounding text, but lacking any extra HTML markup.

For inline minipage and lists:

To frame the contents on their own line with improved formatting in HTML: A new command \fboxBlock is included, intended to be a direct replacement for \fbox for cases where the \fbox surrounds a minipage, table, or list. For print output, this behaves as \fbox. For HTML output, the contents are placed inside an HTML <div> with the class framed, resulting in the contents being placed on their own line with a frame surrounding them. The contents preserve their HTML formatting, so lists and minipages look nicer, and valid HTML is created for a tabular. While an \fbox containing a tabular is valid LATEX code, the result in HTML is problematic since a table is a <div> not a , so use \fboxBlock around a tabular, or else place the tabular inside a minipage, or use fminipage, described next. Also see below regarding the "Misplaced alignment tab character &." error.

For display tabular, minipages, and lists: To create a framed minipage in both print and HTML: A new environment fminipage is included. For print output, this is identical to minipage, except that it is also framed. For HTML output, this forms a <div> of class framed, the contents preserve their HTML formatting, and valid HTML is created for a tabular. Also see section 89 for a new environment fcolorminipage. Also see below regarding the "Misplaced alignment tab character &." error.

colored boxes and frames: To create colored frames and boxes: See section 678 for xcolor's \colorbox and \fcolorbox, and lwarp's additional \colorboxBlock and \fcolorboxBlock.

Misplaced alignment tab character & To frame tables or verbatim environments: Place the contents inside a fminipage, or perhaps a \fboxBlock for a tabular. Also, if using \fboxblock with tabular, you will have to use \StartDefiningTabulars before the start of the macro which uses \fboxBlock and the tabular, and \StopDefiningTabulars afterwards. Also see the lwarp documentation for the fancybox package.

To frame equations: See section 261 for the fancybox package.

For fancy framed minipages: See packages boxedminipage, shadow, fancybox, framed, mdframed.

Custom environments: Use a custom environment to create a sidebar, containing a BlockClass environment with custom css formatting, and \warpprintonly{\hrule} command:

\begin{BlockClass}{frameminipage}% ignored in print output % use \CSS\ to format div class framedminipage \warpprintonly{\hrule} % only appears in print output Contents \warpprintonly{\hrule} % only appears in print output \end{BlockClass}

8.3.6 fancybox package

fancybox(Pkg)framed equation example fancybox's documentation has an example FramedEqn environment which combines math, \Sbox, a minipage, and an \fbox. This combination requires that the entire environment be enclosed inside a lateximage, which is done by adding

\lateximage at the very start of FramedEqn's beginning code, and \endlateximage at the very end of the ending code. Unfortunately, the HTML alt attribute is not used here.

```
\newenvironmentFramedEqn
\lateximage% NEW
\setlength{\fboxsep}{15pt}
. . . }{. . .
\[\fbox{\TheSbox}\]
\endlateximage% NEW
```

framing alternatives

\fbox works with fancybox. Also see lwarp's \fboxBlock macro and fminipage environment for alternatives to \fbox for framing environments.

framed table example

The fancybox documentation's example of a framed table using an \fbox containing a tabular does not work with lwarp, but the FramedTable environment does work if \fbox is replaced by \fboxBlock. This method does lose some HTML formatting. A better method is to enclose the table's contents inside a fminipage environment. The caption may be placed either inside or outside the fminipage:

```
\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
\end{tabular}
\end{fminipage}
\end{table}
```

framed verbatim

lwarp does not support the verbatim environment inside a span, box, or fancybox's \Sbox, but a verbatim may be placed inside a fminipage. The fancybox documentation's example FramedVerb may be defined as:

```
\newenvironment{FramedVerb}[1] % width
{
  \VerbatimEnvironment
  \fminipage{#1}
  \beginVerbatim
}{
  \endVerbatim
  \endfminipage
}
```

framed \VerbBox

fancybox's \VerbBox may be used inside \fbox.

indented alignment

LVerbatim, \LVerbatimInput, and \LUseVerbatim indent with horizontal space which may not line up exactly with what pdftotext detects. Some lines may be off slightly in their left edge.

lwarp sanitizes HTML for fancybox verbatims, except for the contents of \VerbBox and any \verb inside.

8.3.7 mdframed package

Most basic functionality is supported, including frame background colors and mdframed(Pkg)support

single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for mdframed environments and frame titles.

loading When used, lwarp loads mdframed in HTML with framemethod=none.

font For title font, use

frametitlefont=\textbf,

instead of

frametitlefont=\bfseries,

where \textbf must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the mdframed source). Since lwarp does not support \bfseries and friends, only one font selection may be made at a time.

theoremtitlefont

theoremtitlefont is not supported, since the following text is not in braces in the mdframed source.

ignored options

userdefinedwidth and align are currently ignored.

css classes

Environments created or encapsulated by mdframed are enclosed in a <div> of class mdframed, and also class md<environmentname> for new environments.

Frame titles are placed in a <div> of class |mdframedtitle|. Subtitles are in a <div> of class |mdframedsubtitle|, and likewise for subsubtitles.

8.3.8 tcolorbox package

tcolorbox(Pkg)

math

footnotes

tcolorbox is emulated for HTML and MATHJAX, and supported as-is inside a lateximage or svg math.

What has been tested to work (at least partly) includes:

- tcolorbox, \tcbox.
- Title, subtitle.
- Upper, lower parts.
- Colors and title fonts.
- Floating objects.
- Some layered box features.
- Counters, labels, references.
- listings, listingsutf8.
- theorems: Theorems are supported. math, ams equation, etc. are not supported. Use a tcolorbox with regular math inside it. \tcboxmath and \tcbhighmath are suppored in svg math, and emulated in MATHJAX.
- Fitting features: \tcboxfit becomes \tcbox in HTML.
- Footnote numbering does not match the printed output.
- MathJax emulation is provided for common macros.

undefined references If using cleveref, it may be necessary to name theorems such as:

\crefname{tcb@cnt@mytheo}{my theorem}{my theorems}

Section names 8.4

If using named HTML files, by selecting \booltrue{FileSectionNames}, the generated filenames may be simplified by using \FilenameSimplify and \FilenameNullify:

```
\FilenameSimplify
                               \{\langle text \rangle\}
```

To remove common short words from the automatically-generated filenames, replacing each with a single hyphen "-", use \FilenameSimplify:

```
\FilenameSimplify*{-in-}
\FilenameSimplify*{A-}
```

The first example removes the word "in" in the middle of a filename, and the second example removes "A" at the start of the filename. The star forces the arguments to be detokenized, which is required for a plain-text comparison. (The unstarred form is used for a token-sensitive comparison, which is seldom required by the user.) After simplification, repeated hyphen characters will be further simplified to a single hyphen "-". Finally, single hyphens at the start or end of the filename are removed.

```
\FilenameNullify \{\langle macros \rangle\}
```

macros in section names

Macro names may appear in the automatically-generated file names. To remove these, create non-robust nullified versions of the macros, ensuring that each line ends with a percent character % as shown below. These are placed inside \FilenameNullify, which adds them to the list of macros which are nullfiied during filename generation. Low-level macros such as \begingroup will cause problems when nullfied. Many macros such as \textbf are already nullfied. lwarp also already nullifies built-in symbol and textcomp macros, including if defined by xunicode, but not all xunicode macros. See the definition of \LWR@nullfonts for a complete list.

```
\FilenameNullify{%
  \renewcommand*{\macroname}[1]{#1}%
  \renewcommand*{\anothermacro}{}%
}
```

duplicate filename Avoid duplicate file names. Section names at levels which result in HTML file splits must be unique. lwarp will generate an error if a duplicate HTML filename is generated. Use the optional ToC caption entry parameter for formatting, Remember to \protect IATEX commands which appear in section names and Toc captions.

math in section names

If using named HTML files, in section names use paren math \(x+y\) instead of dollar math \$x+y\$. (Dollar math works, but appears in the filename.) Or, use a short name for the TOC entry without the math, or use \texorpdfstring from the hyperref package:

```
\section{Some math \texorpdfstring{$1+2=3$}{three}}
```

8.5 **Cross-references**

labels label characters

Labels with special characters may be a problem. It is best to stick with alphanumeric, hyphen, underscore, and perhaps the colon (if not French).

\nameref \nameref refers to the most recently-used section where the \label was defined.

If no section has been defined before the \label, the link will be empty. Index entries also use \nameref and have the same limitation.

8.5.1 Page references

LATEX page numbers

The printed page does not translate to the HTML page, so \pageref references are converted to parentheses containing \pagerefPageFor, which defaults to "see ", followed by a hyperlink to the appropriate object.

Ex:

```
\ref{sec:name} on page \pageref{sec:name}
in HTML becomes:
   "Sec. 1.23 on page (see sec. 1.23)".
```

\pagerefPageFor may be redefined to "page for", empty, etc. See page 508.

8.5.2 cleveref and varioref packages

cleveref (Pkg) varioref (Pkg)

cleveref and varioref are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for \cpageref and \cpagerefrange. This phrase includes \cpagerefFor, which defaults to "for".

cleveref page numbers

Ex:

```
\cpageref{tab:first,tab:second}
in html becomes:
   "pages for table 4.1 and for table 4.2"
```

See \cpagerefFor at page 746 to redefine the message which is printed for page number references.

varioref types

cleveref changes the behavior of varioref in that the reference type is automatically printed if cleveref is loaded. Lwarp requires cleveref, so the HTML version will always automatically print the reference types even if the print mode does not. The simplest way to make them match is to require the cleveref package for the document.

Hyperlinks, hyperref, and url

hyperref (Pkg) url(Pkg) lwarp emulates hyperref, including the creation of active hyperlinks, but does not require that hyperref be loaded by the document.

comments between arguments Do not place a comment with a % character between arguments for \hyperref, etc., as it is neutralized for inclusion in HTML URLs.

lwarp can also load url, but url should not be used at the same time as hyperref, since they both define the \url command. lwarp does not (yet) attempt to convert url links into hyperlinks during HTML output, nor does the print version of url create hyperlinks.

backref When generating HTML, lwarp's emulation of hyperref does not automatically load backref, so backref must be loaded explicitly.

8.5.4 Footnotes, endnotes, and page notes

lwarp uses native LATEX footnote code, although with its own \box to avoid the LATEX output routine. The usual functions mostly work as-is.

footnote numbering

To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For bigfoot, manyfoot, or perpage:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by FootnoteDepth, which is not necessarily by HTML page. This is recommended for \alph, \Alph, or \fnsymbol footnotes, due to the limited number of symbols which are available.

MATHJAX Also for MATHJAX, \footnotename is used for a \footnotemark if the actual footnote number is not known. To redefine it, provide it before loading lwarp:

```
\providecommand{\footnotename}{something}
\usepackage{lwarp}
```

Similar for sidenotes. For endnotes:

```
\def\endnotename{something}% \def allows name to start with
"end"
```

For the pagenote package, there is no \pagenotename to define, since there is no \pagenotemark command.

footmisc

The footmisc stable option is emulated by lwarp.

sectioning commands

When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the footmisc package with the stable option, provide a short Toc entry, and \protect the \footnote:

```
\usepackage[stable]{footmisc}
\subsection[Subsection Name]
    {Subsection Name\protect\footnote{A footnote.}}
```

memoir with footmisc If using memoir class, with which lwarp preloads footmisc, the stable option must memoir be declared before lwarp is loaded:

```
\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
. . .
```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust \secnumdepth instead.

fancybox, fancyvrb \VerbatimFootnotes \triangle sectioning or

displaymath

If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

```
\subsection[Subsection Name]
    {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbtim+.}
```

and likewise for equations or display math.

 While emulating pfnote, lwarp is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. lwarp therefore uses continuous footnote numbering even for pfnote.

bigfoot, manyfoot \(\triangle \text{ verbatim}\) Verbatim footnotes are not yet supported.

If using the bigfoot package, and possibly also manyfoot, problems may occur with counter allocation because lwarp uses many counters, and there is a difference in how counters numbered 256 and up are handled in PDF LATEX. With bigfoot this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining bigfoot or manyfoot footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use XHIATEX or LualATEX instead of PDF IATEX.

8.5.5 xr, xr-hyper, and xcite packages

See section 5.18.

8.6 Front and back matter

8.6.1 Custom classes with multiple authors and affiliations

Some classes allow multiple authors and affiliations. Often it is possible to emulate these using a standard class along with authblk:

%\documentclass{customclass} % for print document \documentclass{article} % for html document

\usepackage{lwarp}
\begin{warpHTML}
\usepackage{authblk}
\let\affiliation\affil % maybe required
\end{warpHTML}

8.6.2 Starred chapters and sections

нтмL page and тос

The following describes \ForceHTMLPage and \ForceHTMLTOC, which may be used for endnotes, glossaries, tocbibind, bibliographies, and the index. See the following sections where applicable. Continue here if interested in the reason for adding these commands to lwarp.

Some packages use \chapter* or \section* to introduce reference material such as notes or lists, often to be placed in the back matter of a book. These starred sections are placed inline instead of on their own HTML pages, and they are not given TOC entries.

lwarp provides a method to cause a starred section to be on its own HTML page, subject to FileDepth, and also a method to cause the starred section to have its own toc entry during HTML output.

\ForceHTMLPage

To place a starred section on its own HTML page, use \ForceHTMLPage just before the \chapter* or \section*. lwarp will create a new page for the starred sectional unit.

A starred sectional unit does not have a TOC entry unless one is placed manually. The typical method using \phantomsection and \addcontentsline works for inline text but fails when the new starred section is given its own webpage after the TOC entry is created, or when creating an EPUB where the TOC entry will point to the page before the starred section. If the starred section has its own HTML page but no correct TOC entry pointing to that page, the page will be inaccessible unless some other link is created.

inaccessible нтмL page

\ForceHTMLTOC

To automatically force the HTML version of the document to have a TOC entry for a starred section, use \ForceHTMLTOC just before the \chapter* or \section*, and place \phantomsection and \addcontentsline inside a warpprint environment.

For print output, \ForceHTMLTOC and \ForceHTMLPage have no effect.

8.6.3 abstract package

abstract (Pkg) missing Toc If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

8.6.4 titling and authblk

titling(Pkg)authblk(Pkg)

package support

⚠ load order \published and \subtitle

lwarp supports the native LATEX titling commands, and also supports the packages authblk and titling. If both are used, authblk should be loaded before titling.

If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubtitlePublished in the preamble. See section 69.8.

8.6.5 tocloft package

titles (Opt) [tocloft] tocloft (Pkg) tocloft (Pkg) If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard LATEX commands to create the titles, allowing other packages to work with it.

tocloft & other packages

8.6.6 appendix package

appendix (Pkg)

incorrect toc link

During HTML conversion, the option toc without the option page results in a TOC link to whichever section was before the appendices environment. It is recommended to use both toc and also page at the same time.

8.6.7 pagenote package

pagenote (*Pkg*) pagenote works as-is, but the page option is disabled.

labels Note that labels in page notes do not appear as expected, even in the print version.

8.6.8 endnotes package

endnotes (Pkg)

To place the endnotes in the ToC, use:

table of contents

\usepackage{endnotes}

\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}

\renewcommand*{\notesname}{Endnotes} % optional

HTML page To additionally have the endnotes on their own HTML page, if FileDepth allows:

\ForceHTMLPage **\theendnotes**

\endnotemark If using MathJax, see section 8.5.4 regarding the use of \endnotemark and numbering \endnotetext.

8.6.9 *BibTeX*

To update the HTML version of the bibliography:

```
Enter ⇒ bibtex <filename>_html
```

Displays a superscript "+" to indicate "and others". \etalchar

Modify *.bib

When enough authors are cited for a source, BibT_EX may use the \etalchar command to display a math superscript with a + character to indicate "and others". Without modification, this will result in an "Improper \prevdepth" error. At present, lwarp requires that \etalchar be replaced by a text superscript. To do so, add to the start of the .bib file the following:

@PREAMBLE{"\let\etalchar\relax \newcommand{\etalchar}[1]{#1}"}

8.6.10 biber

To update the HTML version of the bibliography:

Enter ⇒ biber <filename>_html

8.6.11 xcite package

See section 5.18.

8.6.12 gloss package

gloss(Pkg)

To process the HTML glossary:

 \triangle compiling

bibtex ctname_html.gls

8.6.13 glossaries package

glossaries (Pkg) processing glossaries GlossaryCmd (Opt) Default: makeglossaries

lwarpmk has the commands lwarpmk printglossary and lwarpmk htmlglossary, which process the glossaries created by the glossaries package using that package's makeglossaries program.

The shell command to execute is set by the lwarp option GlossaryCmd, which defaults to makeglossaries. The print or HTML glossary filename is appended to this command.

makeglossaries not found

printglossary (Opt) [lwarpmk]

htmlglossary(Opt)[lwarpmk]

In some situations it may be required to modify the default command, such as to add the **perl** command in front:

```
\usepackage[
   GlossaryCmd={perl makeglossaries},
] {lwarp}
```

xindy language To set the language to use for processing glossaries with *xindy*:

```
\usepackage[
   GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for makeglossaries may be set as well.

placement and Toc options

The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
\printglossaries
```

Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
\ForceHTMLPage
\printglossaries
```

glossary style

The default style=item option for glossaries conflicts with lwarp, so the style is forced to index instead.

number list

The page number list in the printed form would become \namerefs in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions

The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

8.6.14 nomencl package

nomencl (Pkg) To process the HTML nomenclature:

```
makeindex project>_html.nlo -s nomencl.ist -o
project>_html.nls
```

8.6.15 Indexing overview

There are many ways to process indexes for a LATEX document, including native LATEX capabilities, a number of packages and classes, the possible availability of shell escape and *latexmk*, and the need to process print and HTML versions. lwarp attempts to provide easy recompilation of indexes along with the rest of the document, but the various indexing options must be set correctly. Numerous examples are given below. Some differ in minor details, so the important parts are highlighted in red, and options are in green.

Once set up properly, the entire document may be recompiled with lwarpmk print and lwarpmk html. In some cases, it will also be necessary to compile the indexes with lwarpmk printindex and lwarpmk htmlindex. A recompile may then be forced with lwarpmk print1 and lwarpmk html1.

manual processing

The user may continue to process indexes manually or by shell script without the use of <code>lwarpmk</code>, but adjustments will be required to process <code>HTML</code> indexes as well. In general, <code>*.idx</code> and <code>*.ind</code> files will be accompanied by <code>*_html.idx</code> and <code>*_html.ind</code> files.

custom index style

If using a custom indexing style file, see sections 8.6.21 to 8.6.23.

link appearance

To control how the index links appear in the HTML output, see the IndexRef option in section 7.5, page 106.

source code

See section 79 for lwarp's core index and glossary code, section 344 for index, section 575 for splitidx, section 342 for imakeidx, section 632 for tocbibind, and section 699.17 for memoir's indexing patches.

8.6.16 Indexing with makeidx, makeindex, xindy, xindex, gindex

lwarpmk processing

The following allow the user to process indexes automatically, or using *lwarpmk*'s commands:

```
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk htmlindex
```

makeindex (*Prog*) For a single index using makeindex:

```
\usepackage[makeindex,latexmk] {lwarp}
```

The usual .idx and .ind files will be used, along with the new lwarp.ist style file. When creating the HTML index, "_html" is automatically appended to each of the names.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter⇒ lwarpmk printindex
Enter⇒ lwarpmk htmlindex
```

to compile the indexes.

To use a custom configuration file, see section 8.6.21.

xindy (Prog) For a single index using xindy:

The usual .idx and .ind files will be used, along with the new lwarp.xdy style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk printindex}
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk htmlindex}
```

to compile the indexes.

To use a custom configuration file, see section 8.6.22.

xindex (Prog) For a single index using xindex:

The usual .idx and .ind files will be used.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

To use a custom configuration file, see section 8.6.23.

gindex (Pkg) For a single index using gindex:

The usual .idx and .ind files will be used.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter \Rightarrow lwarpmk printindex

Enter \Rightarrow lwarpmk htmlindex
```

to compile the indexes.

To use a custom configuration file, copy gindex.ist to a new file, modify, then specify it with MakeindexStyle as above. lwarp will automatically adapt to gindex's \indexpagessep and \indexrangesep settings.

8.6.17 Indexing with index

index (Prog)

lwarp is told how to use *makeindex* using the PrintIndexCmd and HTMLIndexCmd options. The file lwarp.ist is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

For multiple indexes using makeindex and index:

```
(Assuming that the second index has file extensions .sist and .sind)
    \usepackage[
      makeindex, latexmk,
      PrintIndexCmd={
        makeindex -s lwarp.ist ctname.idx ;
        makeindex -s lwarp.ist
          -o ctname>.sind ctname>.sidx
      },
      HTMLIndexCmd={
        makeindex -s lwarp.ist projectname>_html.idx ;
        makeindex -s lwarp.ist
          -o projectname>_html.sind projectname>_html.sidx
    ]{lwarp}
    \usepackage{index}
    \makeindex
    \newindex{secondname}{sidx}{sind}{Second Index}
For Windows, replace the two ";" characters with "&".
```

 ⚠ WINDOWS

When creating the HTML index, "_html" is automatically appended to the index filenames.

Use

```
Enter⇒ lwarpmk printindex
Enter⇒ lwarpmk htmlindex
```

to compile the indexes.

If the latexmk option is selected for lwarp, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.

8.6.18 Indexing with splitidx

lwarp is told how to use *splitindex* using the PrintIndexCmd and HTMLIndexCmd options. The file lwarp.ist is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

If the latexmk option is selected for lwarp, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.

When using \AtWriteToIndex or \AtNextWriteToIndex, the user must not refer to \thepage during HTML output, as the concept of a page number is meaningless. Instead, do

```
\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}
```

where the \index -like action occurs, and then refer to $\arabic\{LWR@autoindex\}$ instead of \thepage where the reference should occur.

See section 699.17 in the lwarp-patch-memoir package for the $\ensuremath{\verb{Qewrspindexhyp}}$ macro as an example.

For multiple indexes using makeindex and splitidx:

```
\usepackage[
  makeindex, latexmk,
  PrintIndexCmd={
    splitindex <projectname> -- -s lwarp.ist
  },
  HTMLIndexCmd={
    splitindex <projectname>_html -- -s lwarp.ist
  }
]{lwarp}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}
```

When creating the $\verb|HTML|$ index, "_html" is automatically appended to each of the names.

Use

```
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk printindex} \operatorname{Enter} \Rightarrow \quad \text{lwarpmk htmlindex} to compile the indexes.
```

For multiple indexes using xindy and splitidx:

```
\usepackage[
  xindy, latexmk,
  PrintIndexCmd={
    splitindex -m xindy projectname> -- -M lwarp.xdy
      -L english -C utf8
                                              <optional>
  },
 HTMLIndexCmd={
    splitindex
                -m xindy
                             projectname>_html
lwarp.xdy
      -L english -C utf8
                                              <optional>
  }
]{lwarp}
\usepackage{splitidx}
\makeindex
\newindex[Second Index]{secondname}
```

When creating the HTML index, "_html" is automatically appended to each of the names.

Use

```
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk printindex} \operatorname{Enter} \Rightarrow \quad \text{lwarpmk htmlindex} to compile the indexes.
```

8.6.19 Indexing with imakeidx

imakeidx (Prog)

Due to the number of methods which may be used to process multiple indexes, the options for style file and *xindy* language and codepage must be specified in one of several different ways. These are described in detail later in this section, but are summarized here.

If shell escape is used, imakeidx will automatically compile the indexes by itself. Options specifying a custom style file and *xindy* language and codepage must be specified for each \makeindex command using its options= option, which must include lwarp's special lwarp.ist or lwarp.xdy file, or a file based on them. If using a custom indexing style file, see sections 8.6.21 to 8.6.23.

The splitindex option is also available of shell escape is used, in which case the splitidx package and *splitindex* program will also be used.

If shell escape is not possible, *latexmk* may be used to automatically compile the indexes. The style, language, and codepage options are specified with lwarp's makeindexStyle, xindyStyle, xindyLanguage, and xindyCodepage options. These are passed to *latexmk* by *lwarpmk*'s lwarpmk printindex and lwarpmk htmlindex commands.

Where shell escape and *latexmk* are not possible, *lwarpmk* may be used to manually compile the indexes. lwarp's PrintIndexCmd and HTMLIndexCmd options are used.

For a single or multiple indexes using makeindex and imakeidx:

The index style lwarp.ist is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex,latexmk] {lwarp}
\usepackage[makeindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]
```

imakeidx will automatically compile the indexes. Shell escape is not required while using *makeindex*. latexmk may be specified, and if so it will be used for lwarpmk print and lwarpmk html, but *imakeidx* will actually create the indexes.

For a single or multiple indexes using makeindex and splitindex with imakeidx:

The index style lwarp.ist is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex,latexmk] {lwarp}
\usepackage[makeindex,splitindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]
```

enable shell escape

Shell escape is required while using *splitindex*. For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex

Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with *xelatex* or *lualatex*. lwarp will remember that shell escape was used.

imakeidx will automatically execute *splitindex*, and will also use *makeindex* to compile the indexes.

latexmk may be specified, and if so it will be used for **lwarpmk print** and **lwarpmk html**, but *imakeidx* will actually create the indexes.

For multiple indexes using xindy and imakeidx, using shell escape:

Options may be given to imakeidx's \makeindex command. The style file lwarp.xdy is automatically used for HTML output, and is not necessary for print output since the output will be similar. If language or codepage must be set, they should be specified as options for \makeindex, since imakeidx will process the indexes.

```
\usepackage[xindy,latexmk] {lwarp}
\usepackage[xindy,splitindex]{imakeidx}
...
\makeindex[
   options={ -M lwarp.xdy -L english -c utf8 }
]
\makeindex[
   name=secondname,
   options={ -M lwarp.xdy -L english -c utf8 }
]
```

For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with *xelatex* or *lualatex*. lwarp will remember that shell escape was used.

imakeidx will automatically execute *splitindex* if selected, and will also use *xindy* to compile the indexes.

If selected, *latexmk* will automatically recompile the entire document as necessary.

For indexes using xindy and imakeidx, without shell escape, but with latexmk:

lwarp's options are used, and are passed to *latexmk*.

```
\usepackage[
    xindy,
    xindyLanguage=english,
    xindyCodepage=utf8,
    latexmk,
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]
```

latexmk will create the indexes automatically when lwarpmk print and lwarpmk html are executed.

For indexes using xindy and imakeidx, without shell escape, and without latexmk:

```
xindy,
PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
        <projectname>.idx;
    xindy -M lwarp.xdy -L english -C utf8
        secondname.idx
},
HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
        <projectname>_html.idx;
    xindy -M lwarp.xdy -L english -C utf8
        secondname_html.idx
}
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]
```

For Windows, replace the two ";" characters with "&".

is the \jobname: if compiling "name.tex", use the filenames
 name.idx and name_html.idx.

Use

 $\operatorname{Enter} \Rightarrow \quad \text{lwarpmk printindex}$ $\operatorname{Enter} \Rightarrow \quad \text{lwarpmk htmlindex}$ to compile the indexes.

For multiple indexes using xindex and imakeidx, using shell escape:

xindex, makeindex, imakeidx, and splitindex can all work together:

```
\usepackage[%
    xindex,
    xindexConfig=-imakeidx,
    latexmk
] {lwarp}
\usepackage[makeindex,splitindex]{imakeidx}
...
\makeindex[%
    options={ -s lwarp.ist} }
]
\makeindex[
    name=secondname,
    options={ -s lwarp.ist} }
]
```

♠ enable shell escape

For the first compile, use:

```
Enter ⇒ pdflatex --shell-escape projectname.tex
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with xelatex or lualatex. lwarp will remember if shell escape was used.

xindex will use imakeidx, and imakeidx will automatically execute splitindex if

If selected, latexmk will automatically recompile the entire document as necessary.

8.6.20 Indexes with memoir

For a single index with memoir and makeindex:

```
\documentclass{memoir}
\usepackage[makeindex, latexmk]{lwarp}
\makeindex
```

The usual .idx and .ind files will be used, along with the lwarp.ist style file.

lwarpmk will use latexmk if specified, in which case latexmk will create the index automatically. Otherwise, use

```
Enter ⇒ lwarpmk printindex
    Enter ⇒ lwarpmk htmlindex
to compile the indexes.
```

For multiple indexes with memoir and makeindex, using latexmk:

lwarp's options are used, and are passed to latexmk.

```
\documentclass{memoir}
\usepackage[makeindex,latexmk]{lwarp}
\makeindex
\makeindex[secondname]
```

lwarpmk will use latexmk to create the indexes automatically when the user executes lwarpmk print and lwarpmk html.

For multiple indexes with memoir and makeindex, without latexmk:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
    makeindex,
    PrintIndexCmd={
        makeindex -s lwarp.ist <projectname>.idx ;
        makeindex -s lwarp.ist secondname.idx
    },
    HTMLIndexCmd={
        makeindex -s lwarp.ist <projectname>_html.idx ;
        makeindex -s lwarp.ist secondname_html.idx
    }
]{lwarp}
...
\makeindex
\makeindex[secondname]
```

⚠ WINDOWS

For Windows, replace the two ";" characters with "&".

<projectname> is the \jobname: if compiling "name.tex", use the filenames
name.idx and name_html.idx.

Use

```
\label{eq:Enter} {\rm Enter} \Rightarrow \quad \text{lwarpmk printindex} {\rm Enter} \Rightarrow \quad \text{lwarpmk htmlindex} to compile the indexes.
```

For a single index with memoir and xindy:

The usual .idx and .ind files will be used, along with the lwarp.xdy style file

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
\operatorname{Enter} \Rightarrow \quad \text{lwarpmk printindex} \operatorname{Enter} \Rightarrow \quad \text{lwarpmk htmlindex} to compile the indexes.
```

For multiple indexes with memoir and xindy, using latexmk:

lwarp's options are used, and are passed to latexmk.

```
\documentclass{memoir}
\usepackage[
     xindy,
     xindyLanguage=english,
     xindyCodepage=utf8,
     latexmk
]{lwarp}
...
\xindyindex
\makeindex
\makeindex[secondname]
```

lwarpmk will use *latexmk* to create the indexes automatically.

For multiple indexes with memoir and xindy, without latexmk:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
  xindy,
 PrintIndexCmd={
   xindy -M lwarp.xdy -L english -C utf8
      ctname>.idx ;
   xindy -M lwarp.xdy -L english -C utf8
      secondname.idx
  },
 HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
      projectname>_html.idx ;
   xindy -M lwarp.xdy -L english -C utf8
      secondname_html.idx
 }
]{lwarp}
\xindyindex
\makeindex
\makeindex[secondname]
```

For Windows, replace the four ";" characters with "&".

<projectname> is the \jobname: if compiling "name.tex", use the filenames
name.idx and name_html.idx.

Use

 $\begin{array}{ll} {\rm Enter} \Rightarrow & \text{lwarpmk printindex} \\ {\rm Enter} \Rightarrow & \text{lwarpmk htmlindex} \\ & \text{to compile the indexes.} \end{array}$

8.6.21 Using a custom makeindex style file

makeindex (Prog)
lwarp.ist (file)

When using *makeindex*, *lwarpmk* uses the file lwarp.ist to process the index. This file is over-written by lwarp whenever a print version of the document is processed.

To use a custom *makeindex* style file:

- 1. Copy lwarp.ist to a new filename such as projectname.ist
- 2. Make changes to projectname.ist. Keep the lines which refer to \hyperindexref. These lines creates the hyperlinks for the HTML index. During print output \hyperindexref becomes a null function.
- 3. If changing

```
delim_n -and- delim_r
```

in projectname.ist, then in the document preamble redefine

\IndexPageSeparator -and- \IndexRangeSeparator

to match.

makeindexStyle (Opt)

4. In the document source use the makeindexStyle option for lwarp:

```
\usepackage[
    . . . other options . . .
    makeindex,
    makeindexStyle=projectname.ist,
]{lwarp}
```

Likewise, refer to the custom style file if using \PrintIndexCmd, \HTMLIndexCmd, or \LatexmkIndexCmd.

5. Recompile the print version, which causes lwarp to rewrite the lwarpmk.conf configuration file. This tells *lwarpmk* to use the custom projectname.ist file instead of lwarp.ist.

8.6.22 Using a custom xindy style file

xindy (*Prog*) lwarp.xdy (*file*)

When using *xindy*, *lwarpmk* uses the file lwarp.xdy to process the index. This file is over-written by lwarp whenever a print version of the document is processed.

To use a custom *xindy* style file:

- 1. Copy lwarp.xdy to a new filename such as projectname.xdy
- 2. Make changes to projectname.xdy.

Keep the lines which refer to \hyperindexref:

```
(define-attributes (("hyperindexref")))
(markup-locref :open "\hyperindexref{" :close "}")
...
(markup-locref :open "\textit{\hyperindexref{" :close "}}" :attr "textit")
```

These lines create the hyperlinks for the HTML index. During print output \hyperindexref becomes a null function.

To create custom styles, refer to the lines for \textbf and \textit.

3. If changing any of

```
markup-locref-list :sep
markup-locclass-list :open
markup-locclass-list :sep
markup-crossref-layer-list :sep
markup-range :sep
```

in projectname.xdy, then in the document preamble redefine

\IndexPageSeparator -and- \IndexRangeSeparator

to match.

xindyStyle (Opt)

4. In the document source use the xindyStyle option for lwarp:

```
\usepackage[
    . . . other options . . .
    xindy,
    xindyStyle=projectname.xdy,
]{lwarp}
```

Likewise, refer to the custom style file if using $\P \operatorname{Likewise}$, $\operatorname{Likewise}$

5. Recompile the print version, which causes lwarp to rewrite the lwarpmk.conf configuration file. This tells *lwarpmk* to use the custom projectname.xdy file instead of lwarp.xdy.

8.6.23 Using a custom xindex style file

xindex (*Prog*) To use a custom *xindex* style file:

⚠ filename

- 1. Copy xindex-cfg.lua to a new filename such as xindex-projectname.lua. The filename must start with xindex- and end with .lua.
- 2. Make changes to xindex-projectname.lua.
- 3. If changing

```
itemPageDelimiter -and- rangeSymbol
```

in xindex-projectname.lua, then in the document preamble redefine

 $\verb|\IndexPageSeparator - and - \IndexRangeSeparator| \\$

to match.

xindexConfig (Opt)

4. In the document source use the xindexConfig option for lwarp:

```
\usepackage[
    . . . other options . . .
    xindex,
    xindexConfig=projectname, % (without xindex- or .lua)
]{lwarp}
```

Likewise, refer to the custom style file if using \PrintIndexCmd, \HTMLIndexCmd, or \LatexmkIndexCmd.

5. Recompile the print version, which causes lwarp to rewrite the lwarpmk.conf configuration file. This tells *lwarpmk* to use the custom xindex-projectname.lua file instead of the default xindex-cfg.lua.

8.6.24 Additional indexing limitations

xindy with hyperref

xindy and hyperref may not work well together for print output with "see", "see also", reference ranges, or stylized index references. It may be necessary to turn off hyper-referencing for indexes:

\usepackage[hyperindex=false]{hyperref}

 \triangle

empty index If an HTML index is empty, it may be necessary to add the following before lwarp is loaded:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
\usepackage{lwarp}
```

makeindex custom display styles

When using *makeindex*, custom display styles are possible:

```
\begin{warpprint}
\newcommand{\notesstyle}[1]{#1nn}
\end{warpprint}
\begin{warpHTML}
\makeatletter
\newcommand{\notesstyle}[1]{\LWR@doindexentry{#1} notes }
\makeatother
\end{warpHTML}
A sentence.\index{key|notesstyle}
```

xindy custom display styles For custom styles with xindy, see lwarp.xdy for \textbf and \textit as examples.

8.6.25 Index positions, TOC, tocbibind

placement and Toc options An index may be placed inline with other HTML text, or on its own HTML page:

makeidx (Pkg) Inline, with a manual Toc entry:

A commonly-used method to introduce an index in a LATEX document:

```
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex
```

makeidx (Pkg) On its own HTML page, with a manual TOC entry:

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLT0C
\printindex
```

tocbibind (Pkg) Inline, with an automatic Toc entry:

The tocbibind package may be used to automatically place an entry in the TOC.

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex
```

tocbibind (Pkg) On its own HTML page, with an automatic TOC entry:

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
```

numindex (*Opt*) [tocbibind] numbered index section

Use the tocbibind numindex option to generate a numbered index. Without this option, the index heading has no number.

Other packages, such as imakeidx, may also have options for including the index in the Table of Contents.

tocloft (Pkg)

tocloft & other packages

If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard LATEX commands to create the titles, allowing other packages to work with it.

8.7 Math

8.7.1 Math in section names

math in section names

If using named HTML files, in section names use paren math (x+y) instead of dollar math \$x+y\$. (Dollar math works, but appears in the filename.) Or, use a short name for the TOC entry without the math, or use texorpdfstring from the hyperref package:

math in environments

8.7.2 Math in custom environments

To create an environment which places its contents inside math, instead of:

```
\NewDocumentEnvironment{mymathenv}{b}
    {
        \inlinemathother
        \( starting math #1 ending math \)
        \inlinemathnormal
    }
    {}
```

or:

```
\usepackage{environ}
\NewEnviron{mymathenv}{
  \inlinemathother
  \( \text{starting math \BODY ending math \} \)
  \inlinemathnormal
}
```

For display math, use $\[\]$, $\[\]$, $\[\]$ displaymathother, and $\[\]$ displaymathnormal.

8.7.3 Rendering tradeoffs

Math rendering

Math may be rendered as svG graphics or using the MATHJAX JavaScript display engine.

svg files

Rendering math as images creates a new svg file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to svg only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

svg inline

The svG images are currently stored separately, but they could be encoded inline directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

PNG files

Others LATEX-to-HTML converters have used PNG files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but svG files are the preferred approach for scalable graphics.

MathмL

Conversion to MathmL might be a better approach, among other things allowing a more compact representation of math than svg drawings. Problems with MathmL include limited browser support and some issues with the fine control of the appearance of the result. Also see section 10 regarding EPUB output with MATHJAX.

8.7.4 svg option

svg math option

For svG math, math is rendered as usual by LATEX into the initial PDF file using the current font 14, then is captured from the PDF and converted to svG graphics via a number of utility programs. The svG format is a scalable-vector web format, so math may be typeset by LATEX with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An HTML alt attribute carries the LATEX code which generated the math, allowing copy/paste of the LATEX math expression into other documents.

svg image font size

For the lateximage environment, the size of the math and text used in the svg image may be adjusted by setting \LateximageFontSizeName to a font size name—without the backslash, which defaults to:

\renewcommand{\LateximageFontSizeName}{normalsize}

For inline svg math, font size is instead controlled by \LateximageFontScale, which defaults to:

¹⁴See section 684 regarding fonts and fractions.

\newcommand*{\LateximageFontScale}{.75}

svg math copy/paste

For svg math, text copy/paste from the HTML <alt> tags lists the equation number or tag for single equations, along with the LATEX code for the math expression. For $\mathcal{H}_{\mathcal{M}}\mathcal{S}$ environments with multiple numbers in the same environment, only the first and last is copy/pasted, as a range. No tags are listed inside a starred $\mathcal{H}_{\mathcal{M}}\mathcal{S}$ environment, although the \tag macro will still appear inside the LATEX math expression.

svg math size, baseline

svg math sizing and baselines are improved if the graphics or graphicx package is loaded. An almost-invisible marker is placed at either end of the image to assist in cropping and computing the baseline. A warning is issued at the end of the compile if graphics or graphicx are not used.

svg math in T_EX boxes

svg math does not work inside TEX boxes, since a \newpage is required before and after each image.

8.7.5 MATHJAX option

MATHJAX math option

MathJax (Prog)

The MathJax (mathjax.org) LATEX-math to HTML converter may be used to display math.

When MATHJAX is enabled, math is rendered twice:

- 1. As regular LATEX PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of LATEX, and
- 2. As detokenized printed L^ATEX commands placed directly into the HTML output for interpretation by the MathJax display scripts. An additional script is used to pre-set the equation number format and value according to the current L^ATEX values, and the MathJax equation numbering system is ignored in favor of the L^ATEX internal system, seamlessly integrating with the rest of the HTML output, including any math appearing in non-MathJax svg output.

8.7.6 MATHJAX rendering options

MATHJAX v3 may render using CHTML or svg. svg display renders italic characters correctly. To select svg rendering, right-click on some math, and select

Math Settings \rightarrow Math Renderer \rightarrow SVG

Wait a moment for the math to rerender.

8.7.7 Customizing MATHJAX

equation numbering

lwarp detects and adjusts MathJax equation numbering format for article and book style equations as well as amsmath \numberwithin for chapters, sections, and subsections. Custom equation number formats may be set as follows, for example:

```
\renewcommand*{\theequation}{\Alph{section}.\arabic{equation}}
\AtBeginDocument{
  \renewcommand*{\theMathJaxsection}{\Alph{section}.}
}
```

 \triangle subequation

The amsmath subequations environment is supported, but only with \alpha subequation numbering.

global customizations

MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined in the preamble. These will be declared at the start of each HTML page, and thus will have a global effect across all HTML pages.

Examples:

To avoid a slowdown in compile speed, use the warpMathJax environment to prevent its contents from being processed in print or svg math output. Also, place each new definition inside its own \CustomizeMathJax. A warning to this effect is issued if an overly-long definition is attempted.

lwarp already provides MATHJAX customizations for some packages.

siunitx When using siunitx, a similar process may be used to add custom units:

```
\begin{warpMathJax}
\CustomizeMathJax{\newcommand{\myunit}{\mathrm{WXYZ}}}
\CustomizeMathJax{\newcommand{\umyunit}{\mathrm{\micro\myunit}}}
\end{warpMathJax}
```

advanced control

For more advanced control over dynamically creating custom definitions, see as an example the lwarp definition for \DeclarePairedDelimiterX, in section 403, mathtools.

local customizations

For customizations local to the current HTML page only, macros may be defined as follows:

```
\begin{warpMathJax}
\( \newcommand{\macroname}{\ldots\ \)
\( \newcommand{\anothername}{\ldots\ \)
\end{warpMathJax}
```

To maintain compile speed, use the warpMathJax environment, and use a separate math environment for each definition.

\ifstar For MathJax, use \ifstar instead of \@ifstar:

```
\CustomizeMathJax{
  \def\myname{
    \ifstar\starredaction\unstarredaction
    % (Do not place anything after!)
  } }
```

\ifnextchar

For MathJax, use \ifnextchar instead of \@ifnextchar:

\CustomizeMathJax{\def\myname{\ifnextchar X \found\notfound}}

"X" may be a single ASCII character, or a hex number inside braces, ex:

\CustomizeMathJax{\def\myname{\ifnextchar{0x7B}\found\notfound}}

Use "(" or " $\{0x28\}$ " for a left parenthesis, " $\{0x7B\}$ " for a left brace, " $\{0x7D\}$ " for a right brace, or " $\{0x5C\}$ " for a backslash.

8.7.8 MATHJAX limitations

MathJax limitations
MathJax (Prog)

Limitations when using MATHJAX include:

\multicolumn, multirow

 MATHJAX does not support \multicolumn or multirow. These may be used in text tabulars or svg math, but in MATHJAX math arrays they are emulated. \multicolumn only fills a single cell, resulting in a short row. \multirow simply prints its text on the first line.

• Footnotes are emulated when used inside a MATHJAX expression. For an equation with a single footnote, the correct footnote number is used. For non-equations, \footnotename is used instead, since the actual number cannot be tracked. See section 8.5.4 regarding the use of footnotes with MATHJAX.

• Inside a MathJax expression, references to equations work within the same HTML web page, but do not work when referring to an equation in a different HTML web page. Outside of a MathJax expression, in the text body, references work as expected.

lateximage

• Math appearing inside a lateximage, and therefore also inside a TikZ or picture environment, is rendered as svg math even if MathJax is used in the rest of the document.

siunitx

• For siunitx, see siunitx package, section 8.7.15.

physics

• For physics, see physics package, section 8.7.17.

tabbing

\text

• MathJax includes the *textmacros* extension, which supports various macros which are commonly used inside \text, such as \textbf and text accents. Lwarp supports this extension.

 ⚠ Unicode

• If using DVI LATEX or PDF LATEX, unicode input may not appear correctly in MATHJAX. Either use XALATEX or LualATEX, or replace Unicode special characters such as

\text{special character æ}

with their special macros, such as

\text{special character \ae}

 • Many other math-related macros and packages are not directly supported by MathJax, including \ensuremath and occasionally-used macros such as \relax. While using MathJax, lwarp provides emulation for many of these

macros, as well as for footnotes and emulation for dozens of packages (see table 2). In many cases these emulations simply ignore the package in a source-compatible way. Others produce a result which represents the meaning, even if they don't look exact. Look up each package in this document for a description of the limitations of each.

8.7.9 Catcode changes

preamble macros with math

The math shift character \$ is not set for HTML output until after the preamble. Macros defined in the preamble which contain \$ must be enclosed between \StartDefiningMath and \StopDefiningMath to temporarily change to the HTML meaning of \$:

```
\StartDefiningMath
\newcommand{...}
\StopDefiningMath
```

As an alternative, use \(and \) instead of \$, in which case \StartDefiningMath and \StopDefiningMath are not necessary.

If a package defines macros using \$, it may be nessary to use \StartDefiningMath and \StopDefiningMath before and after loading the package.

8.7.10 Complicated inline math objects

\inlinemathnormal \inlinemathother

changing contents complicated alt tag

MathJax limitations

An inline math expression is usually converted to a reusable hashed svg math image, or a MathJax expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as \$x+1\$, so the image can be reused for multiples instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses. Another problem is complicated contents which do not expand well in an alt tag. Yet another problem is math packages which are only partially emulated in MathJax. The macro \inlinemathother may be used before a sequence of dynamic or complicated math expressions, and \inlinemathnormal after. Doing so tells lwarp to use unhashed svg math images for those particular expressins, even if MathJax is otherwise in use. See section 44.

8.7.11 Complicated display math objects

\displaymathnormal

By default, or when selecting \displaymathnormal, Mathjax math display environments print their contents as text into html for Mathjax to interpret, and svg display math environments render their contents as svg images and use their contents as the alt tag of html output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated TikZ pictures, compilation will fail.

\displaymathother MATHJAX unsupported complicated alt tag When selecting \d is playmathother, it is assumed that the contents are more complicated than "pure" math. An example is an elaborate \d is picture, which will not render in MathJax and will not make sense as an HTML alt tag. In this mode, MathJax is turned off, math display environments become svg images, even if MathJax is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as \d it is assumed that the contents are more likely to compile successfully.

8.7.12 Theorems

cref reference format undefined If the print version does not use cleveref, place all \theoremstyle and \newtheorem declarations in the preamble inside \AtEndPreamble. 15 For some theorems, it may also be required to add inside \AtEndPreamble something such as:

```
\usepackage{etoolbox} % for \ifdef, \AtEndPreamble
\AtEndPreamble{ % if not using cleveref package
  \theoremstyle{definition}
  \newtheorem{dtheorem}{Definition}
  \ifdef{\cref}{
    \crefname{Proof}{Proof}{Proofs}
  }{}
}
```

8.7.13 ntheorem package

ntheorem(Pkg)

Font control

This conversion is not total. Font control is via css, and the custom LATEX font settings are ignored.

Equation numbering

ntheorem has a bug with equation numbering in $\mathcal{A}_{M}\mathcal{S}$ environments when the option thref is used. lwarp does not share this bug, so equations with \split, etc, are numbered correctly with lwarp's HTML output, but not with the print output. It is recommended to use cleveref instead of ntheorem's thref option.

showonlyrefs is disabled, as it conflicts with cleveref, which is used by lwarp.

8.7.14 mathtools package

mathtools(Pkg)

equation numbering

italic correction

mathic is not emulated for HTML.

Equation numbers may not match the print version.

MATHJAX If using MATHJAX:

- Recent changes may not yet be updated in the MATHJAX extension, which is used by lwarp.
- mathtools disallowspaces does not work for MATHJAX. Protect brackets which are not optional arguments, such as:

```
\begin{gathered}{}
[p]=1 . . .
\end{gathered}
```

- showonlyrefs does not work in MATHJAX, and will result in a difference in equation numbering compared to the print version.
- alignat in MATHJAX requires math mode, but in LATEX it doesn't. It may be required to use warpHTML and warpprint to isolate a version for each mode.
- \DeclarePairedDelimiter and related must be in the preamble before \begin{document}.

¹⁵ warp uses cleveref for the HTML conversion, and loads cleveref \AtEndPreamble, just before \AtBeginDocument. This is also before the .aux file is read.

8.7.15 siunitx package

siunitx (*Pkg*) siunitx is well supported by lwarp.

Limitations Some general limitations:

fractions

Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

\cancel is not currently supported for siunitx v3.

Negative values are not automatically colored.

tabular

Tabular S and s columns are rendered as simple c columns, although key settings will be set. If using scientific notation, table-format, table-align-uncertainty, drop-exponent, etc.. use \tablenum for each cell. This is especially required for drop-exponent, without which the value will be shown incorrectly.

drop-exponent

table-auto-round

table-auto-round is ignored.

Math rendering Math may be rendered in several ways in the same document:

For math mode with svg display: The original siunitx code is used while generating the svg image.

For HTML text mode: lwarp uses siunitx code patched for HTML, and simplified units.

For math expressions while using MATHJAX: A limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. The result usually looks fine, and otherwise is enough to get the meaning across.

Custom units siunitx allows customized units:

```
\DeclareSIUnit \{\langle name \rangle\} \{\langle definition \rangle\}
```

\DeclareSIUnit declares a version of the unit for the print version. This is also used when the unit is printed in svg math or a lateximage. It is also used for HTML if an HTML-specific version is not defined with \HTMLDeclareSIUnit.

\DeclareSIUnit\myunit{\ensuremath{\text{m}_y}}

\HTMLDeclareSIUnit $\{\langle name \rangle\} \{\langle definition \rangle\}$

v3 only! Use this after the print unit has been defined. For siunitx v3, \HTMLDeclareSIUnit declares a simplified version of the unit for HTML, for example if the print-mode unit uses TFX boxes or \ensuremath:

\HTMLDeclareSIUnit\myunit{\text{m}\textsubscript{\textit{y}}}

It is also possible to provide a custom unit for MATHJAX:

\CustomizeMathJax{\newcommand{\myunit}{\text{m}_y}}

Predefined units Most units work as-is with HTML. For the following units, lwarp has already set \HTMLDeclareSIUnit: \celsius, \arcminute, \arcsecond, \elementarycharge, \clight, \bohr, \electronmass, \hartree, \planckbar.



Document modifications required for MATHJAX

\sisetup

• Place \sisetup in the preamble before \begin{document}. Changes made later may be ignored, especially with MATHJAX. The MATHJAX emulation also ignores most macro options.

complex numbers

• Complex numbers are displayed as entered, ignoring output-complex-root.

custom units

• Custom units may be added with \CustomizeMathJax. For example, from lwarp-common-mathjax-siunitx:

\CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_{\mathrm{h}}}} \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x212B}}}}}

unit spacing

• Units work better using ~ between units instead of using periods.

\square, \cubic

• To square or cube compound units, enclose the following compound units in braces:

\cubic{\centi\meter}

Single units do not require braces.

 For \numlist, the argument is printed as text as-is, so use space between semicolons for improved readability.

Missing \$ inserted

• If using parse-numbers = false, also use \num or \qty. siunitx=siunitx>Missing \$ inserted.

Also see MathJax option, section 8.7.5.

8.7.16 units and nicefrac packages

units (Pkg)nicefrac(Pkg)

units and nicefrac work with lwarp, but MATHJAX does not have an extension for units or nicefrac. These packages do work with lwarp's option sygmath.

8.7.17 physics package

physics (Pkg)physics works as-is for HTML with svg math.

For MathJax, the MathJax v3 physics extension is used.

Graphics 8.8

graphics (Pkg) graphicx(Pkg)

file extensions

Per table 9, image filenames may be specified either with or without an extension. If an extension is given it will be used as-is, for either print or HTML output. If no extension is given, a list of possible extensions is tried, which depends on whether print or HTML is being generated. This allows a PDF file for print and a SVG file for HTML, for example. If no extension is given, the automatic search will only return lowercase extensions, even if the filename actually has an uppercase

case sensitive

Table 9: \includegraphics and file names

Print image file	нтмL image file	Command to use
${\tt image.pdf}^a$	image.svg ^a	\includegraphics{image}
image.eps ^a	${\tt image.svg}^a$	\includegraphics{image}
image.jpg	b	\includegraphics{image}
image.png	b	\includegraphics{image}
image.JPG	b	$\verb \includegraphics{image.JPG} ^c$
image.PNG	b	$\verb \includegraphics{image.PNG} ^c$
image.jpg	image.gif	\includegraphics{image}

^{a:} Must be a lowercase file extension.

extension, and lwarp cannot get around this problem, so image file extensions must be lowercase to be seen by the HTML browser with lwarp. For example, name the image file image.pdf instead of image.PDF, but refer to it in the source as image, without an extension. For images which may be used as-is with either print or HTML, such as JPG or PNG, you may use a capitalized extension if it is specified in the source, such as image.JPG.

\includegraphics file formats

For \includegraphics with .pdf or .eps files, the user must provide a .pdf or .eps image file for use in print mode, and also a .svg, .png, or .jpg version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, lwarp will automatically choose the .pdf or .eps format if available, or some other format otherwise. For ${\tt HTML}$, one of the other formats is used instead.

If a .pdf or .eps image is referred to with its file extension, the extension will be changed to .svg for $\ensuremath{\mathsf{HTML}}$:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

pdftocairo (*Prog*)
PDF to SVG

pdftocairo (Prog) To convert a PDF image to svg, use the utility pdftocairo:

```
Enter ⇒ pdftocairo -svg filename.pdf
```

lwarpmk pdftosvg (*Prog*) For a large number of images, use *lwarpmk*:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

 For EPS images converted to PDF using the package epstopdf, use

```
Enter ⇒ lwarpmk pdftosvg *.PDF
```

to convert to svg images.

b: The same file is used for print and нтмг.

c: The uppercase extension must be specified.

DVI LATEX When using DVI latex, it is necessary to convert EPS to PDF and then to SVG:

Enter ⇒ lwarpmk epstopdf *.eps (or a list of filenames)

Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)

PNG and JPG For PNG or JPGwhile using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

GIF GIF files may be used for HTML, but another format must also be provided for print output.

file extension priorities If a file extension is not used, for HTML the file extension priorities are: svg, GIF,

PNG, then JPG.

A complication occurs if a file of the same name exists elsewhere in the TEX tree, such as a test image from some LATEX package. TEX looks in the local document directory before considering the directories specified by \graphicspath, but the TEX tree is found as "local", so any file in the tree is found before the directories in \graphicspath. To use such an image, it must be copied to the document's directory to be used for HTML, and furthermore must be in the document's base directory instead of an images subdirectory.

graphics vs. graphicx If using the older graphics syntax, use both optional arguments for \includegraphics. A single optional parameter is interpreted as the newer graphicx syntax. Note that viewport viewports are not supported by lwarp—the entire image will be shown.

For \includegraphics, avoid px and % units for width and height, or enclose them inside warpHTML environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys width=.5\linewidth, or similar for \textwidth or \textheight to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the scale option, since it is not well supported by HTML browsers.

options \includegraphics accepts width and height, origin, rotate and scale, plus new class and alt keys. (alt has recently been incorportated into graphicx itself.)

HTML class With HTML output, \includegraphics accepts an optional class=xyz keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

HTML alt tags Likewise, the \includegraphics alt key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag according to \ImageAltText.

scale Avoid using the \includegraphics scale option. Change:

\includegraphics[scale=<xx>]{ . . . }

to:

duplicate files

units

image not displayed

⚠

\includegraphics[width=<yy>\linewidth]{ . . . }

\rotatebox \rotatebox accepts the optional origin key.

browser support \rotatebox, \scalebox, and \reflectbox depend on modern browser support.

The css3 standard declares that when an object is transformed the whitespace

which they occupied is preserved, unlike IATEX, so expect some ugly results for scaling and rotating.

8.8.1 tikz package

tikz(Pkg)⚠ displaymath and matrices

If using display math with tikzpicture or \tikz, along with matrices with the & character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of & in the tikz expression must be replaced with \&.

8.8.2 grffile package

grffile (Pkg)

grffile is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an svg, PNG, or JPG version for HTML.

matching PDF and svG

8.8.3 color package

color is superceded by xcolor, and lwarp requires several of the features of xcolor. color (Pkg) When color is requested, xcolor is loaded as well.

8.8.4 xcolor package

xcolor(Pkg)

\colorboxBlock and \fcolorboxBlock \colorboxBlock and \fcolorboxBlock are provided for increased HTML compatibility, and they are identical to \colorbox and \fcolorbox in print mode. In HTML mode they place their contents into a <div> instead of a . These <div>s are set to display: inline-block so adjacent \colorboxBlocks appear side-by-side in нтмL, although text is placed before or after each.

Print-mode definitions for \colorboxBlock and \fcolorboxBlock are created by lwarp's core if xcolor is loaded.

background: none

\fcolorbox and \fcolorboxBlock allow a background color of none, in which case only the frame is drawn, which can be useful for HTML.

color support

Color definitions, models, and mixing are fully supported without any changes required.

colored text and boxes \textcolor, \colorbox, and \fcolorbox are supported.

\color and \pagecolor \color and \pagecolor are ignored. Use css or \textcolor where possible.

8.8.5 epstopdf package

epstopdf (Pkg) Images with an .eps extension will be converted to .pdf. The HTML output uses the .svg version, so use

 \triangle

convert to .svg

Enter ⇒ lwarpmk pdftosvg <listofPDFfiles>

to generate . svg versions.

8.8.6 pstricks package

pstricks (Pkg)

All pstricks content should be contained inside a pspicture environment.

8.8.7 pdftricks package

pdftricks (*Pkg*) convert image files

 \triangle

The pdftricks image files <jobname>-fig*.pdf must be converted to .svg, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ lwarpmk pdftosvg <jobname>-fig*.pdf

8.8.8 psfrag package

psfrag(Pkg)

∆ use psfrags

The psfrags environment is modified to use lateximage to encapsulate the image. Always use a psfrags environment to contain any local \psfrag macros and the associated \includegraphics or \epsfig calls. Outside of a psfrags environment, psfrags adjustments will not be seen by lwarp.

 \triangle

Tip: Use a mono-spaced font for the tags in the EPS file.

8.8.9 pstool package

pstool (Pkg) \graphicspath is ignored, and the file directory must be stated.

♠ path and filename

The filename must not have a file extension.

Use

Enter ⇒ lwarpmk html

followed by

Enter ⇒ lwarpmk limages

.

8.8.10 asymptote package

asymptote (Pkg) To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex

lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1
```

lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages

8.8.11 overpic package

overpic (*Pkg*)

 scaling

The macros \overpicfontsize and \overpicfontskip are used during HTML generation. These are sent to \fontsize to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the overpic and Overpic environments.

8.8.12 Multimedia packages

 $\operatorname{multimedia}\left(Pkg\right)$

The packages multimedia, movie15, and media9 are supported.

movie15(Pkg)

media9(Pkg)

 ${\tt HTML5}$ <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each addresource=, as well as each flashvars source= and src=. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside \warpprintonly or the warpprint environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For movie15, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YouTubeTM video, use an "embedded" url with .../embed/... instead of .../v/...

8.9 Tabbing

The tabbing environment works, except that svg math and lateximages do not yet work inside the environment.

 If math is used inside tabbing, place tabbing inside a lateximage environment, which will render the entire environment as a single svg image.

8.10 Tabular

8.10.1 tabular environment

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

Defining macros and environments:

 When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are are ignored in print mode.

\StartDefiningTabulars

<define macros or environments using tabular and & here>

\StopDefiningTabulars

This includes before and after defining any macro which used \ttabbox from floatrow.

When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabular as follows. This is ignored in print mode.

△ Misplaced alignment tab character &

tabular inside another environment

```
\StartDefiningTabulars
                                (&
                                    is
                                         used
                                                in
definition)
\newenvironment{outerenvironment}
  \tabular{cc}
  left & right \\
}
{
  \TabularMacro\ResumeTabular
  left & right \\
  \endtabular
}
\StopDefiningTabulars
```

For developers:

• To automate the use of \StartDefiningTabulars and \EndDefiningTabulars, these macros may be embedded inside an HTML environment definition to automatically change the catcode of & before absorbing the arguments. Another environment may be embedded as well.

```
% Does the work after the catcode has been changed:
\newcommand*{\LWR@HTML@subsomename}[2]{%
  \otherenvironmentname [<args>] {<args>} %
example
}
% Change catcode before absorbing arguments:
\newcommand*{\LWR@HTML@somename{%
  \StartDefiningTabulars
  \LWR@HTML@subsomename
}
% Change catcode again at the end:
\newcommand*{\LWR@HTML@endsomename}{%
  \endotherenvironmentname
                             % for example
  \StopDefiningTabulars
}
% Combine with the existing print definition:
\LWR@formattedenv{somename}
```

Cell contents:

 \triangle macro in a table

• Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use \TabularMacro just before the macro. This is ignored in print mode.

\TabularMacro\somemacro & more row contents \\

Column specifiers:

∆ math

• Due to the way math is gathered for processing, column specifiers such as >{\$}c<{\$} do not work with lwarp. Instead, each cell must specify math mode individually.

@ and!

• Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

In \multirow cells, the print version may have extra instances of <, >,
 @, and ! cells on the second and later rows in the \multirow which do not appear in the HTML version.

• If \newcolumntype does not work for HTML, add a simplified column type using \HTMLnewcolumntype.

font and alignment

• lwarp detects each of the following, and sets HTML CSS appropriately:

```
>{\centering\arraybackslash}
```

- >{\raggedright\arraybackslash}
- >{\raggedleft\arraybackslash}
- >{\itshape}
- >{\bfseries}
- >{\bfseries\itshape}

These may be used with \newcolumntype, such as:

\newcolumntype{P}[1]{>{\centering\arraybackslash}p{#1}}

Rules:

• Doubled \hlines, \midrules, and vertical rules are supported.

• Vertical rules next to either side of an @ or! column are displayed on both sides of the column.

• Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or! columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

If you wish to use \cmidrule followed by \bottomrule, it may be necessary to use:

```
\cmidrule{2-3} \\[-2ex]
```

\bottomrule

The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.

• For \toprule and \bottomrule, when combined with a warpprint or warpHTML environment, if a "Misplaced \noalign" error occurs, change

```
This & That \endhead
```

to

\warpprintonly{This & That \endhead}

and likewise with the other \end headings. Keep the \endfirsthead row unchanged, as it is still relevent to HTML output.

Other:

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.
- For longtable, place headings and footings which do not apply to HTML inside \warpprintonly{}.
- For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside { } braces, including commands such as \multirow. While producing HTML output, though, anything placed inside braces is not seen by lwarp's tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3
\\}
\warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}
```

• In LATEX, a tabular may be placed inside a minipage, but in HTML a may not be inside a . If this situation is detected, a warning is printed instructing the user to isolate the using \warpprintonly or the warpprint environment.

vertical rules

width and trim

combined rules

⚠ \warpprintonly⚠ Misplaced \noalign

longtable headings

∴ S columns

Δ

tabular inside a

8.10.2 multirow package

vposn

Note that recent versions of multirow include a new optional vposn argument.

multirow cells

• For multirow, insert \mrowcell into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```
... & \multirow{2}{.5in}{text} & ...
```

colored cells

• The multirow documentation regarding colored cells recommends using a negative number of rows. This will not work with lwarp, so \warpprintonly and \warpHTMLonly must be used to make versions for print and HTML.

with \multicolumn

^ \multicolumn & \multirow

 \triangle

• See section 433.2 for \multicolumrow.

lwarp does not support directly combining \multicolumn and \multirow. Use \multicolumnrow instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for \multicolumn come first, followed by the five arguments for \multirow, many of which are optional, followed by the contents.

As per \multirow, skipped cells to the right of the \multicolumnrow statement are not included in the source code on the same line. On the following lines, \mcolrowcell must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

```
... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
```

skipped cells

empty cells

• MATHJAX does not support multirow, so it is emulated to only print its text on the first row. \multirow works as expected in text tabulars or svg math.

8.10.3 longtable package

longtable (*Pkg*) Use one of either \endhead or \endfirsthead for both print and HTML, and use a \warpprintonly macro to disable the other head phrase, and also the \endfoot and \endfirstfoot phrases. (See section 8.10.4 if using threeparttablex.)

Misplaced \noalign

Use the \warpprintonly macro instead of the warpprint environment. Doing so helps avoid "Misplaced \noalign." when using \begin{warpprint}.

\kill is ignored, place a \kill line inside

\begin{warpprint} . . . \end{warpprint}

or place it inside \warpprintonly.

lateximage

longtable is not supported inside a lateximage.

8.10.4 threeparttablex package

threeparttablex (Pkg) threeparttablex is used with longtable and booktabs as follows:

```
\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{
                        % not used in HTML
  [ . . . ] \endhead
                       % or \endfirsthead
  [ . . . ] \endfoot
  \bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warpHTMLonly{ % HTML last footer
  \bottomrule
  \UseMinipageWidths
                         % optional
  \insertTableNotes
  \endlastfoot
}
\end{longtable}
```

table width

The table notes are created using a \multicolumn. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, lwarp guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use \UseMinipageWidths before \insertTableNotes. The width is then specified, and in many cases the result is an improvement in overall table layout.

8.10.5 supertabular and xtab packages

supertabular(Pkg)

For \tablefirsthead, etc., enclose them as follows:

xtab(Pkg)

Misplaced alignment tab character &

\StartDefiningTabulars \tablefirsthead

\StopDefiningTabulars

See section 8.10.1.

lateximage supertabular and xtab are not supported inside a lateximage.

8.10.6 colortbl package

colortbl (Pkg)

Only use \rowcolor and \cellcolor at the start of a row, in that order.

 \triangle

row/cell color

colortbl ignores the overhang arguments.

colored tables

\rowcolors is supported, except that the optional argument is ignored so far.

8.10.7 ctable package

tab character &

Misplaced alignment Use \StartDefiningTabulars before one or more \ctables, and \StopDefiningTabulars after. These change the meaning of the ampersand & character.

8.10.8 bigdelim package

bigdelim(Pkg)

use \mrowcell

\ldelim and \rdelim use \multirow, so \mrowcell must be used in the proper number of empty cells in the same column below \ldelim or \rdelim, but not in cells which are above or below the delimiter:

```
\begin{tabular}{lll}
<empty> & a & b \\
\left( \frac{3}{3} \right) = c & d \
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}
 <->
 left
       е
```

For MATHJAX, limited emulation is provided which merely prints the delimter and optional text in the first row.

8.11 Floats

8.11.1 Float contents alignment

figure & table \centering, etc. are honored in a figure or table if they are the first command alignment inside the float:

```
\begin{table*}
\centering
\caption{A Table}
. . .
```

8.11.2 float, trivfloat, and/or algorithmicx together

If using \newfloat, trivfloat, and/or algorithmicx together, see section 643.1. float (Pkg)

trivfloat (Pkg)

algorithmicx (Pkg)package conflicts

8.11.3 caption and subcaption packages

caption (Pkg)subcaption (Pkg) Package options may cause problems with lwarp, especially if they include curley

If selecting options with braces in \usepackage does not work:

```
\usepackage[font={it,small}]{caption}% does not work
```

... try instead selecting the package options before loading lwarp:

```
\PassOptionsToPackage{font={it,small}}{caption}
\usepackage{lwarp}
\usepackage{caption}
```

... or try setting package options after the package has been loaded:

```
\usepackage{caption}
\captionsetup{font={it,small}}
```

numbering To ensure proper float numbering, set caption positions such as:

```
\captionsetup[figure]{position=bottom}
\captionsetup[subfigure]{position=bottom}
\captionsetup[table]{position=top}
\captionsetup[subtable]{position=top}
```

Similarly for longtable. These positions depend on where the user places the \caption command inside each float.

8.11.4 subfig package

subfig(Pkg)

table numbering To have correct sub table numbers:

```
\usepackage{caption}
\captionsetup[table]{position=top}
```

lof/lotdepth At present, the package options for lofdepth and lotdepth are not working. These counters must be set separately after the package has been loaded.

horizontal spacing In the document source, use \hfill and \hspace* between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

8.11.5 floatrow package

floatrow (Pkg)

Misplaced alignment tab character & subfig package

Use \StartDefiningTabulars and \StopDefiningTabulars before and after defining macros using \ttabbox with a tabular inside. See section 8.10.1.

When combined with the subfig package, while inside a subfloatrow \ffigbox and \ttabbox must have the caption in the first of the two of the mandatory arguments.

\FBwidth,\FBheight

The emulation of floatrow does not support \FBwidth or \FBheight. These values are pre-set to .3\Linewidth and 2in. Possible solutions include:

- Use fixed lengths. lwarp will scale the HTML lengths appropriately.
- Use warpprint and warpHTML environments to select appropriate values for each case.
- Inside a warpHTML environment, manually change \FBwidth or \FBheight before the \ffigbox or \ttabbox. Use \FBwidth or \FBheight normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

8.11.6 keyfloat package

keyfloat (Pkg)

⚠ keywrap

If placing a \keyfig[H] inside a keywrap, use an absolute width for \keyfig, instead of lw-proportional widths. (The [H] option forces the use of a minipage, which internally adjusts for a virtual 6-inch wide minipage, which then corrupts the lw option.)

For wrapped figures, overhang and number of lines are ignored.

8.12 Koma-Script classes

komascript (*Cls*) Many features are ignored during the HTML conversion. The goal is source-level compatibility.

\captionformat, \figureformat, and \tableformat are not yet emulated.

Not fully tested!

Please send bug reports!

Some features have not yet been tested. Please contact the author with any bug reports.

8.13 Memoir class

memoir(Cls)

lwarp uses caption, which causes a warning from memoir. This is normal. Adjust captions via caption, instead of memoir.

While emulating memoir, lwarp pre-loads a number of packages (section 699.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading lwarp:

♠ options clash

```
\documentclass{memoir}
\PassOptionsToPackage{options_list}{package_name}
\usepackage{lwarp}
\usepackage{package_name}
```

version numbers

memoir emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since lwarp is intended to support the freestanding packages, which are often newer than the date declared by memoir, it is hoped that memoir will update and change its emulated version numbers to match.

\label(bookmark){tag} \label accepts an optional (bookmark) argument, but this is ignored in HTML.

comment

The comment environment is from the comment package, and thus requires that the \begin and \end each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

\newcomment

Comments defined with \newcomment use memoir's defintions, and behave as expected, where the \begin and \end do have to each be on its own line.

verbatim footnotes \verbfootnote is not supported.

\newfootnoteseries

\newfootnoteseries, etc. are not supported.

page notes

lwarp loads pagenote to perform memoir's pagenote functions, but there are minor differences in \pagenotesubhead and related macros.

page notes with cleveref To add support for pagenotes with cleveref, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

page note \nameref

Note that for print mode, \nameref print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

poems

Poem numbering is not supported.

verbatim

The verbatim environment does not yet support the memoir enhancements. It is currently recommended to load and use fancyvrb instead.

glossaries

The memoir glossary system is not yet supported by lwarpmk. The glossaries package may be used instead, but does require the glossary entries be changed from the memoir syntax to the glossaries syntax.

 Λ titledframe

framewithtitle, The custom frame commands in the memoir manual may be emulated by placing the original defintions in the preamble inside warpprint environments, and then providing an HTML equivalent:

```
\begin{warpHTML}
\newcommand{\FrameTitle}[2]{%
    \textbf{#2}
}
```

```
\newenvironment{framewithtitle}[2][\FrameFirst@Lab\ (cont.)]{%
    \begin{fminipage}{\linewidth}
    \textbf{#2}
    \begin{minipage}{\linewidth}
{\end{minipage}\end{fminipage}}
\newcommand{\TitleFrame}[2]{%
    \par
    \textbf{#1}\par
    \fboxBlock{#2}
}
\newenvironment{titledframe}[2][\FrameFirst@Lab\ (cont.)]{%
    \par
    \textbf{#2}
    \begin{fminipage}{\linewidth}
{\end{fminipage}}
\end{warpHTML}
```

8.14 International languages

section and file names

If using <code>pdflatex</code> with the setting \booltrue{FileSectionNames}, non-ascil text in section names can result in corrupted <code>HTML</code> file names. <code>pdflatex</code> may be used if setting \boolfalse{FileSectionNames}, in which case <code>HTML</code> file numbers will be generated.

For correct HTML file names, use *xelatex*, *lualatex*, or dedicated document classes/engines.

(As of this writing, this warning is only relevent to the kotex package.)

8.15 Miscellaneous packages

8.15.1 verse and memoir

verse (Pkg) When

When using verse or memoir, always place a \\ after each line.

memoir(Cls)

\attrib

The documentation for the verse and memoir packages suggest defining an \attrib command, which may already exist in current documents, but it will only work for print output. lwarp provides \attribution, which works for both print and HTML output. To combine the two so that \attrib is used for print and \attribution is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

\vleftskip (*Len*)
\vleftmargini (*Len*)
\HTMLvleftskip (*Len*)

\HTMLleftmargini (*Len*)

These lengths are used by verse and memoir to control the left margin, and they may already be set by the user for print output. New lengths \HTMLvleftskip and \HTMLleftmargini are provided to control the margins in HTML output. These new lengths may be set by the user before any verse environment, and persist

 \triangle

until they are manually changed again. One reason to change \HTMLleftmargini is if there is a wide \flagverse in use, such as the word "Chorus", in which case the value of \HTMLleftmargini should be set to a wide enough length to contain "Chorus". The default is wide enough for a stanza number.

verse margin

Horizontal spacing relies on *pdftotext*'s ability to discern the layout (-layout option) of the text in the HTML-tagged PDF output. For some settings of \HTMLleftmargini or \HTMLleftskip the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

8.15.2 newclude package

newclude(Pkg)

loading

newclude modifies \label in a non-adaptive way, so newclude must be loaded before lwarp is loaded:

\documentclass{article}
...
\usepackage{newclude}
\usepackage[warpHTML]{lwarp}

8.15.3 babel package

babel (Pkg)

When French is used, the caption separator is changed to a dash. To restore it to a colon, the following may be placed before lwarp is loaded:

\renewcommand*{\CaptionSeparator}{:~}

punctuation spaces

\CaptionSeparator

Also when French is used, lwarp creates fixed-width space around punctuation by patching \FBcolonspace, \FBthinspace, \FBguillspace, \FBmedkern, \FBthickkern, \FBtextellipsis, and the tilde. If the user's document also changes these parameters, the user's changes should be placed inside a warpprint environment so that the user's changes do not affect the HTML output.

customized spacing

⚠

8.15.4 polyglossia package

polyglossia (*Pkg*) lwarp uses cleveref, which has some limitations when using polyglossia, possibly resulting in the error

! Undefined control sequence. . . . __hook begindocument

To test compatibility, add

\usepackage{cleveref}

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

\setdefaultlanguage{english}

or some other language supported by cleveref, then select other languages using \setotherlanguages.

Once the print version works with cleveref and polyglossia, the HTML version should work as well using lwarp.

8.15.5 todonotes and luatodonotes packages

todonotes (Pkg)luatodonotes (Pkg) The documentation for todonotes and luatodonotes have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

8.15.6 fixme

fixme(Pkg)

External layouts (\fxloadlayouts) are not supported.

external layouts

Customized layouts are overwritten by lwarp's versions \AtBeginDocument in order to provide the HTML conversion. If creating a new layout, see lwarp's changes to provide similar for the new layout, inside a warpHTML environment.

User control is provided for setting the HTML styling of the "faces". The defaults are as follows, and may be changed in the preamble after fixme is loaded:

```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

8.15.7 acro package

formats Define acronymn formats using \textbf instead of \bfseries etc.

8.15.8 chemfig package

If using \polymerdelim to add delimiters to a \chemfig, wrap both inside a single lateximage:

```
\begin{lateximage}[-chemfig-~\PackageDiagramAltText]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

8.15.9 chemformula package

chemformula with

chemformula works best without MATHJAX. If MATHJAX is used, \displaymathother must be used before array, and then \displaymathnormal may be used after. (The chemformula package adapts to array, but does not know about MATHJAX, and MATHJAX does not know about chemformula.)

While using Mathjax, \displaymathother may also be used for other forms of display and inline math which contain chemformula expressions.

8.15.10 mhchem package

See section 414.

8.15.11 kotex package

kotex (Pkg) See section 8.14 regarding pdflatex and Korean section names.

★ Korean section names

Compiling using custom shell commands 9

lwarp and lwarpmk try to make it easy to process print and HTML compilation tasks in most situations. Depending on the operating system, command-line options, TEX engine, and lwarp options, the commands lwarpmk print and lwarpmk html are automatically set up to correctly recompile the project. These actions may be overridden using lwarp options, thus allowing the use of packages such as perltex and pythontex.

Command options 9.1

PrintLatexCmd(Opt)HTMLLatexCmd(Opt) The lwarp options PrintLatexCmd and HTMLLatexCmd are used to set customized commands to be executed by lwarpmk print and lwarpmk html.

PrintLatexCmd should be set to shell commands which take project.tex and generate project.pdf.

HTMLLatexCmd should be set to take project_html.tex and generate project_html.pdf. lwarpmk will then take project_html.pdf and automatically convert it and generate project.html.

9.2 Literal character macros

The lwarp package options are parsed by TEX, and so some characters require the use of a special macro to represent them. See table 10. \LWRopquote and \LWRopseq may be used to increase operating-system portability. \jobname must have _html appended for processing HTML. \space may be necessary between other macros.

macro not found To use these macros, either kvoptions-patch must be loaded before lwarp:

```
\usepackage{kvoptions-patch}
\usepackage[
    PrintLatexCmd={ ... } ,
    HTMLLatexCmd={ ... }
]{lwarp}
```

Table 10: Literal character macros

Character	Macro	Comment
%	\LWRpercent	
\$	\LWRdollar	
&	\LWRamp	
%	\LWRhash	
\	\LWRbackslash	
' or "	\LWRopquote	Depends on the operating system.
& or &&	\LWRopseq	Depends on the operating system.
(space)	\space	Forces an extra space.
(jobname)	\jobname	Without file extension.

or \lwarpsetup must be used to set PrintLatexCmd and HTMLLatexCmd:

```
\usepackage[...]{lwarp}
\lwarpsetup{
 PrintLatexCmd=
     {
          latex tm \LWRopseq
          dvips -o tm-pics.ps tm.dvi \LWRopseq
          ps2pdf -dALLOWPSTRANSPARENCY tm-pics.ps \LWRopseq
          pdflatex tm.tex
      } ,
 HTMLLatexCmd=
     {
          latex tm_html \LWRopseq
          dvips -o tm_html-pics.ps tm_html.dvi \LWRopseq
          ps2pdf -dALLOWPSTRANSPARENCY tm_html-pics.ps \LWRopseq
          pdflatex tm_html.tex
      }
```

9.3 latexmk

latexmk (*Prog*) If *latexmk* is used for a project, it may be easiest to continue using it.

latexmk project.tex would create project.pdf as normal.

latexmk project_html.tex would create project_html.pdf, then

lwarpmk pdftohtml project_html.pdf would take project_html.pdf and convert it to project.html.

sagetex (Pkg) latexmk may simplify the use of packages such as sagetex.

perltex package 9.4

perltex (Pkg) The lwarp package option settings to use perltex would be similar to:

```
\usepackage[
  . . .
 PrintLatexCmd={perltex -latex=pdflatex project.tex} ,
 HTMLLatexCmd={perltex -latex=pdflatex project_html.tex} ,
]{lwarp}
```

⚠

"impure" math Place perltex math expressions between \displaymathother and \displaymathnormal, or \inlinemathother and \inlinemathnormal. See section 8.7.11.

pythontex package 9.5

pythontex (*Pkg*) An example using pythontex:

```
\usepackage[
  PrintLatexCmd={
    pdflatex project.tex \LWRopseq
    pythontex project \LWRopseq
    pdflatex project.tex
  } ,
  HTMLLatexCmd={
    pdflatex project_html.tex \LWRopseq
    pythontex project_html \LWRopseq
    pdflatex project_html.tex
  } ,
]{lwarp}
```

Another possibility is to use *latexmk*, placing the *latexmk* . . . commands in the PrintLatexCmd and HTMLLatexCmd options. While using these options, the lwarp option latexmk would not be used.

"impure" math

HTML look-alike

No attempt has yet been made to make pythontex robust with HTML output. Some math objects must be surrounded by \displaymathother ... \displaymathnormal, or \inlinemathother ... \inlinemathnormal. Displays of code may have to be enclosed inside a lateximage environment to prevent <, > and similar from being interpreted by the browser as HTML entities.

sympytex package 9.6

sympytex (Pkg) For sympytex:

```
\usepackage[
...
PrintLatexCmd={
   pdflatex project.tex \LWRopseq
   python project.sympy \LWRopseq
   pdflatex project.tex
},
HTMLLatexCmd={
   pdflatex project_html.tex \LWRopseq
   python project_html.sympy \LWRopseq
   pdflatex project_html.tex
},
...
]{lwarp}
```

Also see the warnings for pythontex, above.

9.7 Other packages

rterface (*Pkg*) Other packages such as **rterface** would be set up similar to **pythontex**, and the same warnings would apply.

9.8 make program

make (*Prog*) To use lwarp with the *make* program, have the makefile take project.tex and generate the print version project.pdf, as normal. \usepackage{lwarp} must be used, and it generates lwarpmk.conf when the print version is created.

To generate HTML, first have project_html.tex be compiled to generate project_html.pdf. This must be in PDF format. Finally, have project_html.pdf be converted to HTML using lwarpmk pdftohtml project_html.pdf, and convert svg math with lwarpmk limages.

9.9 UTF-8 locale

⚠ UTF-8 locale

<code>lwarpmk</code> uses the <code>texlua</code> program, which sets the "locale" to "C", including for external operating-system calls such as when executing <code>lwarpmk</code> <code>html</code>. In some cases, an external program called from the user's document may require the use of a <code>UTF-8</code> "locale". For <code>UNIX-related</code> operating systems, it may be required to use <code>lwarp</code>'s custom compilation options to add a locale change:

```
\usepackage{lwarp}[
  PrintLatexCmd={
    env LC_CTYPE=en_US.UTF-8
        xelatex -shell-escape project.tex
  }
  HTMLLatexCmd={
    env LC_CTYPE=en_US.UTF-8
        xelatex -shell-escape project_html.tex
  }
]
```

The only example seen so far where this is required is the ditaa package, where the locale change allows the use of UTF-8 with XeLATEX and ditaa. To use LuaLATEX instead, the locale change would have to be made inside the ditaa package where its calls the ditaa program.

10 EPUB conversion

lwarp does not produce EPUB documents, but it may be told to modify its HTML output to greatly assist in the conversion. An external program may then be used to finish the conversion to EPUB.

<meta> author

To assign the author's name for regular lwarp HTML files, and also for the EPUB, use \HTMLAuthor $\{\langle name \rangle\}$. This assigns the name to the <meta> author element. It may be set empty, and it defaults to \theauthor.

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

FormatEPUB

FormatEPUB (bool)

Default: false

FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.

To help convert lwarp HTML output to EPUB, add

\booltrue{FormatEPUB}

to the project's source preamble after \usepackage{\lwarp}. The EPUB version of the document cannot co-exist with the regular HTML version, so

Enter ⇒ lwarpmk cleanall

 $Enter \Rightarrow$ lwarpmk html

Enter ⇒ lwarpmk limages

to recompile with the Formatepub boolean turned on. Several changes are then made to the $\ensuremath{\mathtt{HTML}}$ output:

- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.

Calibre

The resulting files will be ready to be loaded into an EPUB conversion program, such as the open-source program *Calibre* (https://calibre-ebook.com/).

The EPUB conversion program must know what order the files are included. For lwarp projects, set the EPUB conversion software to do a breadth-first search of the files. For *Calibre*, this option is found in

$\textbf{Preferences} \rightarrow \textbf{Plugins} \rightarrow \textbf{File type plugins} \rightarrow \textbf{HTML to Zip}$

Check the box Add linked files in breadth first order. Set the document encoding as utf-8, which is what lwarp generates for HTML, even if the original printed document uses some other encoding.

The EPUB-conversion program must also know where the section breaks are located. For a list of lwarp's section headings, see table 12. For example, an article class document would break at \section, which is mapped to HTML heading level

<h4>, whereas a book class document would break at \chapter, which is HTML heading level <h3>. For *Calibre*, this option is found in

Preferences \rightarrow Conversion (Common Options) \rightarrow Structure Detection \rightarrow Detect chapters at (XPath expression)

Select the "magic wand" to the right of this entry box, and set the first entry

Match HTML tags with tag name:

to "h4". (Or "h3" for document classes with \chapters.) The Detect chapters at field should then show

This option is also available on the main tool bar at the Convert books button.

Once these settings have been made, the lwarp-generated HTML files may be loaded by *Calibre*, and then converted to an EPUB.

MathJax support

MATHJAX may be used in EPUB documents. Some e-readers include MATHJAX, but any given reader may or may not have a recent version, and may or may not include extensions such as support for siunitx.

lwarp adds some modifications to MathmL to support equations numbered by chapter. These modifications may not be compatible with the e-reader's version of MathJax, so lwarp requests that a known version be loaded instead. In some cases chapter numbering of equations still doesn't work.

Until math support in EPUB documents is improved, it is recommended to use svg images instead of MATHJAX, especially for equations numbered by chapter, or where siunitx support is important.

11 Word-processor conversion

lwarp may be told to modify its HTML output to make it easier to import the HTML document into a word processor. At the time of this writing, it seems that LibreOffice works best at preserving table layout, but it still has some limitations, such as an inability to automatically assign figure and table frames and captions according to user-selected HTML classes. lwarp provides some assistance in locating these frame boundaries, as shown below.

11.1 Activating word-processor conversion

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

FormatWP

FormatWP (bool)

Default: false

Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments. Additionally, honors the booleans WPMarkFloats, WPMarkMinipages, WPMarkTOC, and WPMarkLOFT.

To help modify lwarp HTML output for easier import to a word processor, add

\booltrue{FormatWP}

formatting adjustments

to the project's source preamble after lwarp is loaded. The following changes are then made to the HTML output:

- If using a class without chapters, \section and lower are shifted up in level for the HTML heading tags. The css has not been changed, so the section heading formats will not match the normal HTML output, but when imported to *LibreOffice Writer* the higher section headings will import as **Heading 1** for the title, **Heading 2** for \section, etc.
- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.
- Forces single-file output.
- Turns off HTML debugging comments. These are comments appearing inside
 the HTML code, marking the opening/closing of sections and <div>s, but
 they are no longer useful when the document has been imported into a word
 processor.
- An additional <div> with an id encapsulates each float and minipage, which
 on import into LibreOffice Writer causes a thin frame to appear around the
 text block for each.
- Float captions are given an explicit italic formatting.
- Tabular rule borders are made explicit for *LibreOffice Writer*. LIBREOFFICE displays a light border around each cell while editing, even those which have

no border when printed, and lwarp also uses a light border for thin rules, so it will be best to judge the results using the print preview instead of while editing in LibreOffice.

- \includegraphics and svg math width and height are made explicit for LIBREOFFICE.
- \hspace is approximated by a number of \quads, and rules are approximated by a number of underscores.
- Explicit HTML styles are given to:
 - \textsc, etc.
 - \underline, soul and ulem markup.
 - center, flushleft, flushright.
 - \marginpar, keyfloat, sidenotes, floatflt, and wrapfig.
 - fancybox \shadowbox, etc.
 - The LATEX and TEX logos.
- Honors several booleans:

WPMarkFloats: Marks the begin and end of floats.

WPMarkMinipages: Marks the begin and end of minipages.

WPMarkTOC: Marks the location of the Table of Contents.

WPMarkLOFT: Marks the locations of the List of Figures/Tables.

WPMarkMath: Prints LATEX math instead of using images.

WPTitleHeading: Adjusts title and section headings.

Several of these may be used to add markers to the HTML text which help determine where to adjust the word processor document after import.

11.2 Additional modifications

WPMarkFloats

WPMarkFloats (bool)

Default: false

```
Adds
=== begin table ===
...
=== end ===

or
=== begin figure ===
...
=== end ===
```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.

WPMarkMinipages

WPMarkMinipages (bool)

Default: false

Adds

```
=== begin minipage ===
...
=== end minipage ===
```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

WPMarkT0C

WPMarkTOC (bool)

Default: true

While formatting for word processors, adds

```
=== table of contents ===
```

where the Table of Contents would have been. This helps identify where to insert the actual Toc.

If set false, the actual toc is printed instead.

WPMarkLOFT

WPMarkLOFT (bool)

Default: false

While formatting for word processors, adds

```
=== list of figures === and/or
=== list of tables ===
```

where each of these lists would have been. This helps identify where to insert the actual lists.

If set false, the actual lists are printed instead.

WPMarkMath

siunitx WPMarkMath (bool) Default: false TeXMaths (Prog) While formatting for word processors, prints math as IATEX code instead of creating svG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

When using the siunitx package, enter

```
\usepackage{siunitx}
```

in the *TeXMaths* preamble. Equation numbering is problematic for $\mathcal{F}_M\mathcal{S}$ math environments.

WPTitleHeading

WPTitleHeading (bool)

Default: false section headings

While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LibreOffice. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

Table 11: Section нтмL headings for word-processor conversion

	нтмL headings*			
	With \chapter		Without \chapter	
	WPTitleHeading		WPTitleHeading	
Section	true	false	true	false
Title	<h1></h1>	plain	<h1></h1>	plain
\book	<div></div>	<div></div>	<div></div>	<div></div>
\part	<h2></h2>	<h1></h1>	<h2></h2>	<h1></h1>
\chapter	<h3></h3>	<h2></h2>	_	_
\section	<h4></h4>	<h3></h3>	<h3></h3>	<h2></h2>
\subsection	<h5></h5>	<h4></h4>	<h4></h4>	<h3></h3>
\paragraph	<h6></h6>	<h5></h5>	<h5></h5>	<h4></h4>
\subparagraph		<h6></h6>	<h6></h6>	<h5></h5>

 $^{^{*}}$ For default depths when not FormatWP, see table 12 on page 203.

See table 11 on page 187.

11.3 Recommendations

TOC, LOF, LOT For use with *LibreOffice Writer*, it is recommended to:

- 1. Set \booltrue{FormatWP}
- 2. Set \booltrue{WPMarkTOC} and \boolfalse{WPMarkLOFT}
- 3. Use lwarp to generate the HTML document.
- 4. Copy/paste from the HTML document into an empty *LibreOffice Writer* document.
- 5. Manually insert a LibreOffice toc in the LibreOffice document.
- 6. Manually add frames around each float, adding a caption which is cut/pasted from each float's simulated caption.
- 7. Manually create cross references.

This process yields a document with an actual LibreOffice Table of Contents, but a simulated List of Figures and List of Tables.

siunitx For siunitx, remember to adjust the preamble as mentioned above.

LO view border options LIBREOFFICE has options in the **View** menu to turn on/off the display of thin borders around table cells and text objects.

11.4 Limitations

Floats and captions are not explicitly converted to LibreOffice floats with their own captions. Floats are surrounded by a thin frame in the LibreOffice editor, and may be marked with WPMarkFloats, but are not given a proper LibreOffice object frame. Captions are given an explicit italic formatting, but not a proper LibreOffice paragraph style.

Cross references are not actual LibreOffice linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo lof and lot match the numbering of the LATEX and HTML versions.

Equation numbering is not automatic, but the equation numbers in svg math will match the LATEX and HTML output. svg math is recommended when using the $\mathcal{A}_{M}S$ environments, which may have multiple numbered equations per object.

As of when last checked, LIBREOFFICE ignores the following:

- Minipage alignment.
- Tabular cell vertical alignment.
- · Image rotation and scaling.
- Rounded border corners, which are also used by:
 - \textcircled
 - booktabs trim
- \hspace and rules, also used by algorithmic.
- Coloring of text decorations, used by soul and ulem.
- Overline text decoration, used by romanbar.

LIBREOFFICE also has limitations with frames and backgrounds:

- Multiple lines in an object are framed individually instead of as a whole.
- Nested frames are not handled correctly.
- Images inside boxes are not framed correctly.
- Spans with background colors and frames are not displayed correctly.

Modifying lwarp 12

locating something

To quickly find the source for a package in lwarp.dtx, search for *packagename, such as *siunitx.

Likewise, to quickly find the source for a file in lwarp.dtx, search for *filename, such as *lwarp.css.

Purely text-based packages probably will work as-is when generating HTML.

Look to existing code for ideas on how to expand into new code.

image of T_EX output

An environment may be converted to a lateximage then displayed with an image of the resulting IATEX output. See section 93 for an example of the picture environment.

css classes

To create a custom HTML block or inline css class, see section 52.10.

print/HTML macros

To create print and HTML versions of the same macro or environment, see section 36.

TEX boxes Any TEX boxes must be undone, as svg math or lateximages require \newpage, which will not work in a TEX box.

12.1 Creating a development system

The following creates a local development system for lwarp on a TeXLive system in a UNIX-like environment. Doing so allows anything requesting lwarp to use the development version instead of whichever version is installed in TeXLive.

Create a development directory:

Place into this directory lwarp.dtx and lwarp.ins.

To create lwarp.sty, execute

```
Enter ⇒ pdflatex lwarp.ins
```

which creates lwarp.sty and several hundred additional lwarp-*.sty files for the various packages which are supported.

To create the initial documentation lwarp.pdf, execute

```
Enter ⇒ pdflatex lwarp.dtx
```

To make the development files visible to other projects:

Create the directory

/usr/local/texlive/texmf-local/tex/latex/local/lwarp

Inside this directory, create the file update, containing:

```
rm lwarp-*.sty
ln -s /path_to_dev_directory/lwarp*.sty .
ln -s /path_to_dev_directory/lwarp_baseline_marker.png .
ln -s /path_to_dev_directory/lwarp_baseline_marker.eps .
mktexlsr
```

Run ./update now, and whenever a new lwarp-* package is added.

To make the development version of *lwarpmk* visible to other projects:

```
cd /opt
ln -s /usr/local/texlive/texmf-local/bin/x86_64-linux texbin_local
cd texbin_local
ln -s ../../scripts/lwarp/lwarpmk.lua lwarpmk
cd /usr/local/texlive/texmf-local/scripts/
mkdir lwarp
cd lwarp
ln -s /path_to_dev_directory/lwarpmk.lua lwarpmk
```

Verify that the correct version is found with

```
Enter ⇒ which lwarpmk
```

To make the local versions visible to the shell:

Paths must be set by the shell startup, such as in .bashrc and .cshrc: In .bashrc:

```
PATH=/opt/texbin_local:/opt/texbin:$PATH

In .cshrc:

setenv PATH ${HOME}/bin:/opt/texbin_local:/opt/texbin:${PATH}
```

To fully compile the lwarp documentation and indexes:

```
pdflatex lwarp.ins
pdflatex lwarp.dtx
pdflatex lwarp.dtx
                                          <if necessary>
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
                                              <indexes>
splitindex lwarp.idx - -s gind.ist
pdflatex lwarp.dtx
pdflatex lwarp.dtx
                                          <if necessary>
makeindex -s gglo.ist -o lwarp.gls lwarp.glo <indexes>
splitindex lwarp.idx - -s gind.ist
                                                 <again>
pdflatex lwarp.dtx
pdflatex lwarp.dtx
                                          <if necessary>
```

(The second round of index processing is required to fully resolve the final Index of Indexes.)

To make it easier to update the documentation after a minor change, it is useful to create a command script called make_index, containing:

```
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
splitindex lwarp.idx -- -s gind.ist
```

Note that Index of Indexes and the cross-references to the indexes may not be correct until the above has been accomplished.

12.2 Modifying a package for lwarp

If a class loads additional packages, it will be required to modify the class for lwarp, since lwarp must be loaded before most other packages.

To work with lwarp, a class must first set up anything which replicates the functions of the basic IATEX classes, load any required fonts, then load lwarp, then finally load and adjust any other required packages.

When creating HTML, lwarp redefines the \usepackage and \RequirePackage macros such that it first looks to see if a lwarp-<packagename>.sty version exists. If so, the lwarp version is used instead. This modular system allows users to create their own versions of packages for lwarp to use for HTML, simply by creating a new package with a lwarp- prefix. If placed in the local directory along with the source code, it will be seen by that project alone. If placed alongside the other lwarp-packages where TEX can see it, then the user's new package will be seen by any documents using lwarp. (Remember mktexlsr or texhash.)

An lwarp-<packagename>.sty package is only used during HTML generation. Its purpose is to pretend to be the original package, while modify anything necessary to create a successful HTML conversion. For many packages it is sufficient to simply provide nullified macros, lengths, counters, etc. for anything which the original package does, while passing the raw text on to be typeset. See the pre-existing lwarp- packages for examples.

Anything the user might expect of the original package must be replaced or emulated by the new lwarp- package, including package options, user-adjustable counters, lengths, and booleans, and conditional behaviors. In many of these packages, most of the new definitions have a "local" prefix according to the package name, and @ characters inside the name, which hides these names from the user. In most cases these macros will not need to be emulated for HTML output. Only the "user-facing" macros need to be nullified or emulated.

Each lwarp-* package should first call either of:

```
\LWR@ProvidesPackageDrop
- or-
\LWR@ProvidesPackagePass
```

If "Drop" ped, the original print-version package is ignored, and only the lwarp-version is used. Use this where the original print version is useless for HTML. If "Pass"ed, the original package is loaded first, with the user-supplied options, then the lwarp- version continues loading as well. See section 461 (ntheorem) for an example of selectively disabling user options for a package. Use this when HTML output only requires some modifications of the original package. For a case where the original package is usable without changes, there is no need to create a lwarp-version.

12.2.1 Adding a package to the lwarp.dtx file

When adding a package to lwarp.dtx for permanent inclusion in lwarp, provide the lwarp-<packagename> code in lwarp.dtx, add its entry into lwarp.ins, and also remember to add

```
\LWR@loadafter{<packagename>}
```

to lwarp. dtx in section 20.1. This causes lwarp to stop with an error if packagename is loaded before lwarp. Finally, add an entry in table 2, Supported packages and features, and also the Updates section.

12.3 Modifying a class for lwarp

If a class loads additional packages, it will be required to modify the class for lwarp, since lwarp must be loaded before most other packages.

To work with lwarp, a class must first set up anything which replicates the functions of the basic LATEX classes, load any required fonts, then load lwarp, then finally load and adjust any other required packages.

12.4 Testing lwarp

Compiling lwarp. ins generates all the \star . sty files for lwarp. It can be useful to create additional \star . ins files to be able to recompile only the pieces which have changed.

compiling individual packages

core.ins (file)

For example, to be able to recompile the lwarp core alone, copy lwarp.ins to core.ins, then modify core.ins to only compile:

```
\generate{
\file{\warp.sty}{\from{\warp.dtx}{\package}}}
}
```

For individual packages, create packagename.ins, set to compile only:

```
\generate{
\file{lwarp-packagename.sty}{\from{lwarp.dtx}{packagename}}
}
```

When changes have been made, test the print output before testing the HTML. The print output compiles faster, and any errors in the printed version will be easier to figure out than the HTML version.

compiling css and other generated files

Remember that the configuration files are only rewritten when compiling the printed version of the document.

When changing the source to *lwarpmk* or a css file in lwarp.dtx:

- 1. Change the source in lwarp.dtx.
- 2. pdflatex lwarp.ins -or- pdflatex core.ins
- 3. If modifying *lwarpmk* the new version should now be active.
- 4. If modifying css files or other files generated by lwarp:
 - (a) For the document, lwarpmk print to update the css files in the project.
 - (b) Reload the HTML document to see the effect of the new css files.
- 5. If done testing, pdflatex lwarp.dtx to update the lwarp documentation.

Sometimes it is worth checking the containing HTML tags. Also, cpred>_html.html has the text conversion of these tags, before the file is split into individual HTML files.

It is also worth checking the browser's tools for verifying the correctness of $\mbox{\sc html}$ and $\mbox{\sc code}.$

12.5 Modifying lwarpmk

lwarpmk (Prog)
lwarpmk.lua (file)

In most installations, lwarpmk.lua is an executable file located somewhere the operating system knows about, and it is called by typing lwarpmk into a terminal.

A project-local copy of lwarpmk. lua may be generated, modified, and then used to compile documents:

- 1. Add the lwarpmk option to the lwarp package.
- 2. Recompile the printed version of the document. The lwarpmk option causes lwarp to create a local copy of lwarpmk.lua
- 3. The lwarpmk option may now be removed from the lwarp package.
- 4. Copy and rename lwarpmk. lua to a new file such as mymake. lua.
- 5. Modify mymake. lua as desired.
- 6. If necessary, make mymake.lua executable.
- 7. Use mymake.lua instead of lwarpmk.lua.

13 Troubleshooting

13.1 lwarp package error conditions and warnings

lwarp tests for a number of error conditions and prints appropriate warnings. The following is a summary of these conditions.

13.1.1 Configuration file lwarpmk.conf

File does not exist: The configuration file must exist for lwarpmk.

Incorrect Unix /Windows selection: The operating system which was detected by lwarp. So far only Unix and Windows are supported.

Incorrect delimiter characters. Older versions of *lwarpmk* used a different delimiter.

Source name is set to lwarp: lwarp has recently been recompiled in this directory, which overwrote the project's configuration files. This also occurs if *lwarpmk* is executed in *lwarp's* source directory.

Incorrect operating system: The configuratio file was set for a different operating system, perhaps due to sharing in a collaborative project.

Outdated configuration files: lwarp has been updated since this projects was last compiled. If there appears to be a valid print command in the file, lwarpmk displays this to instruct the user how to recompile the print version, which then updates the configuration files.

The designated source file does not exist: For whatever reason...

Unknown engine: lwarp cannot determing which engine is being used. Supported are DVI LATEX, PDF LATEX, XFLATEX, LualATEX, and upLATEX.

13.1.2 Image generation with lwarpmk limages

"Wait a moment for the images to complete before reloading page.":

Images are generated by background tasks. If the document is reloaded before these tasks are complete, some images may not yet be generated. *lwarpmk* tries to wait for background tasks to complete before exiting.

- **HTML version does not exist:** Images are extracted from the HTML version, which must be compiled before images are generated.
- *-images.txt does not exist: This file tells which images to extract from the HTML file. If the file does not exist, it may be that no svg math or lateximages were used. If so, lwarpmk limages is not necessary.
- **Cross references are not correct:** The document must have up-to-date cross references to locate the images to extract. A number of conditions may cause incorrect cross references.
- **"WARNING: Images will be incorrect.":** An image reference was not found. Recompile.

lwarpmk epstopdf * or lwarpmk pdftosvg *: Errors if filenames are not found.

13.1.3 Default bitmapped font

lwarp requires the use of a vector font. If lwarp detects that the document uses the default Computer Modern font, and the cm-super package is not installed, it is assumed that the font is bitmapped. An error is generated, along with the recommendation to install cm-super or use lmodern.

13.1.4 Packages

- **Loaded before lwarp:** Some packages and classes must be loaded before lwarp. These include input and font encoding, morewrites and newclude, and a number of CJK-related packages and classes.
- **Loaded after lwarp:** Most packages which are modified by lwarp must be loaded after lwarp.
- **Loaded never:** Some packages do not work with lwarp. An error is generated, along with a list of alternatives to consider.
- **Specific packages:** Some packages enforce a specific load order vs. certain other packages.
- Patching error: lwarp tries to patch some packages using xpatch. If the original package has been updated more recently than lwarp, a patch may not work. It may be necessary to use an older version of the package until lwarp is updated.
- longtable: lwarp's longtable package issues detailed error messages regarding the use of the table headers and footers.
- polyglossia: If used, an informative message is printed to instruct the user to be sure to set a language, without which an error will occur.
- babel or polyglossia: An informative message is printed to note that not all langauges are supported by cleveref.

13.1.5 Compiling

- **SideTOCDepth** < **FileDepth:** A warning is displayed if these counters are set such that the sidetoc will not be able to access all pages of the website.
- **Filenames:** lwarp may generate file names from section names. While doing so, the filenames are simplified, and special characters and math are removed. If this process generates a duplicate filename, and error is generated, describing the filename and which section name generated it. A warning is issued if dollar-delimited math is used. Parenthesis-delimited math is recommended instead.
- HTML corrupted Multirow: When \multirow or \multicolrow are used, \mrowcell or \mcolrowcell must be placed in the appropriate cells to avoid corrupted HTML output.
 - (width,height) missing a comma: \makebox and \framebox can accept a parenthesisdelimited width and height, which must be separated by a comma.
 - "Load graphics or graphics for improved svg math baselines.": svg math sizing and baselines are improved if either of these packages are used.

"Load graphics or graphics for improved XeTeX logo.": If these packages are loaded, the XHATEX logo can use the reversed "E".

"It is recommended to use [width=xx\linewidth] instead of [scale=yy] ": Browser support of scale does not have the same effect as in LATEX.

13.2 Using the lwarp package

The following address problems which may occur, and possible solutions to each.

Section 7.11: Commands to be placed into the warpprint environment Section 8: Special cases and limitations

HTML corrupted Text is not converting correctly / corrupted HTML tags:

- Font-related UTF-8 information must be embedded in the PDF file. See section 7.4 regarding bitmapped vs. vector fonts.
- See section 8.2.1 regarding HTML entities and the characters &, <, and >.

dotlessj Dotless j (\j): See section 7.4 regarding cmap, mmap.

Undefined HTML settings:

• See the warning regarding the placement of the HTML settings at sec-

Tabular problems: See section 8.10.1.

Obscure error messages:

Print first: Be sure that a print version of the document compiles and that your document's LATEX code is correct, before attempting to generate an HTML version.

\end{warpHTML}, \end{warpprint}, \end{warpall}, \end{warpMathJax}:

Each of these must be without any other characters on the same line.

"Runaway argument? File ended while scanning use of \next: Don't use warpHTML, warpprint, warpall, or warpMathJax inside itself.

Options clash: If using memoir, see section 8.13.

"Missing \begin{document}.": Some packages require that their options be specified before lwarp is loaded, or via the package's setup macro, especially if these options include the use of braces. See section 8.1.

"No room for a new \write.": Before \usepackage{lwarp}, add:

\usepackage{morewrites} \morewritessetup{allocate=10}

"! TeX capacity exceeded, sorry [text input levels=15].": Packages were nested too many levels deep. Locate the file texmf.cnf for your distribution, and add the line

```
max_in_open = 30
```

"Missing \$ inserted.": If using a filename or URL in a footnote or \item, escape underscores with _.

warpHTML, warpprint, warpMathJax, warpall

"Label(s) may have changed. Rerun to get cross-references right.":

This warning may repeat endlessly if a math expression is used in a caption. Simple math expressions such as \$X=1\$ may be replaced with

```
\text{textit}{X}\,=\,1
```

"Temporary page! LaTeX was unable to guess the total number of pages ...":
Harmless. Recompile the document one more time.

"Leaders not followed by proper glue":

This can be caused by a missing l@<floattype> or l@<sectiontype> definition. See lwarp's definitions for examples.

"Improper \prevdepth": lateximages and svG math require \newpage, which cannot work inside TEX boxes or \ensuremath. Anything using \newsavebox, \newbox, \rbox, \savebox, \hbox, \vbox, \sbox, etc., must be modified to work without box commands.

If you find something using \ensuremath, have it temporarily set:

\LetLtxMacro\@ensuredmath\LWR@origensuredmath

inside a group first.

As a stop-gap measure, you may wish to try incrementing the counter LWR@texboxdepth before the problematic macro, and then decrementing it after. Doing so tells lwarp to avoid using a \newpage inside the macro, which may avoid this error.

Also, custom macros which appear inside a section, figure, or table name should be made robust since they appear inside the .toc, .lof, or .lot files. Use \newrobustcmd or \robustify from etoolbox, xparse, etc.

If using BibTeX, see section 8.6.9.

"! Undefined control sequence. . . . __hook begindocument": See section 8.15.4 if using polyglossia.

"\begin{equation} ended by \end{document}": Do not use custom macros such as \beg and \eeg to replace

```
\begin{equation}
...
```

\end{equation}

"Misplaced \omit": If using \LWR@formatted to define new macros for print and HTML modes, see section 36 regarding \LWR@expandableformatted.

"Token not allowed in a PDF string": This hyperref warning appears while creating the print-mode document, not HTML. A low-level macro is being used in a section name which appears in the PDF bookmarks. hyperref removes this macro from the bookmark, and warns of doing so. To avoid this warning, use \pdfstringdefDisableCommands in the preamble to define simplified replacement macros for each, or use \texorpdfstring in the \section or related macro to declare what to use for the TEX text, v.s. the PDF bookmark. See the hyperref manual.

"Command \textquoteright invalid in math mode": This can occur when the document source has math containing the slanted quote ' character, instead of using the upright quote ' character.

Complicated objects inside math: Some objects, such as Ti*k*Z, may not compile in lwarp's normal math emulation. Insert

LWR@texboxdepth

macros in section, table, figure names

⚠ BibTeX

⚠ polyglossia

custom macros for environments

∴ \LWR@formatted

'impure" math objects

```
\displaymathother - or - \displaymathother
before the math, and then
    \displaymathnormal - or - \displaymathnormal
when displaying "normal" math. See section 8.7.11.
```

Slow compliation of math objects: Complicated math objects can also cause problems with alt tags, resulting in very slow compilation, large alt tags, and possible crashes. Use \inlinemathother ... \inlinemathnormal or \displaymathother ... \displaymathnormal around the math expression.

MATHJAX Incorrect MATHJAX: Some objects do not convert to MATHJAX. Use \displaymathother before these objects, then \displaymathnormal to return to "normal" display math. See section 8.7.11.

> Missing sections: See section 7.6 regarding the FileDepth and SideTOCDepth counters, and the use of \tableofcontents in the home page.

Misnumbered footnotes from section headings: See section 8.5.4.

Missing HTML files:

- See the warning regarding changes to the HTML settings at section 7.6.
- Ensure that the filenames are unique after math and short words are removed. See FileSectionNames at section 7.6.

Missing / incorrect cross-references:

- Use lwarpmk again followed by lwarpmk html or lwarpmk print to compile the document one more time.
- Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French).

\nameref refers to the most recently-used section where the \label was defined. If no section has been defined before the \label, the link will be empty. Index entries also use \nameref and have the same limitation.

• cleveref and varioref are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for \cpageref and \cpagerefrange. This phrase includes \cpagerefFor, which defaults to "for".

```
Ex:
    \cpageref{tab:first,tab:second}
 in html becomes:
    "pages for table 4.1 and for table 4.2"
```

See \cpagerefFor at page 746 to redefine the message which is printed for page number references.

BibTeX errors with \etalchar: See section 8.6.9.

Malformed URLs: Do not use the % character between arguments of \hyperref, etc., as this character is among those which is neutralized for inclusion in HTML URLS.

Em-dashes or En-dashes in listing captions and titles:

Use X₇L^AT_FX or LuaL^AT_FX.

labels label characters

> \nameref empty link

cleveref page numbers

Floats out of sequence:

Mixed "Here" and floating: Floats [H]ere and regular floats may become out of order. \clearpage if necessary.

Caption setup: With \captionsetup set the positions for the captions above or below to match their use in the source code.

Images are appearing in strange places:

• When images are added or removed, Enter lwarpmk limages to refresh the lateximage images.

svg images:

adding/removing

When a math expression, picture, or TikZ environment is added or removed, the svg images must be re-created by entering lwarpmk limages to maintain the proper image-file associations. Inline svg math may be hashed and thus not need to be recreated, but display math and objects such as TikZ may move to new image numbers when the document is changed.

recompile first

Before attempting to create the svg image files, lwarpmk verifies that the HTML version of the document exists and has correct internal image references.¹⁶ If it is necessary to recompile the document's HTML version one more time, lwarpmk usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the LATEX recompile warnings.

HTML instead of images

If HTML appears where an svg image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

page counter

Incorrect svG images will also occur if the document changes the page counter:

\setcounter{page}{<value>}

The page counter must *not* be adjusted by the user.

Lots of files!

Expressing math as svG images has the advantage of representing the math exactly as LATEX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, lwarp uses an MD5 hash on its LATEX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as picture and TikZ require one image file each. For a document with a large amount of math, see section 5.5 to use MATHJAX instead.

Plain-looking document:

 The document's css stylesheet may not be available, or may be linked incorrectly. Verify any \CSSFilename statements point to a valid css file.

HTML corrupted Broken fragments of HTML:

• Check the PDF file used to create HTML to see if the tags overflowed the margin. (This is why such large page size and margins are used.)

Changes do not seem to be taking effect:

¹⁶This becomes important when dealing with a document containing thousands of images.

- Be sure to lwarpmk clean, recompile, then start by reloading the home page. You may have been looking at an older version of the document. If you changed a section name, you may have been looking at the file for the old name.
- See the warning regarding changes to the HTML settings at section 7.6.
- Verify that the proper css is actually being used.
- The browser may compensate for some subtle changes, such as automatically generating ligatures, reflowing text, etc.

Un-matched conditional compiles:

Verify the proper begin/end of warpprint, warpHTML, and warpall environments.

13.2.1 Debug tracing output

\tracinglwarp

When \tracinglwarp is used, lwarp will add extra tracing messages to the .log file. The last several messages may help track down errors.

Place \tracinglwarp just after \usepackage{lwarp} to activate tracing.

13.3 Compiling the lwarp.dtx file

lwarp_tutorial.tex: Copy or link lwarp_tutorial.txt from the TDS doc directory to the source directory, or wherever you wish to compile the documentation. This file is included verbatim in the documentation, but is in the doc directory so that it may be found by texdoc and copied by the user.

Illogical error messages caused by an out-of-sync lwarp.sty file:

- 1. Delete the lwarp.sty file.
- 2. Enter pdflatex lwarp.ins to generate a new lwarp.sty file.
- Enter pdflatex lwarp.dtx to recompile the lwarp.pdf documentation.

Un-nested environments:

Be sure to properly nest:

- \begin{macrocode} and \end{macrocode}
- \begin{macro} and \end{macro}
- \begin{environment} and \end{environment}

14 Trademarks

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File 1 lwarp.sty

15 Implementation

This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of crude hacks clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

Judgement calls were made, and are often commented. Improvements are possible. The author is open to ideas and suggestions.

Packages were patched for re-use where they provided significant functionality. Examples include xcolor with its color models and conversion to HTML color output, and siunitx which provides many number and unit-formatting options, almost all of which are available in pure-text form, and thus easily used by *pdftotext*.

Packages were emulated where their primary purpose was visual formatting which is not relevent to html output. For example, packages related to sectioning are already patched by numerous other packages, creating a difficult number of combinations to try to support, and yet in html output all of the formatting is thrown away, so these packages are merely emulated.

Packages with graphical output are allowed as-is, but must be nested inside a lateximage environment to preserve the graphics.

Testing has primarily been done with the Iceweasel/Firefox browser.

Table 12: Section depths and HTML headings

Section	LATEX depth	HTML headings *
Title of the entire website		<h1></h1>
(none)	-5	new for this package
book	-2	<div class="book"></div>
part	-1	<h2></h2>
chapter	0	<h3></h3>
section	1	<h4></h4>
subsection	2	<h5></h5>
subsubsection	3	<h6></h6>
paragraph	4	
subparagraph	5	
listitem	7	new for this package, used for list items

 $_{*}$ If FormatWP is true, section headings may be adjusted, depending on WPTitleHeading. See table 11 on page 187.

16 Section depths and HTML headings

Stacks are created to track depth inside the LATEX document structure. This depth is translated to HTML headings as shown in table 12. "Depth" here is not depth in the traditional computer-science stack-usage sense, but rather a representation of the nesting depth inside the LATEX document structure.

When starting a new section, the program first must close out any existing sections and lists of a deeper level to keep the HTML tags nested correctly.

Support for the memoir package will require the addition of a book level, which may push the HTML headings down a step, and also cause subsubsection to become a <div> due to a limit of six HTML headings.

It is possible to use ${\tt HTML5} < {\tt section} > {\tt and} < {\tt h1} > {\tt for}$ all levels, but this may not be well-recognized by older browsers.

Fixed levels for parts and chapters allow the css to remain fixed as well.

17 Source code

This is where the documented source code for lwarp begins, continuing through the following sections all the way to the change log and index at the end of this document.

The following sections document the actual implementation of the lwarp package.

line numbers

The small numbers at the left end of a line refer to line numbers in the lwarp.sty file.

subjects

Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph. These are often the targets of index entries.

Prog Lwarp

index entries

Black-colored tags in the left marign are used to identify programming objects such as files, packages, environments, booleans, and counters. Items without a tag are command macros. Each of these also appears in the index as individual entries, and are also listed together under "files", "packages", "environments", "booleans", and "counters".

Special warnings are marked with a warning icon.

for HTML output: for PRINT output: for HTML & PRINT: Green-colored tags in the left margin show which sections of source code apply to the generation of HTML, print, or both forms of output.

18 Detecting the TEX engine — pdflatex, lualatex, xelatex

```
See: http://tex.stackexchange.com/a/47579.
Detects X<sub>3</sub>T<sub>E</sub>X and Lual<sup>4</sup>T<sub>E</sub>X:
1 \RequirePackage{iftex}[2019/11/07]
2 \RequirePackage{ifpdf}
3 \RequirePackage{ifptex}% in case TL2019 or earlier
5 \newif\ifxetexorluatex
7\ifXeTeX
      \xetexorluatextrue
9 \else
     \ifLuaTeX
10
          \xetexorluatextrue
11
    \else
12
           \xetexorluatexfalse
13
14
```

19 Early package requirements

15 \fi

```
etoolbox (Pkg) Provides \ifbool and other functions.

16 \RequirePackage{etoolbox}[2020/10/05]%

Patch to fix copy of environment with a \par:
    https://github.com/josephwright/etoolbox/issues/35

17 \long\def\etb@carsquare#1#2#3\@nil{#1#2}%

verifycommand (Pkg) Verify macros before patching.

18 \RequirePackage{verifycommand}

xpatch (Pkg) Patches macros with optional arguments.

19 \RequirePackage{xpatch}

ifplatform (Pkg) Provides \ifwindows to try to automatically detect WINDOWS OS.

20 \RequirePackage{ifplatform}% sense op-system platform

letltxmacro (Pkg)

21 \RequirePackage{letltxmacro}
```

20 Package load order

Several packages must never be used with lwarp, others should only be loaded before lwarp, and others should only be loaded after. The lwarp core checks most of these cases. In some lwarp-* packages, \LWR@loadbefore is used to trigger an error if they are loaded after lwarp, while additional code provides necessary patches for when they are loaded before.

Packages which must be loaded after lwarp are enfoced by a large number of \LWR@loadafter statements, below. Some packages are emulated by memoir, and so these are tested by \LWR@notmemoirloadafter, which does not cause an error if memoir is used.

\LWR@checkloadfilename is used to check each filename to see if it must never be loaded, or must always be loaded before lwarp.

20.1 Tests of package load order

\LWR@loadafter {\(\langle packagename\)\} Error if this package was loaded before \lunders\)

```
22 \newcommand*{\LWR@loadafter}[1]{%
23 \IfPackageLoadedTF{#1}
      \PackageError{lwarp}
25
26
          {%
               Package #1,\MessageBreak
27
              or one which uses #1,\MessageBreak
28
              must be loaded after Lwarp.\MessageBreak
29
               Enter 'H' for possible solutions%
30
          }
31
32
               Move ''\protect\usepackage{#1}'' after
33
               ''\protect\usepackage{lwarp}''.\MessageBreak
               Package #1 may also be loaded by something else, \MessageBreak
35
36
               which must also be moved after Lwarp.%
37
          }
38 }
39 {\relax}
40 }
```

\LWR@notmemoirloadafter {\packagename\}\ Error if not memoir class and this package was loaded before

memoir emulates many packages, and pretends that they have already been loaded.

```
41 \IfClassLoadedTF{memoir}
42 {\newcommand*{\LWR@notmemoirloadafter}[1]{}}
43 {\LetLtxMacro\LWR@notmemoirloadafter\LWR@loadafter}
```

\LWR@notltjloadafter {\packagename\} Error if not a ltjs* class and this package was loaded before lwarp.

```
44 \LetLtxMacro\LWR@notltjloadafter\LWR@loadafter
```

```
45
46 \IfClassLoadedTF{ltjarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
47 \IfClassLoadedTF{ltjbook}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
48 \IfClassLoadedTF{ltjreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
49 \IfClassLoadedTF{ltjsarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
50 \IfClassLoadedTF{ltjsbook}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
51 \IfClassLoadedTF{ltjsreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
52 \IfClassLoadedTF{ltjspf}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
53 \IfClassLoadedTF{ltjskiyou}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
54 \IfClassLoadedTF{ltjtarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
55 \IfClassLoadedTF{ltjtbook}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
56 \IfClassLoadedTF{ltjtreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
66 \IfClassLoadedTF{ltjtreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
61 \IfClassLoadedTF{\titreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
61 \IfClassLoadedTF{\titreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
61 \IfClassLoadedTF{\titreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
61 \IfClassLoadedTF{\titreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
61 \IfClassLoadedTF{\titreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\}
61 \IfClassLoadedTF{\titreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\renewcommand*{\LWR@notltjloadafter}[1]{}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcommand*{\titreport}}{\renewcomm
```

\LWR@loadbefore $\{\langle packagename \rangle\}$ Error if this package is loaded after lwarp.

```
57 \newcommand*{\LWR@loadbefore}[1]{%
58 \IfPackageLoadedTF{#1}
59 {\relax}
60 {
      \PackageError{lwarp}
61
62
63
          Package #1 must be loaded before lwarp.\MessageBreak
          Enter 'H' for possible solutions%
64
65
     {Move ''\protect\usepackage{#1}'' before ''\protect\usepackage{lwarp}''.}
66
67 }
68 }
```

\LWR@checkloadbefore $\{\langle packagename \rangle\}$

Given \LWR@tempone is the package name to compare to, if package names match, error if it is loaded after lwarp.

```
69 \newcommand*{\LWR@checkloadbefore}[1]{%
70 \ifdefstring{\LWR@tempone}{#1}{%
71 \LWR@loadbefore{#1}%
72 }{}%
73 }
```

\LWR@loadnever {\langle badpackagename \rangle } \{\langle replacementpkgnames \rangle \}

The first packages is not supported, so tell the user to use the second instead. Factored from $\LWR@checkloadnever$ and $\LWR@checkloadnever$.

```
74 \newcommand*{\LWR@loadnever}[2]{%
75 \PackageError{lwarp}
76 {%
      Package #1 is not yet supported\MessageBreak
77
      by lwarp's HTML conversion%
78
      \ifblank{#2}{}{%
79
80
           .\MessageBreak
          Package(s)\MessageBreak
81
          \space\space#2\MessageBreak
82
          may be useful instead%
83
      }%
84
85 }
86 {%
```

```
Package #1 might conflict with lwarp in some way,\MessageBreak
or is superceded by another package.%
\ifblank{#2}{}{%
\MessageBreak
For possible alternatives, see package(s) #2.%
}%

93 }

94 }
```

\LWR@afterloadnever $\{\langle badpackagename \rangle\} \{\langle replacementpkgnames \rangle\}$

Given: \LWR@tempone is set to the package name being tested against, if this package name is the bad packagename, suggest the replacements instead. This is used when loading packages after lwarp.

```
95 \newcommand*{\LWR@afterloadnever}[2]{%
96 \ifdefstring{\LWR@tempone}{#1}{%
97 \LWR@loadnever{#1}{#2}%
98 }{}%
99 }
```

\LWR@earlyloadnever $\{\langle badpackagename \rangle\} \{\langle replacementpkgname \rangle\}$

The first package is not supported, so tell the user to use the second instead. This version checks immediately for packages which may have been loaded before lwarp.

```
100 \newcommand*{\LWR@earlyloadnever}[2]{%
101 \IfPackageLoadedTF{#1}{%
102 \LWR@loadnever{#1}{#2}%
103 }{}%
104 }
```

\LWR@earlyclassloadnever $\{\langle badclassname \rangle\}$ $\{\langle replacementclassname \rangle\}$

The first class is not supported, so tell the user to use the second instead. This version checks immediately for classes which may have been loaded before lwarp.

```
105 \newcommand*{\LWR@earlyclassloadnever}[2]{%
106 \IfClassLoadedTF{#1}{%
107 \PackageError{lwarp}
108 {%
       Class #1 is not supported\MessageBreak
109
       by lwarp's HTML conversion%
110
       \ifblank{#2}{}{%
111
112
           .\MessageBreak
           #2 may be useful instead%
113
114
       }%
115 }
116 {%
       Class #1 might conflict with lwarp in some way,\MessageBreak
117
       or is superceded by another class.%
118
       \ifblank{#2}{}{%
119
           \MessageBreak
120
121
           For a possible alternative, see #2.%
122
       }%
123 }
```

```
124 }{\relax}%
125 }
```

20.2 Error for disallowed packages and classes loaded before lwarp

\LWR@checkloadnevers Checks against a list of incompatible packages.

```
126 \newcommand*{\LWR@checkloadnevers}{
127 \LWR@checkloadnever{ae}{cm-super, lmodern}
128 \LWR@checkloadnever{aecompl}{cm-super, lmodern}
129 \LWR@checkloadnever{aecc}{cm-super, lmodern}
130 \LWR@checkloadnever{alg}{algorithm2e, algorithmicx}
131 \LWR@checkloadnever{algorithmic}{algorithm2e, algorithmicx}
132 \LWR@checkloadnever{bitfield}{bytefield}
 bxcjkatype is based on CJK:
133 \LWR@checkloadnever{bxcjkjatype}{upLaTeX, bxjsarticle, ujarticle, utarticle}
134 \LWR@checkloadnever{caption2}{caption}
135 % \LWR@checkloadnever{ccaption}{caption}% might be preloaded by memoir
136 \LWR@checkloadnever{colortab}{colortbl}
137 \LWR@checkloadnever{csvtools}{datatool}
138 \LWR@checkloadnever{doublespace}{setspace}
139 \LWR@checkloadnever{fancyheadings}{fancyhdr}
140 \LWR@checkloadnever{fncylab}{cleveref}
141 \LWR@checkloadnever{formula}{siunitx}
142 \LWR@checkloadnever{glossary}{glossaries}
 hangul is not in TeXLive, and is not tested:
143 \LWR@checkloadnever{hangul}{kotex, xetexko, luatexko}
144 \LWR@checkloadnever{hyper}{hyperref}
145 \LWR@checkloadnever{libgreek}{libertinust1math, newtx}
146 \LWR@checkloadnever{newthm}{ntheorem}
147 \LWR@checkloadnever{pdfcprot}{microtype}
148 \LWR@checkloadnever{picins}{floatflt, wrapfig, wrapfig2}
149 \LWR@checkloadnever{rplain}{fancyhdr}
150 \LWR@checkloadnever{si}{siunitx}
151 \LWR@checkloadnever{sistyle}{siunitx}
152 \LWR@checkloadnever{slashbox}{diagbox}
153 \LWR@checkloadnever{statex}{statex2}
154 \LWR@checkloadnever{t1enc}{fontenc, inputenc, inputenx}
155 \LWR@checkloadnever{ucs}{inputenc, inputencx}
156 \LWR@checkloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
 The following may one day be supported by lwarp:
```

```
157% \LWR@checkloadnever{adjustbox}{}% req'd for menukeys
158 \LWR@checkloadnever{animate}{}
159 \LWR@checkloadnever{auto-pst-pdf}{}
160 \LWR@checkloadnever{auto-pst-pdf-lua}{}
161 \LWR@checkloadnever{algorithms}{}
162 \LWR@checkloadnever{arraycols}{}
```

```
163 \LWR@checkloadnever{bidi}{}
164 \LWR@checkloadnever{cals}{}
165 \LWR@checkloadnever{cellspace}{tabls}
166 \LWR@checkloadnever{cgloss4e}{}
167 \LWR@checkloadnever{collcell}{}
168 \LWR@checkloadnever{colophon}{}
169 \LWR@checkloadnever{cooltooltips}{}
170 \LWR@checkloadnever{covington}{}
171 \LWR@checkloadnever{crbox}{}
172 \LWR@checkloadnever{decision-table}{}
173 \LWR@checkloadnever{dvgloss}{}
174 \LWR@checkloadnever{ednotes}{}
175 \LWR@checkloadnever{edfnotes}{}
176 \LWR@checkloadnever{eledform}{}
177 \LWR@checkloadnever{eledmac}{}
178 \LWR@checkloadnever{embedfile}{}
179 \LWR@checkloadnever{endnotes-hy}{endnotes}
180 \LWR@checkloadnever{expex}{}
181 \LWR@checkloadnever{fancytooltips}{}
182 \LWR@checkloadnever{fixocgx}{}
183 \LWR@checkloadnever{flowfram}{}
184 \LWR@checkloadnever{gb4e}{}
185 \LWR@checkloadnever{gmverse}{}
186 \LWR@checkloadnever{graphbox}{}
187 \LWR@checkloadnever{graphicxbox}{}
188 \LWR@checkloadnever{hvfloat}{}
189 \LWR@checkloadnever{inline-images}{}
190 \LWR@checkloadnever{isorot}{rotating}
191 \LWR@checkloadnever{ledmac}{}
192 \LWR@checkloadnever{linguex}{}
193 \LWR@checkloadnever{longdiv}{}
194 \LWR@checkloadnever{longfigure}{}
195 \LWR@checkloadnever{longtabu}{}
196 \LWR@checkloadnever{mdwenv}{}
197 \LWR@checkloadnever{mdwlist}{}
198 \LWR@checkloadnever{mdwtab}{}
199 \LWR@checkloadnever{navigator}{}
200 \LWR@checkloadnever{nccpic}{}
201 \LWR@checkloadnever{nccsect}{}
202 \LWR@checkloadnever{newvbtm}{}
203 \LWR@checkloadnever{ocg-p}{}
204 \LWR@checkloadnever{ocgtools}{}
205 \LWR@checkloadnever{ocgx}{}
206 \LWR@checkloadnever{ocgx2}{}
207 \LWR@checkloadnever{parrun}{}
208 \LWR@checkloadnever{poemscol}{}
209 \LWR@checkloadnever{poetry}{}
210 \LWR@checkloadnever{program}{}
211 \LWR@checkloadnever{proofread}{}
212 \LWR@checkloadnever{pst-pdf}{}
213 \LWR@checkloadnever{refstyle}{}
214 \LWR@checkloadnever{robustindex}{}
215 \LWR@checkloadnever{robustglossary}{}
216 \LWR@checkloadnever{semioneside}{}
217 \LWR@checkloadnever{slemph}{}
218 \LWR@checkloadnever{snotez}{sidenotes}
219 \LWR@checkloadnever{spacingtricks}{}
```

```
220 \LWR@checkloadnever{sverb}{verbatim, fancyvrb}
221 \LWR@checkloadnever{syntax}{}
222 \LWR@checkloadnever{tablists}{}
223 \LWR@checkloadnever{tabto}{}
224 \LWR@checkloadnever{tabu}{}
225 \LWR@checkloadnever{tabularht}{}
226 \LWR@checkloadnever{tabularkv}{}
227 \LWR@checkloadnever{thumby}{}
228 \LWR@checkloadnever{titles}{}
229 \LWR@checkloadnever{titles}{}
230 \LWR@checkloadnever{unicode-bidi}{}
231 \LWR@checkloadnever{vcell}{}
232 \LWR@checkloadnever{xhfill}{}
233 }
```

\LWR@checkloadnever $\{\langle badpackagename \rangle\} \{\langle replacementpkgname \rangle\}$

The first package is not supported, so tell the user to use the second instead.

When lwarp is first loaded, this is set to \LWR@earlyloadnever to check for incompatible packages which were loaded before lwarp. After lwarp is loaded, this is changed to \LWR@afterloadnever to check for incompatible packages during \usepackage.

234 \LetLtxMacro\LWR@checkloadnever\LWR@earlyloadnever

Now check for incompatible packages which have been loaded before lwarp:

235 \LWR@checkloadnevers

The older CJK and CJKutf8 only work with xeCJK:

```
236 \IfPackageLoadedTF{xeCJK}{}{
237    \LWR@checkloadnever{CJK}{ctex, xeCJK}
238    \LWR@checkloadnever{CJKutf8}{ctex, xeCJK}
239 }
```

Some classes do not work with lwarp:

```
240 \LWR@earlyclassloadnever{beamer}{beamerarticle}
241 \LWR@earlyclassloadnever{jarticle}{ujarticle}
242 \LWR@earlyclassloadnever{jbook}{ujbook}
243 \LWR@earlyclassloadnever{jreport}{ujreport}
244 \LWR@earlyclassloadnever{tarticle}{utarticle}
245 \LWR@earlyclassloadnever{tbook}{utbook}
246 \LWR@earlyclassloadnever{treport}{utreport}
247 \LWR@earlyclassloadnever{novel}{}
248 \LWR@earlyclassloadnever{powerdot}{}
```

20.3 Enforcing package loading after lwarp

Packages which should only be loaded after lwarp are tested here to trip an error of they have already been loaded.

The following packages must be loaded after lwarp:

```
249 \LWR@loadafter{2in1}
250 \LWR@loadafter{2up}
251 \LWR@loadafter{a4}
252 \LWR@loadafter{a4wide}
253 \LWR@loadafter{a5comb}
254 \LWR@notmemoirloadafter{abstract}
255 \LWR@loadafter{academicons}
256 \LWR@loadafter{accents}
257 \LWR@loadafter{accessibility}
258 \LWR@loadafter{accsupp}
259 \LWR@loadafter{acro}
260 \LWR@loadafter{acronym}
261 \LWR@loadafter{adjmulticol}
262 \LWR@loadafter{addlines}
263 \LWR@loadafter{afterpage}
264 \LWR@loadafter{algorithm2e}
265 \LWR@loadafter{algorithmicx}
266 \LWR@loadafter{alltt}
267 \LWR@loadafter{amscdx}
268% \LWR@loadafter{amsmath}% may be preloaded
269% \LWR@loadafter{amsthm}% may be preloaded
270 \LWR@loadafter{anonchap}
271 \LWR@loadafter{anysize}
272 \LWR@notmemoirloadafter{appendix}
273 \LWR@loadafter{apxproof}
274 \LWR@loadafter{ar}
275 \LWR@loadafter{arabicfront}
276 \LWR@notmemoirloadafter{array}
277 \LWR@loadafter{arydshln}
278 \LWR@loadafter{asymptote}
279% \LWR@loadafter{atbegshi}% now in LaTeX core, also used by morewrites
280 \LWR@loadafter{attachfile}
281 \LWR@loadafter{attachfile2}
282 \LWR@loadafter{authblk}
283 \LWR@loadafter{authoraftertitle}% Supported as-is, but must be loaded after.
284 \LWR@loadafter{autobreak}
285 \LWR@loadafter{autonum}
286 \LWR@loadafter{awesomebox}
287 \LWR@loadafter{axessibility}
288 \LWR@loadafter{axodraw2}
289 \LWR@loadafter{backnaur}
290 \LWR@loadafter{backref}
291 \LWR@loadafter{balance}
292 \LWR@loadafter{bbding}
293 \LWR@loadafter{beamerarticle}
294 \LWR@loadafter{bigdelim}
295 \LWR@loadafter{bigfoot}
296 \LWR@loadafter{bigstrut}
297 \LWR@loadafter{bitpattern}
298 \LWR@loadafter{blowup}
299 \LWR@loadafter{bm}
300 \LWR@loadafter{booklet}
301 \LWR@loadafter{bookmark}
302 \LWR@notmemoirloadafter{booktabs}
303 \LWR@loadafter{bophook}
304 \LWR@loadafter{bounddvi}
305 \LWR@loadafter{boxedminipage}
306 \LWR@loadafter{boxedminipage2e}
307 \LWR@loadafter{braket}
308 \LWR@loadafter{breakurl}
```

```
309 \LWR@loadafter{breqn}
310 \LWR@loadafter{bsheaders}
311 \LWR@loadafter{bussproofs}
312 \LWR@loadafter{bxpapersize}
313 \LWR@loadafter{bytefield}
314 \LWR@loadafter{ccicons}
315 \LWR@loadafter{cancel}
316 \LWR@loadafter{canoniclayout}
317 \LWR@loadafter{caption}
318 \LWR@loadafter{caption2}
319 \LWR@loadafter{caption3}
320 \LWR@loadafter{cases}
321% catoptions is supported by the lwarp core
322% \LWR@loadafter{ccaption}% may be preloaded by memoir
323 \LWR@loadafter{centerlastline}
324% \LWR@loadafter{centernot}% may be preloaded by newtx
325 \LWR@loadafter{changebar}
326 \LWR@loadafter{changelayout}
327 \LWR@notmemoirloadafter{changepage}
328 \LWR@loadafter{changes}
329 \LWR@loadafter{chappg}
330 \LWR@loadafter{chapterbib}
331 \LWR@loadafter{chemfig}
332 \LWR@loadafter{chemformula}
333 \LWR@loadafter{chemgreek}
334 \LWR@loadafter{chemmacros}
335 \LWR@loadafter{chemnum}
336 \LWR@loadafter{chkfloat}
337 \LWR@notmemoirloadafter{chngpage}
338 \LWR@loadafter{cite}
339 \LWR@loadafter{citeref}
340 \LWR@loadafter{classicthesis}
341 \LWR@loadafter{cleveref}
342% cmbright may be preloaded
343 \LWR@loadafter{cmdtrack}
344 \LWR@loadafter{colonequals}
345 \LWR@loadafter{color}
346 \LWR@loadafter{colortbl}
347 \LWR@loadafter{continue}
348 \LWR@loadafter{copyrightbox}
349 \LWR@notmemoirloadafter{crop}
350% ctex must be loaded before lwarp
351 \LWR@loadafter{ctable}
352 \LWR@loadafter{cuted}
353 \LWR@loadafter{cutwin}
354 \LWR@loadafter{dblfloatfix}
355 \LWR@loadafter{dblfnote}
356 \LWR@notmemoirloadafter{dcolumn}
357 \LWR@loadafter{decimal}
358 \LWR@loadafter{decorule}
359 \LWR@loadafter{diagbox}
360 \LWR@loadafter{dingbat}
361 \LWR@loadafter{doipubmed}
362 \LWR@loadafter{DotArrow}
363 \LWR@loadafter{dotlessi}
364 \LWR@loadafter{dprogress}
365 \LWR@loadafter{draftcopy}
366 \LWR@loadafter{draftfigure}
367 \LWR@loadafter{draftwatermark}
368 \LWR@loadafter{drftcite}
```

```
369 \LWR@loadafter{easy-todo}
370 \LWR@loadafter{ebook}
371 \LWR@loadafter{econometrics}
372 \LWR@loadafter{ed}
373 \LWR@loadafter{ellipsis}
374 \LWR@loadafter{embrac}
375 \LWR@loadafter{emptypage}
376 \LWR@loadafter{endfloat}
377 \LWR@loadafter{endheads}
378 \LWR@loadafter{endnotes}
379 \LWR@loadafter{engtlc}
380 \LWR@loadafter{enotez}
381 \LWR@notmemoirloadafter{enumerate}
382 \LWR@loadafter{enumitem}
383 \LWR@notmemoirloadafter{epigraph}
384 \LWR@loadafter{epsf}
385 \LWR@loadafter{epsfig}
386 \LWR@loadafter{epstopdf}
387 \LWR@loadafter{epstopdf-base}
388 \LWR@loadafter{eqlist}
389 \LWR@loadafter{eqparbox}
390 \LWR@loadafter{errata}
391 \LWR@loadafter{eso-pic}
392 \LWR@loadafter{esvect}
393 \LWR@loadafter{etoc}
394 \LWR@loadafter{eurosym}
395 \LWR@loadafter{everypage}
396% \LWR@loadafter{everyshi}% now in LaTeX core
397 \LWR@loadafter{extarrows}
398 \LWR@loadafter{extramarks}
399 \LWR@loadafter{fancybox}
400 \LWR@loadafter{fancyhdr}
401 \LWR@loadafter{fancypar}
402 \LWR@loadafter{fancyref}
403 \LWR@loadafter{fancytabs}
404 \LWR@loadafter{fancyvrb}
405 \LWR@loadafter{fbox}
406 \LWR@loadafter{fewerfloatpages}
407 \LWR@loadafter{figcaps}
408 \LWR@loadafter{figsize}
409 \LWR@loadafter{fitbox}
410 \LWR@loadafter{fix2col}
411 \LWR@loadafter{fixmath}
412 \LWR@loadafter{fixme}
413 \LWR@loadafter{fixmetodonotes}
414 \LWR@loadafter{flafter}
415 \LWR@loadafter{flippdf}
416 \LWR@loadafter{float}
417 \LWR@loadafter{floatflt}
418 \LWR@loadafter{floatpag}
419 \LWR@loadafter{floatrow}
420 \LWR@loadafter{fltrace}
421 \LWR@loadafter{flushend}
422 \LWR@loadafter{fnbreak}
423 \LWR@loadafter{fncychap}
424 \LWR@loadafter{fnlineno}
425 \LWR@loadafter{fnpara}
426 \LWR@loadafter{fnpos}
427 \LWR@loadafter{fontawesome}
428 \LWR@loadafter{fontawesome5}
```

```
429% fontenc must be loaded before lwarp
430% fontspec must be loaded before lwarp
431 \LWR@loadafter{footmisc}
432 \LWR@loadafter{footnote}
433 \LWR@loadafter{footnotebackref}
434 \LWR@loadafter{footnotehyper}
435 \LWR@loadafter{footnoterange}
436 \LWR@loadafter{footnpag}
437 \LWR@loadafter{foreign}
438 \LWR@loadafter{forest}
439 \LWR@loadafter{fouridx}
440% fourier may be loaded before lwarp
441 \LWR@loadafter{framed}
442 \LWR@loadafter{froufrou}
443 \LWR@loadafter{ftcap}
444 \LWR@loadafter{ftnright}
445 \LWR@loadafter{fullminipage}
446 \LWR@loadafter{fullpage}
447 \LWR@loadafter{fullwidth}
448 \LWR@loadafter{fvextra}
449 \LWR@loadafter{fwlw}
450 \LWR@loadafter{gensymb}
451 \LWR@loadafter{gentombow}
452% geometry is always loaded by lwarp, and lwarp-geometry is AtBeginDocument
453 \LWR@loadafter{ghsystem}
454 \LWR@loadafter{gindex}
455 \LWR@loadafter{glossaries}
456 \LWR@loadafter{gmeometric}
457% \LWR@loadafter{graphics}% pre-loaded by xunicode
458% \LWR@loadafter{graphicx}% pre-loaded by xunicode
459 \LWR@loadafter{gloss}
460 \LWR@loadafter{glossary}
461 \LWR@loadafter{grffile}
462 \LWR@loadafter{grid}
463 \LWR@loadafter{grid-system}
464 \LWR@loadafter{gridset}
465 \LWR@loadafter{hang}
466 \LWR@loadafter{hanging}
467 \LWR@loadafter{hepunits}
468 \LWR@loadafter{hhline}
469 \LWR@loadafter{hhtensor}
470 \LWR@loadafter{hypbmsec}
471 \LWR@loadafter{hypcap}
472 \LWR@loadafter{hypdestopt}
473 \LWR@loadafter{hypernat}
474 \LWR@loadafter{hyperref}
475 \LWR@loadafter{hyperxmp}
476 \LWR@loadafter{hyphenat}
477 \LWR@loadafter{idxlayout}
478 \LWR@loadafter{ifoddpage}
479 \LWR@loadafter{imakeidx}
480 \LWR@loadafter{impnattypo}
481 \LWR@notmemoirloadafter{index}
482% inputenc must be loaded before lwarp
483% inputenx must be loaded before lwarp
484% inputtrc may be loaded before lwarp
485 \LWR@loadafter{intopdf}
486 \LWR@loadafter{isomath}
487 \LWR@loadafter{isotope}
488 \LWR@loadafter{jurabib}
```

```
489 \LWR@loadafter{karnaugh-map}
490 \LWR@loadafter{keyfloat}
491 \LWR@loadafter{keystroke}
492% kpfonts may be loaded before lwarp
493 % kpfonts-otf may be loaded before lwarp
494 \LWR@loadafter{layaureo}
495 \LWR@loadafter{layout}
496 \LWR@loadafter{layouts}
497 \LWR@loadafter{leading}
498 \LWR@loadafter{leftidx}
499 \LWR@loadafter{letterspace}
500 \LWR@loadafter{lettrine}
501% libertinust1math may be loaded before lwarp
502 \LWR@loadafter{lineno}
503 \LWR@loadafter{lips}
504 \LWR@loadafter{listings}
505 \LWR@loadafter{listliketab}
506 \LWR@loadafter{lltjp-siunitx}
507 \LWR@loadafter{lltjp-tascmac}
508 \LWR@loadafter{longtable}
509 \LWR@loadafter{lpic}
510 \LWR@loadafter{lscape}
511 \LWR@loadafter{ltablex}
512 \LWR@loadafter{ltcaption}
513 \LWR@loadafter{ltxgrid}
514 \LWR@loadafter{ltxtable}
515 \LWR@loadafter{lua-check-hyphen}
516 \LWR@loadafter{lua-visual-debug}
517 \LWR@loadafter{luacolor}
518 \LWR@loadafter{luamplib}
519 \LWR@loadafter{luatodonotes}
520 \LWR@loadafter{luavlna}
521 \LWR@loadafter{lyluatex}
522 \LWR@loadafter{magaz}
523 \LWR@notmemoirloadafter{makeidx}
524 \LWR@loadafter{manyfoot}
525 \LWR@loadafter{marginfit}
526 \LWR@loadafter{marginfix}
527 \LWR@loadafter{marginnote}
528 \LWR@loadafter{marvosym}
529% mathalpha may be loaded before lwarp
530 \LWR@loadafter{mathastext}
531 \LWR@loadafter{mathcomp}
532 \LWR@loadafter{mathdesign}
533 \LWR@loadafter{mathdots}
534 \LWR@loadafter{mathfixs}
535 \LWR@loadafter{mathpazo}
536 \LWR@loadafter{mathptmx}
537 \LWR@loadafter{mathspec}
538 \LWR@loadafter{mathtools}
539 \LWR@loadafter{mattens}
540 \LWR@loadafter{maybemath}
541 \LWR@loadafter{mcaption}
542 \LWR@loadafter{mdframed}
543 \LWR@loadafter{mdwmath}
544 \LWR@loadafter{media9}
545 \LWR@loadafter{memhfixc}
546 \LWR@loadafter{menukeys}
547 \LWR@loadafter{metalogo}
548 \LWR@loadafter{metalogox}
```

```
549 \LWR@loadafter{mhchem}
550 \LWR@loadafter{microtype}
551 \LWR@loadafter{midfloat}
552 \LWR@loadafter{midpage}
553 \LWR@loadafter{minibox}
554 \LWR@loadafter{minitoc}
555 \LWR@loadafter{minted}
556 \LWR@loadafter{mismath}
557 \LWR@loadafter{mleftright}
558% morefloats must be allowed early for print mode
559 \LWR@notmemoirloadafter{moreverb}
560% morewrites must be loaded before lwarp
561 \LWR@notmemoirloadafter{movie15}
562 \LWR@notmemoirloadafter{mparhack}
563 \LWR@loadafter{multibib}
564 \LWR@loadafter{multicap}
565 %\LWR@loadafter{multicol}% loaded by ltxdoc
566 \LWR@loadafter{multicolrule}
567 \LWR@loadafter{multimedia}
568 \LWR@loadafter{multiobjective}
569 \LWR@loadafter{multirow}
570 \LWR@loadafter{multitoc}
571 \LWR@loadafter{musicography}
572 \LWR@loadafter{mwe}
573 \LWR@loadafter{nameauth}
574 \LWR@loadafter{natbib}
575 \LWR@notmemoirloadafter{nccfancyhdr}
576 \LWR@loadafter{nccfoots}
577 \LWR@loadafter{nccmath}
578 \LWR@notmemoirloadafter{needspace}
579% newclude must be loaded before lwarp
580% newpxmath may be preloaded
581% newtxmath may be loaded before lwarp
582% newtxsf may be loaded before lwarp
583% newunicodechar must be loaded before lwarp
584 \LWR@notmemoirloadafter{nextpage}
585 \LWR@loadafter{nicefrac}
586 \LWR@loadafter{niceframe}
587 \LWR@loadafter{nicematrix}
588 \LWR@loadafter{noitcrul}
589 \LWR@loadafter{nolbreaks}
590 \LWR@loadafter{nomencl}
591 \LWR@loadafter{nonfloat}
592 \LWR@loadafter{nonumonpart}
593 \LWR@loadafter{nopageno}
594 \LWR@loadafter{notes}
595 \LWR@loadafter{notespages}
596 \LWR@loadafter{nowidow}
597 \LWR@loadafter{ntheorem}
598 \LWR@loadafter{octave}
599 \LWR@loadafter{orcidlink}
600 \LWR@loadafter{overpic}
601 \LWR@loadafter{pagegrid}
602 \LWR@notmemoirloadafter{pagenote}
603 \LWR@loadafter{pagesel}
604 \LWR@loadafter{paralist}
605 \LWR@loadafter{parallel}
606 \LWR@loadafter{parcolumns}
607 \LWR@loadafter{parnotes}
608 \LWR@notmemoirloadafter{parskip}
```

```
609 \LWR@loadafter{pbalance}
610 \LWR@loadafter{pbox}
611 \LWR@loadafter{pdfcol}
612 \LWR@loadafter{pdfcolfoot}
613 \LWR@loadafter{pdfcolmk}
614 \LWR@loadafter{pdfcolparallel}
615 \LWR@loadafter{pdfcolparcolumns}
616 \LWR@loadafter{pdfcomment}
617 \LWR@loadafter{pdfcrypt}
618 \LWR@loadafter{pdflscape}
619 \LWR@loadafter{pdfmarginpar}
620 \LWR@loadafter{pdfpages}
621 \LWR@loadafter{pdfprivacy}
622 \LWR@loadafter{pdfrender}
623 \LWR@loadafter{pdfsync}
624 \LWR@loadafter{pdftricks}
625 \LWR@loadafter{pdfx}
626 \LWR@loadafter{perpage}
627 \LWR@loadafter{pfnote}
628 \LWR@loadafter{phfqit}
629 \LWR@loadafter{physics}
630 \LWR@loadafter{physunits}
631 \LWR@loadafter{picinpar}
632 \LWR@loadafter{pifont}
633 \LWR@loadafter{pinlabel}
634 \LWR@loadafter{placeins}
635 \LWR@loadafter{plarray}
636 \LWR@loadafter{plarydshln}
637 \LWR@loadafter{plextarray}
638 \LWR@loadafter{plextarydshln}
639 \LWR@loadafter{plcolortbl}
640 \LWR@loadafter{plextdelarray}
641 \LWR@loadafter{plimsoll}
642 \LWR@loadafter{prelim2e}
643 \LWR@loadafter{prettyref}
644 \LWR@loadafter{preview}
645 \LWR@loadafter{psfrag}
646 \LWR@loadafter{psfragx}
647 \LWR@loadafter{pst-eps}
648 \LWR@loadafter{pstool}
649 \LWR@loadafter{pstricks}
650% \LWR@loadafter{pxatbegshi}% may be used by morewrites
651 \LWR@loadafter{pxeveryshi}
652% \LWR@loadafter{pxfonts}% may be loaded before lwarp
653 \LWR@loadafter{pxftnright}
654 \LWR@loadafter{pxjahyper}
655 \LWR@loadafter{quotchap}
656 \LWR@loadafter{quoting}
657 \LWR@loadafter{ragged2e}
658 \LWR@loadafter{refcheck}
659 \LWR@loadafter{register}
660 \LWR@loadafter{relsize}
661 \LWR@loadafter{repeatindex}
662 \LWR@loadafter{resizegather}
663 \LWR@loadafter{returntogrid}
664 \LWR@loadafter{rlepsf}
665 \LWR@loadafter{rmathbr}
666 \LWR@loadafter{rmpage}
667 \LWR@loadafter{romanbar}
668 \LWR@loadafter{romanbarpagenumber}
```

```
669 \LWR@loadafter{rotating}
670 \LWR@loadafter{rotfloat}
671 \LWR@loadafter{rviewport}
672 \LWR@loadafter{savetrees}
673% scalefnt is loaded by babel-french
674 \LWR@loadafter{scalerel}
675 \LWR@loadafter{schemata}
676 \LWR@loadafter{scrextend}
677 \LWR@loadafter{scrhack}
678 \LWR@loadafter{scrlayer}
679 \LWR@loadafter{scrlayer-notecolumn}
680 \LWR@loadafter{scrlayer-scrpage}
681 \LWR@loadafter{scrpage2}
682 \LWR@loadafter{section}
683 \LWR@loadafter{sectionbreak}
684 \LWR@loadafter{sectsty}
685 \LWR@loadafter{selectp}
686 \LWR@loadafter{semantic-markup}
687 \LWR@notmemoirloadafter{setspace}
688 \LWR@loadafter{shadow}
689 \LWR@loadafter{shapepar}
690 \LWR@notmemoirloadafter{showidx}
691 \LWR@loadafter{showlabels}
692 \LWR@loadafter{showkeys}
693 \LWR@loadafter{showtags}
694 \LWR@loadafter{shuffle}
695 \LWR@loadafter{sidecap}
696 \LWR@loadafter{sidenotes}
697 \LWR@loadafter{simplebnf}
698 \LWR@loadafter{SIunits}
699 \LWR@loadafter{siunitx}
700 \LWR@loadafter{siunitx-v2}
701 \LWR@loadafter{skmath}
702 \LWR@loadafter{slantsc}
703 \LWR@loadafter{slashed}
704 \LWR@loadafter{soul}
705 \LWR@loadafter{soulpos}
706 \LWR@loadafter{soulutf8}
707 \LWR@loadafter{splitbib}
708 \LWR@loadafter{splitidx}
709 \LWR@loadafter{srcltx}
710 \LWR@loadafter{srctex}
711 \LWR@loadafter{stabular}
712 \LWR@loadafter{stackengine}
713 \LWR@loadafter{stackrel}
714 \LWR@loadafter{statex2}
715 \LWR@loadafter{statistics}
716 \LWR@loadafter{statmath}
717 \LWR@loadafter{steinmetz}
718 \LWR@notltjloadafter{stfloats}
719 \LWR@loadafter{struktex}
720 \LWR@loadafter{subcaption}
721 \LWR@loadafter{subfig}
722 \LWR@loadafter{subfigure}
723 \LWR@loadafter{subsupscripts}
724 \LWR@loadafter{supertabular}
725 \LWR@loadafter{svg}
726 \LWR@loadafter{swfigure}
727 \LWR@loadafter{sympytex}
```

728 \LWR@loadafter{syntonly}

```
729 \LWR@loadafter{t1inc}
730 \LWR@loadafter{tabfigures}
731 \LWR@loadafter{tabls}
732 \LWR@loadafter{tablefootnote}
733 \LWR@notmemoirloadafter{tabularx}
734 \LWR@loadafter{tabulary}
735 \LWR@loadafter{tagpdf}
736 \LWR@loadafter{tagpdf-mc-code-generic}
737 \LWR@loadafter{tagpdf-mc-code-lua}
738 \LWR@loadafter{tascmac}
739 \LWR@loadafter{tcolorbox}
740 \LWR@loadafter{tensor}
741 \LWR@loadafter{termcal}
742 \LWR@loadafter{textarea}
743% \LWR@loadafter{textcomp}% maybe before lwarp with font packages
744 \LWR@loadafter{textfit}
745 \LWR@loadafter{textpos}
746 \LWR@loadafter{theorem}
747 \LWR@loadafter{thinsp}
748 \LWR@loadafter{thm-listof}
749 \LWR@loadafter{thm-restate}
750 \LWR@loadafter{thmbox}
751 \LWR@loadafter{thmtools}
752 \LWR@loadafter{threadcol}
753 \LWR@loadafter{threeparttable}
754 \LWR@loadafter{threeparttablex}
755 \LWR@loadafter{thumb}
756 \LWR@loadafter{thumbs}
757 \LWR@loadafter{tikz}
758 \LWR@loadafter{tikz-imagelabels}
759 \LWR@loadafter{titleps}
760 \LWR@loadafter{titlesec}
761 \LWR@loadafter{titletoc}
762 \LWR@notmemoirloadafter{titling}
763% \LWR@loadafter{tocbasic}% preloaded by koma-script classes
764 \LWR@notmemoirloadafter{tocbibind}
765 \LWR@loadafter{tocdata}
766 \LWR@loadafter{tocenter}
767 \LWR@notmemoirloadafter{tocloft}
768 \LWR@loadafter{tocstyle}
769 \LWR@loadafter{todo}
770 \LWR@loadafter{todonotes}
771 \LWR@loadafter{topcapt}
772 \LWR@loadafter{tram}
773 \LWR@loadafter{transparent}
774 \LWR@loadafter{trimclip}
775 \LWR@loadafter{trivfloat}
776 \LWR@loadafter{truncate}
777 \LWR@loadafter{turnthepage}
778 \LWR@loadafter{twoup}
779% \LWR@loadafter{txfonts}% may be loaded before lwarp
780% txgreeks may be loaded before lwarp
781% \LWR@loadafter{typearea}% preloaded by koma-script classes
782 \LWR@loadafter{typicons}
783% \LWR@loadafter{ulem}% preloaded by ctexart and related classes
784 \LWR@loadafter{umoline}
785 \LWR@loadafter{underscore}
786% unicode-math may be loaded before lwarp
787 \LWR@loadafter{units}
```

```
788 \LWR@loadafter{unitsdef}
789 \LWR@loadafter{upgreek}
790 \LWR@loadafter{upref}
791 \LWR@loadafter{url}
792 \LWR@loadafter{ushort}
793 \LWR@loadafter{uspace}
794 \LWR@loadafter{varioref}
795 \LWR@notmemoirloadafter{verse}
796 \LWR@loadafter{versonotes}
797 \LWR@loadafter{vertbars}
798 \LWR@loadafter{vmargin}
799 \LWR@loadafter{vowel}
800 \LWR@loadafter{vpe}
801 \LWR@loadafter{vwcol}
802 \LWR@loadafter{wallpaper}
803 \LWR@loadafter{watermark}
804 \LWR@loadafter{widetable}
805 \LWR@loadafter{widows-and-orphans}
806 \LWR@loadafter{witharrows}
807 \LWR@loadafter{wrapfig}
808 \LWR@loadafter{wrapfig2}
809 \LWR@loadafter{xbmks}
810 \LWR@loadafter{xcolor}
811 \LWR@loadafter{xechangebar}
812 \LWR@loadafter{xellipsis}
813% xetexko must be loaded before lwarp
814 \LWR@loadafter{xevlna}
815 \LWR@loadafter{xfakebold}
816 \LWR@loadafter{xfrac}
817 \LWR@loadafter{xltabular}
818 \LWR@loadafter{xltxtra}
819 \LWR@loadafter{xmpincl}
820 \LWR@loadafter{xpiano}
821 \LWR@loadafter{xpinyin}
822 \LWR@loadafter{xr}
823 \LWR@loadafter{xr-hyper}
824 \LWR@loadafter{xtab}
825% xunicode must be loaded before lwarp
826 \LWR@loadafter{xurl}
827 \LWR@loadafter{xy}
828 \LWR@loadafter{zwpagelayout}
```

21 MD5 hashing

The MD5 hash is used for lateximage filenames for svg math.

The default for PDF LATEX, DVI LATEX, uplateX, etc:

22 PDF LATEX T1 and UTF-8 encoding

When using PDF LATEX, lwarp requires T1 font encoding, and recommends UTF-8 input encoding.

If some other input encoding is already defined, lwarp will try to use it instead, and hope for the best.

X₃I₄T_EX and LuaI₄T_EX are both utf-8 by nature.

\LWR@pdfencoding Sets T1, and also utf8 if not already set.

```
850 \newcommand*{\LWR@pdfencoding}{%
       \RequirePackage[T1]{fontenc}
851
852
       \IfPackageLoadedTF{inputenc}{}{
853
           \IfPackageLoadedTF{inputenx}{}{
854
                \RequirePackage[utf8]{inputenc}
856
           }
857
       }
858 }
859 \ifPDFTeX% pdflatex or dvi latex
       \LWR@pdfencoding
861\fi
862
863 \ifpTeX
       \LWR@pdfencoding
865 \fi
```

23 Unicode input characters

If using *pdflatex*, convert a minimal set of Unicode characters. Additional characters may be defined by the user, as needed.

A commonly-used multiply symbol is declared to be \texttimes.

The first arguments of \newunicodechar below are text ligatures in the source code, even though they are not printed in the following listing.

```
866 \ifpTeX
867 \else
868 \RequirePackage{newunicodechar}
869
870 \newunicodechar{*}{\texttimes}
871
872 \ifpDFTeX% pdflatex or dvi latex
873 \newunicodechar{ff}{ff}% Here, the first arguments are ligatures.
874 \newunicodechar{fi}{fi}
875 \newunicodechar{ff}{fl}
876 \newunicodechar{ffi}{ffi}
877 \newunicodechar{fff}{ffl}
878 \newunicodechar{-}{---}
879 \newunicodechar{-}{---}
880 \fi
881
882 \fi
```

24 Avoid a bitmapped font

If DVI or PDF LATEX, and if the default Computer Modern is the selected font family, ensure that cm-super or lmodern is used to provide a vector font.

```
883 \ifxetexorluatex
884 \else
       \ifdefstring{\f@family}{cmr}{
885
           \IfFileExists{type1ec.sty}% found in cm-super
886
887
           {}
           {% cm-super not installed
888
               \IfFileExists{lmodern.sty}{
889
                    \PackageInfo{lwarp}{cm-super not installed, loading lmodern}
890
                    \RequirePackage{lmodern}
891
               }{
892
                    \PackageError{lwarp}
893
                    {%
894
895
                        Lwarp requires a vector font.\MessageBreak
896
                     Install and load cm-super, lmodern, or another\MessageBreak
                        Type-1 vector font before loading lwarp.\MessageBreak
897
                        Enter 'H' for possible solutions%
898
899
                    {%
900
901
                        Install cm-super or lmodern.\MessageBreak
                        If lmodern, load it before lwarp:\MessageBreak
902
                           \space\space\protect\usepackage{lmodern}\MessageBreak
903
                            \space\space\protect\usepackage{lwarp}%
905
906
               }
           }% cm-super not installed
907
       }{}% f@family
908
```

909\fi

25 Upright quotes

In PDF TEX, preserve upright quotes in verbatim text. upquote also loads textcomp.

```
910 \ifPDFTeX
911 \RequirePackage{upquote}
912 \fi
913
914 \ifpTeX
915 \RequirePackage{upquote}
916 \fi
```

26 Avoid bad font combinations

For XHIATEX and LuaIATEX, certain font combinations cause problems with lwarp.

libertinus-off has special handling for \textquotedbl. Search for \LWR@orig@textquotedbl.

```
917 \ifxetexorluatex
       \AtBeginDocument{
918
           \IfPackageLoadedTF{kpfonts}{
919
               \PackageError{lwarp}
920
                    {%
921
922
                        When using XeLaTeX or LuaLaTeX, \MessageBreak
                        use kpfonts-otf instead of kpfonts%
                    {%
                        Replace: \protect\usepackage{kpfonts}\MessageBreak
926
                        with: \protect\usepackage{kpfonts-otf}
927
                    }
928
           }{}
929
930
       }
931\fi
```

27 Miscellaneous tools

27.1 Variables

```
932 \newlength{\LWR@templengthone}
933 \newlength{\LWR@templengthtwo}
934 \newlength{\LWR@templengththree}
935 \newcounter{LWR@tempcountone}
```

27.2 Lengths and units

 $\verb|\LWR@providelength| \{ \langle \texttt| lengthname \rangle \} Provides the length if it isn't defined yet.$

Used to provide source compatibility for lengths which will be ignored, but might or might not be already provided by other packages.

Prints a length in the given units, without printing the unit itself.

939 \newcommand*{\LWR@convertto}[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr 1#1}

 $\verb|\LWR@printpercentlength| \{\langle smaller \rangle\} \{\langle larger \rangle\}|$

Prints a percent ratio of the two lengths.

```
940 \newcommand*{\LWR@printpercentlength}[2]{%
941 \setcounter{LWR@tempcountone}{100*\ratio{#1}{#2}}%
942 \arabic{LWR@tempcountone}%
943}
```

27.3 Counters

27.4 Patching macros

```
\LWR@patcherror \{\langle packagename \rangle\} \{\langle macroname \rangle\}
```

Prints an error if could not patch a macro.

```
947 \newcommand*{\LWR@patcherror}[2]{%
948 \PackageError{\warp}%
949 {%
950 Unable to patch package #1,\MessageBreak
951 macro \LWRbackslash #2.\MessageBreak
952 Lwarp or #1 may need to be updated%
953 }%
954 {Please contact the maintainer of the Lwarp package.}%
```

27.5 Copying macros

Given a cs-name for each, copies a macro to a new definition.

```
956 \providecommand*{\csNewCommandCopycs}[2]{%
957 \expandafter\NewCommandCopy\csname#1\expandafter\endcsname%
958 \csname#2\endcsname%
959 }
```

 $\NewEnvironmentCopy \{\langle dest \rangle\} \{\langle source \rangle\}$

Copies an environment to a new definition.

```
960 \providecommand*{\NewEnvironmentCopy}[2]{%
961 \csNewCommandCopycs{#1}{#2}%
962 \csNewCommandCopycs{end#1}{end#2}%
963 }
```

27.6 Chinese text isolation

\LWR@isolate $\{\langle text \rangle\}$ Isolates Chinese characters from the surrounding text. This is required to avoid extra spaces on either side of the Chinese characters, especially when written to a file.

```
964 \newcommand{\LWR@isolate}[1]{#1}%
965
966 \IfPackageLoadedTF{ctexpatch}{
967 \renewcommand{\LWR@isolate}[1]{\null#1\null}%
968 }{}
969
970 \IfPackageLoadedTF{xeCJK}{
971 \renewcommand{\LWR@isolate}[1]{\null#1\null}%
972 }{}
```

\LWR@disablepinyin Disable xpinyin during file, sidetoc, and footnote generation. Set by xpinyin.

```
973 \newcommand*{\LWR@disablepinyin}{}
```

27.7 Inserting vertical space

\LWR@forceemptyline Extra vertical space in the HTML output. Use after \LWR@stoppars.

```
974 \newcommand*{\LWR@forceemptyline}{%
975 \LWR@origrule{0pt}{1\baselineskip}%
976 \LWR@orignewline%
977 }
```

27.8 Argument selection

```
\label{eq:local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_
```

```
\label{eq:local_local_local_local_local_local} $$ LWR@firstoffive $$ {\langle first \rangle} $$ {\langle second \rangle} $$ {\langle third \rangle} $$ {\langle fourth \rangle} $$ {\langle fifth \rangle}$ $$
     \LWR@secondoffive \{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\} \{\langle fifth \rangle\}
      \label{eq:local_local_local_local} $$ LWR@thirdoffive $$ {\langle first \rangle} $$ {\langle second \rangle} $$ {\langle third \rangle} $$ {\langle fourth \rangle} $$ $$
     \LWR@fourthoffive \{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\} \{\langle fifth \rangle\}
      \label{eq:local_local_local_local_local} $$ LWR@fifthoffive {\langle first \rangle} {\langle second \rangle} {\langle third \rangle} {\langle fourth \rangle} {\langle fifth \rangle} $$
                                   Expands to the nth of the five arguments. Used for extra cross referencing.
                                 978 \long\def\LWR@thirdofthree#1#2#3{#3}%
                                 979 \long\def\LWR@fourthoffour#1#2#3#4{#4}%
                                 981 \long\def\LWR@firstoffive#1#2#3#4#5{#1}
                                 982 \long\def\LWR@secondoffive#1#2#3#4#5{#2}
                                 983 \long\def\LWR@thirdoffive#1#2#3#4#5{#3}
                                 984 \long\def\LWR@fourthoffive#1#2#3#4#5{#4}
                                 985 \long\def\LWR@fifthoffive#1#2#3#4#5{#5}
\LWR@edeffirstoffive \{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\} \{\langle fifth \rangle\} \}\edefs to the first of five argu-
                                   ments. Used for back referencing.
                                 986 \long\def\LWR@edeffirstoffive#1#2#3#4#5{%
                                             \edef\@tempa{#1}%
                                 988 }%
```

27.9 Inside boxes

Greater than zero if currently inside a TEX box, thus should not use \LWR@orignewpage. See section 13.2.

```
989 \newcounter{LWR@texboxdepth}
990 \setcounter{LWR@texboxdepth}{0}
```

\LWR@maybe@orignewpage Only do \LWR@orignewpage if not inside a TEX box. Avoids nested paragraph tags.

```
991 \newcommand*{\LWR@maybe@orignewpage}{%
992 \LWR@traceinfo{LWR@maybe@orignewpage}%
993 \ifnumgreater{\value{LWR@texboxdepth}}{0}%
994 {}%
995 {\LWR@orignewpage}%
996 \LWR@traceinfo{LWR@maybe@orignewpage done}%
997}
```

27.10 Global boxes

```
\LWR@gsavebox \{\langle macroname \rangle\} \{\langle contents \rangle\}
```

From https://tex.stackexchange.com/questions/288702/ savebox-forgets-its-content-across-columns-inside-align

```
998 \DeclareRobustCommand\LWR@gsavebox[1]{%
                                                  \@ifnextchar(%)
                                                         $$ {\WR@@gsavepicbox#1}{\WR@gsbox#1}}} 
                                      {\tt 1001 \long\def\LWR@gsbox\#1\#2{\global\setbox\#1\hbox{\%}}}
                                      1002 \color@setgroup#2\color@endgroup}}
                                      1003 \def\LWR@@gsavebox#1[#2]{%
                                      1004 \@ifnextchar [{\LWR@@igsavebox#1[#2]}{\LWR@@igsavebox#1[#2][c]}}
                                      {\tt 1005 \long\def\LWR@eigsavebox\#1[\#2][\#3]\#4\{\%)}
                                      1006 \LWR@gsbox#1{\@imakebox[#2][#3]{#4}}}
                                      1007 \def\LWR@@gsavepicbox#1(#2,#3){%
                                      1008 \@ifnextchar[%]
                                                        {\LWR@@igsavepicbox#1(#2,#3)}{\LWR@@igsavepicbox#1(#2,#3)[]}}
                                      1010 \long\def\LWR@@igsavepicbox#1(#2,#3)[#4]#5{%
                                      1011 \LWR@gsbox#1{\@imakepicbox(#2,#3)[#4]{#5}}}
   LWR@glrbox(env.) {\langle macroname \rangle}
                                      1012 \def\LWR@glrbox#1{%
                                                 \edef\reserved@a{%
                                      1014
                                                        \endgroup
                                                        \global\setbox#1\hbox{%
                                      1015
                                                              \begingroup\aftergroup}%
                                      1016
                                                                   \def\noexpand\@currenvir{\@currenvir}%
                                      1017
                                                                  \def\noexpand\@currenvline{\on@line}}%
                                      1018
                                                   \reserved@a
                                      1019
                                                        \@endpefalse
                                      1020
                                                         \color@setgroup
                                      1021
                                                              \ignorespaces}
                                      1023 \let\LWR@endglrbox\LWR@endlrbox
                                                                  Converting a macro name to a cs name
       \mbox{\colored} {\colored} \mbox{\colored} \
                                           Results in the macro name without the leading backslash.
                                           Ref: https://tex.stackexchange.com/questions/42318/
                                                                                                          removing-a-backslash-from-a-character-sequence
                                      1024 \newcommand*{\macrotocsname}[1]{%
                                                   \ifcat\relax\noexpand#1%
                                      1025
                                      1026
                                                        \expandafter\expandafter\expandafter\@gobble\expandafter\string
                                                   \fi
                                      1027
                                      1028
                                                   #1%
                                      1029 }
                                           27.12 Title case
\LWRtexttitlecase
```

1030 \ExplSyntaxOn

1034 \ExplSyntaxOff

1032

1033 }

1031 \newcommand*{\LWRtexttitlecase}[1]{%

\text_titlecase:n{#1}%

27.13 LetLtxMacrocs

```
\LWR@LetLtxMacrocs \{\langle newcsname \rangle\} \{\langle oldcsname \rangle\}
                      \LetLtxMacro with cs names.
                   1035 \newcommand*{\LWR@LetLtxMacrocs}[2]{%
                            \expandafter\LetLtxMacro\csname #1\expandafter\endcsname%
                   1037
                            \csname#2\endcsname%
                   1038 }
```

27.14 Absorbing a star

```
\LWR@absorbstar \{\langle csname \rangle\}
```

Modifies a macro to aborb a star. Used for cleveref, since hyperref is emulated, so the starred macros are not created by cleveref.

```
1039 \newcommand*{\LWR@absorbstar}[1]{%
     \LWR@LetLtxMacrocs{LWR@origns@#1}{#1}%
1040
     1041
     \expandafter\robustify\csname #1\endcsname
1042
1043 }
```

28 **Operating-System portability**

Unix (*Prog*)

Mac OS (Prog)

Linux (Prog)

MS-Windows (Prog)

Windows (Prog) OSWindows (Opt) lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as "UNIX" in the configuration files), and MS-WINDOWS is supported as well.

If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.

When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean usingOSWindows is set true. This boolean may be tested by the user for later use.

Literal characters 28.1

Literal characters to be used in PrintLatexCmd and HTMLLatexCmd. These are defined without @ to easily allow their inclusion in the user's document.

The literal % character:

1044 \let\LWRpercent\@percentchar

The literal \$ character:

```
1045 \catcode '\$=12
1046 \def\LWRdollar{$}
1047 \def\LWRdollar{$}% syntax highlighting
1048 \catcode '\$=3
```

The literal & character:

```
1049 \catcode '\&=12
1050 \def\LWRamp{&}
1051 \catcode '\&=4
```

The literal \ character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

```
1052 \catcode '\&=0
1053 &catcode '&\=12
1054 &def&LWRbackslash{\}
1055 &catcode '&\=0
1056 \catcode '\&=4
```

The literal { character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

```
1057 \catcode'\&=1
1058 \catcode'\{=12
1059 \def\LWRleftbrace&{}
1060 \catcode'\{=1
1061 \catcode'\&=4
```

The literal } character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

```
1062 \catcode'\&=2
1063 \catcode'\}=12
1064 \def\LWRrightbrace{}&
1065 \catcode'\}=2
1066 \catcode'\&=4
```

The literal # character:

```
1067 \catcode'\#=12
1068 \def\LWRhash{#}
1069 \catcode'\#=6
```

\LWRopquote The operating system's quote mark, Unix default. For Windows, see \LWR@setOSWindows, below.

```
1070 \def\LWRopquote{'}
```

\LWRopseq The operating system's sequential execution command, UNIX default. For WINDOWS, see \LWR@setOSWindows, below.

1071 \def\LWRopseq{\space\LWRamp\LWRamp\space\space}

28.2 Common portability code

usingOSWindows (bool) Set if the OSWindows option is used, or if WINDOWS is automatically detected.

```
1072 \newbool{usingOSWindows}
1073 \boolfalse{usingOSWindows}
```

28.3 UNIX, LINUX, and MAC OS

\OSPathSymbol Symbol used to separate directories in a path.

```
1074 \newcommand*{\OSPathSymbol}{/}
```

28.4 MS-WINDOWS

For MS-WINDOWS:

\LWR@setOSWindows Set defaults for the MS-Windows operating system. lwarp attempts to auto-detect the operatings system, and the OSWindows option may also be used to force MS-Windows compatibility.

```
1075 \newcommand*{\LWR@setOSWindows}
1076 {
1077 \booltrue{usingOSWindows}
1078 \renewcommand*{\OSPathSymbol}{\@backslashchar}
1079 \def\LWRopquote{"}
1080 \def\LWRopseq{\space\LWRamp\space\space}
1081 }
```

Test for windows during compile. The user may also specify OSWindows package option in case this test fails.

```
1082 \ifwindows
1083 \LWR@setOSWindows
1084 \fi
```

29 Package options

```
kvoptions (Pkg) Allows key/value package options.
```

```
1085 \RequirePackage{kvoptions}
1086 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

\lwarpsetup A user interface to set the keys:

```
\label{loss_loss} $$1087 \times LWR}{11}{\setkeys{LWR}{\#1}}$
```

```
warpingHTML (bool)
warpingHTML (bool)
mathjax (bool)
warpingHTML (bool)
set to true/false depending on the package option selections for print/HTML/EPUB
output and mathsvg/mathjax.

LWR@origmathjax (bool)
```

LWR@origmathjax remembers the original setting to be restored by \displaymathnormal.

```
1088 \newbool{warpingprint}
1089 \newbool{warpingHTML}
1090 \newbool{mathjax}
1091 \newbool{LWR@origmathjax}
```

defaults The default is print output, and svg math if the user chose HTML output.

```
1092 \booltrue{warpingprint}%
1093 \boolfalse{warpingHTML}%
1094 \boolfalse{mathjax}%
```

warpdisable (*Opt*) If the warpdisable option is given, both boolean warpingprint and boolean warpingHTML are false, and may be used for \ifbool tests. This option may be used to disable almost all of lwarp, for testing purposes.

```
1095 \DeclareVoidOption{warpdisable}{%
1096     \PackageInfo{lwarp}{Using option 'warpdisable'}
1097     \boolfalse{warpingprint}%
1098     \boolfalse{warpingHTML}%
1099 }
```

warpprint (Opt) If the warpprint option is given, boolean warpingprint is true and boolean warpingHTML is false, and may be used for \ifbool tests.

```
1100 \DeclareVoidOption{warpprint}{%
1101 \PackageInfo{lwarp}{Using option 'warpprint'}
1102 \booltrue{warpingprint}%
1103 \boolfalse{warpingHTML}%
1104 }
```

- warpHTML (Opt) Anything in the warpHTML environment will be generated for HTML output only.
- warpHTML (Opt) If the warpHTML option is given, boolean warpingHTML is true and boolean warpingprint is false, and may be used for \ifbool tests.

```
1105 \DeclareVoidOption{warpHTML}{%
1106     \PackageInfo{\lwarp}{\Using option 'warpHTML'}%
1107     \booltrue{\warpingHTML}%
1108     \boolfalse{\warpingprint}%
1109 }
```

mathsvg (*Opt*) Option mathsvg selects svg math display: If the mathsvg option is given, boolean mathjax is false, and may be used for \ifbool tests.

```
1110 \DeclareVoidOption{mathsvg}{%
1111    \PackageInfo{\lwarp}{\Using option 'mathsvg'}}
1112    \boolfalse{\mathjax}%
1113    \boolfalse{LWR@origmathjax}%
1114 }
```

mathjax (Opt) Option mathjax selects MATHJAX math display: If the mathjax option is given, boolean mathjax is true, may be used for \ifbool tests.

```
1115 \DeclareVoidOption{mathjax}{%
1116    \PackageInfo{lwarp}{Using option 'mathjax'}
1117    \booltrue{mathjax}%
1118    \booltrue{LWR@origmathjax}%
1119 }
```

BaseJobname (*Opt*)

Default: \jobname

Option BaseJobname sets the \BaseJobname for this document.

This is the \jobname of the printed version, even if currently compiling the HTML version. I.e. this is the \jobname without _html appended. This is used to set \HomeHTMLFilename if the user did not provide one.

1120 \DeclareStringOption[\jobname]{BaseJobname}

ImagesDirectory (Opt) Option ImagesDirectory sets the name of the directory to use for the lateximage Default: $\joname-images$ images.

1121 \DeclareStringOption[\BaseJobname-images]{ImagesDirectory}

ImagesName (Opt) Option ImagesName sets the prefix to use for the lateximage images.

Default: image-

1122 \DeclareStringOption[image-]{ImagesName}

makeindexStyle (*Opt*) Selects a custom .ist file. A customized file should be based on lwarp.ist. See Default: lwarp.ist section 8.6.21.

1123 \DeclareStringOption[lwarp.ist]{makeindexStyle}

xindyStyle (*Opt*) Selects a custom .xdy file. A customized file should be based on lwarp.xdy. See Default: lwarp.xdy section 8.6.22.

1124 \DeclareStringOption[lwarp.xdy]{xindyStyle}

xindyLanguage (*Opt*) Sets the *xindy* language to be assigned in *lwarpmk*'s configuration files. This is then Default: english used by *lwarpmk* while processing the index and glossary.

1125 \DeclareStringOption[english]{xindyLanguage}

xindyCodepage (*Opt*) Sets the *xindy* codepage to be assigned in *lwarpmk*'s configuration files. This is Default: utf8 then used by *lwarpmk* while processing the index.

1126 \DeclareStringOption[utf8]{xindyCodepage}

xindexConfig(*Opt*) Selects a custom xindex-*.lua file. A customized file should be based on Default: <empty> xindex-cfg.lua. See section 8.6.23.

1127 \DeclareStringOption[]{xindexConfig}

pdftotextEnc (*Opt*) The option pdftotextEnc sets the encoding used by *pdftotext*. This is passed to *pdftotext* using its -enc option, and is used when converting LATEX PDF output with HTML tags into a plain-text file with HTML tags.

1128 \DeclareStringOption[UTF-8]{pdftotextEnc}

lwarpmk (*Opt*) Tells lwarp to generate a local copy of *lwarpmk* called lwarpmk.lua. Useful for archiving for future use. This file may be made executable and acts just like *lwarpmk*.

If lwarpmk option, creates a local copy of lwarpmk.lua:

```
1129 \newbool{LWR@creatinglwarpmk}
                      1130 \boolfalse{LWR@creatinglwarpmk}
                      1132 \DeclareVoidOption{lwarpmk}{
                             \PackageInfo{lwarp}{Using option 'lwarpmk'}
                      1133
                             \booltrue{LWR@creatinglwarpmk}
                      1134
                      1135 }
       OSWindows (Opt) Tells lwarp to use MS-WINDOWS compatibility. Auto-detection of the operating sys-
                        tem is attempted, and this option is only necessary if the auto-detection fails. See
                        the automatically-generated lwarpmk.conf file to find out whether the operating
                        system was detected correctly.
                      1136 \DeclareVoidOption{OSWindows}{
                      1137
                              \PackageInfo{lwarp}{Using option 'OSWindows'}
                      1138
                              \LWR@setOSWindows
                      1139 }
HomeHTMLFilename (Opt) The filename of the homepage. The default is the jobname. This option is stored
    Default: \BaseJobname
                        into \LWR@HomeHTMLFilename, and later transferred into \HomeHTMLFilename for
                        internal use.
                      1140 \DeclareStringOption[]{HomeHTMLFilename}
    HTMLFilename (Opt) The filename prefix of web pages after the homepage. The default is empty, no
         Default: <empty>
                        prefix. This option is stored into \LWR@HTMLFilename, and later transferred into
                        \HTMLFilename for internal use.
                      1141 \DeclareStringOption[]{HTMLFilename}
   PrintLatexCmd (Opt) The shell commands to use to compile the print document.
     Default: <automatic>
                      1142 \DeclareStringOption[]{PrintLatexCmd}
    HTMLLatexCmd (Opt) The shell commands to use to compile the HTML document.
     Default: <automatic>
                      1143 \DeclareStringOption[]{HTMLLatexCmd}
   PrintIndexCmd (Opt) The shell commands to use to compile the print indexes.
         Default: <empty>
                      1144 \DeclareStringOption[]{PrintIndexCmd}
    HTMLIndexCmd (Opt) The shell commands to use to compile the HTML indexes.
        Default: <empty>
```

1146 \DeclareStringOption[]{LatexmkIndexCmd}

1145 \DeclareStringOption[]{HTMLIndexCmd}

makeindex (Opt) Tells lwarp to use makeindex for index generation. When lwarpmk.conf and

*.lwarpmkconf are generated, PrintIndexCmd and HTMLIndexCmd will be set for *makeindex* with a single index file.

1147 \DeclareBoolOption[false]{makeindex}

xindy (*Opt*) Tells **lwarp** to use *xindy* for index generation. When lwarpmk.conf and *.lwarpmkconf are generated, PrintIndexCmd and HTMLIndexCmd will be set for *xindy* with a single index file.

1148 \DeclareBoolOption[false]{xindy}

xindex (Opt) Tells lwarp to use xindex for index generation. When lwarpmk.conf and *.lwarpmkconf are generated, PrintIndexCmd and HTMLIndexCmd will be set for xindex with a single index file.

1149 \DeclareBoolOption[false]{xindex}

IndexRef (Opt) Tells lwarp how to display the index entries in HTMLoutput. See section 7.5.

Default: cref

1150 \DeclareStringOption[cref]{IndexRef}

GlossaryCmd (*Opt*) The shell command to use to compile the glossary. The print or HTML version of the glossary filename will be appended to this command.

1151 \DeclareStringOption[makeglossaries]{GlossaryCmd}

latexmk (Opt) Option latexmk tells lwarpmk to use latexmk when compiling documents.

1152 \DeclareBoolOption[false]{latexmk}

dvips (Opt) Option dvips tells *lwarpmk* to use *dvips* when compiling DVI *latex* documents.

1153 \DeclareBoolOption[false]{dvips}

dvipdfm (Opt) Option dvipdfm tells lwarpmk to use dvipdfm when compiling DVI latex documents.

1154 \DeclareBoolOption[false]{dvipdfm}

dvipdfmx (*Opt*) Option dvipdfmx tells *lwarpmk* to use *dvipdfmx* when compiling DVI *latex* documents.

1155 \DeclareBoolOption[false]{dvipdfmx}

1156 \ProcessKeyvalOptions*\relax

29.1 Additional options support

Assign the \BaseJobname if the user hasn't provided one:

1157 \providecommand*{\BaseJobname}{\LWR@BaseJobname}

Defaults unless already over-ridden by the user:

Special handling for underscores in labels and filenames.

\LWR@sanitized The sanitized version of what was given to \LWR@sanitize. Characters are set to their detokenized versions. Required for underscores in labels and filenames.

```
% life \newcommand* {\LWR@sanitized} {\ \LWR@sanitize \{ \langle text \rangle \}
```

Sanitizes the text and returns the result in \LWR@sanitized.

```
1166 \newcommand*{\LWR@sanitize}[1]{%
1167 \edef\LWR@sanitized{#1}%
1168 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
1169 }
```

Sanitize some string options to neutralize underscores.

```
1170 \LWR@sanitize{\LWR@BaseJobname}
1171 \edef\LWR@BaseJobname{\LWR@sanitized}
1172
1173 \LWR@sanitize{\LWR@ImagesDirectory}
1174 \edef\LWR@ImagesDirectory{\LWR@sanitized}
1175
1176 \LWR@sanitize{\LWR@ImagesName}
1177 \edef\LWR@ImagesName{\LWR@sanitized}
```

\LWR@PrintIndexCmd and \LWR@HTMLIndexCmd are tested to see if they are empty. If so, they are set to a reasonable defaults for a single index using *makeindex*, then possibly set to defaults for *xindy* if the lwarp xindy option was selected, then likewise for *xindex* if the xindex option was selected.

```
1178 \ifdefempty{\LWR@PrintIndexCmd}{
1179
        \renewcommand{\LWR@PrintIndexCmd}{%
1180
            makeindex -s \LWR@makeindexStyle \space \jobname.idx%
1181
        \ifbool{LWR@xindy}{
1182
            \renewcommand{\LWR@PrintIndexCmd}{%
1183
                 xindv
1184
                 -M \LWR@xindyStyle \space
1185
                 -L \LWR@xindyLanguage \space
1186
                 -C \LWR@xindyCodepage \space
1187
                 \jobname.idx%
1188
1189
1190
        }{}
        \ifbool{LWR@xindex}{
1191
            \verb|\ifdefvoid{\LWR@xindexConfig}|{|}
1192
```

```
\renewcommand{\LWR@PrintIndexCmd}{%
1193
1194
1195
                     \jobname.idx%
1196
                 }
1197
            }{
                 \renewcommand{\LWR@PrintIndexCmd}{%
1198
                     xindex
1199
                     -c \LWR@xindexConfig \space
1200
                     \jobname.idx%
1201
                 }
1202
1203
            }
1204
        }{}
1205 }{}
1206
1207 \ifdefempty{\LWR@HTMLIndexCmd}{
        \verb|\renewcommand{\LWR@HTMLIndexCmd}{%}|
1208
            makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
1209
1210
        \ifbool{LWR@xindy}{
1211
            \renewcommand{\LWR@HTMLIndexCmd}{%
1212
                xindy
1213
                 -M \LWR@xindyStyle \space
1214
                 -L \LWR@xindyLanguage \space
1215
1216
                 -C \LWR@xindyCodepage \space
1217
                 \jobname_html.idx%
1218
            }
1219
        }{}
        \ifbool{LWR@xindex}{
1220
            \verb|\ifdefvoid{\LWR@xindexConfig}|{|}
1221
                 \renewcommand{\LWR@HTMLIndexCmd}{%
1222
1223
                     xindex
                     \jobname_html.idx%
1224
1225
            }{
1226
1227
                 \renewcommand{\LWR@HTMLIndexCmd}{%
1228
                     xindex
                     -c \LWR@xindexConfig \space
1229
                     \jobname_html.idx%
1230
                 }
1231
1232
        }{}
1233
1234 }{}
1235
1236 \ifdefempty{\LWR@LatexmkIndexCmd}{
        \renewcommand{\LWR@LatexmkIndexCmd}{%
1237
1238
            makeindex -s \LWR@makeindexStyle%
1239
        \ifbool{LWR@xindy}{
1240
            \renewcommand{\LWR@LatexmkIndexCmd}{%
1241
                xindy
1242
                 -M \LWR@xindyStyle \space
1243
                 -L \LWR@xindyLanguage \space
1244
1245
                 -C \LWR@xindyCodepage%
1246
            }
1247
        }{}
        \ifbool{LWR@xindex}{
1248
1249
            \ifdefvoid{\LWR@xindexConfig}{
1250
                 \renewcommand{\LWR@LatexmkIndexCmd}{%
1251
                     xindex
                 }
1252
```

29.2 Conditional compilation

```
\warpprintonly \{\langle contents \rangle\}
```

Only process the contents if producing printed output.

```
1261 \newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
```

```
\warpHTMLonly \{\langle contents \rangle\}
```

Only process the contents if producing HTML output.

```
1262 \mbox{ } 1262 \mbox{ }
```

comment (Pkg) Provides conditional code blocks.

Attempts to use versions or verbatim fail in some cases, and do not provide much of a speed benefit even when they do work.

```
\label{lem:likelihood} $$ \LWR@includecomment {$\langle env \ name \rangle$} {\langle partial \ filename \rangle$} $$ \LWR@excludecomment {$\langle env \ name \rangle$} {\langle partial \ filename \rangle$} $$
```

Use many comment cut files to avoid collision in case the user uses the comment package. Each filename is "comment_#2.cut". Based on the comment package.

```
1264 \def\LWR@includecomment
1265 #1#2{\message{Lwarp: Including comment '#1'}%
1266
        \csarg\def{After#1Comment}{%
1267
            \CloseAndInputCutFile%
1268
            \csundef{LWR@#1commentused}%
1269
        \csarg\def{#1}{%}
1270
            \endgroup
1271
            \ifcsdef{LWR@#1commentused}{
1272
                \PackageError{lwarp}%
1273
                    {Nested #1 environment}%
1274
1275
                    {%
                         Environment #1 cannot be nested.\MessageBreak
1276
1277
                         This can happen when a package is loaded
                         from inside a\MessageBreak
1278
                         #1 environment.%
1279
1280
            }{\relax}
1281
```

```
1282
                            \csdef{LWR@#1commentused}{}
                            \message{Including '#1' comment.}%
               1283
                            \def\CommentCutFile{comment_#2.cut}
               1284
               1285
                            \SetUpCutFile
               1286
                            \ProcessComment{#1}
               1287
                       }%
                       \CommentEndDef{#1}
               1288
               1289 }
               1290
               1291 \def\LWR@excludecomment
               1292 #1#2{\message{Lwarp: Excluding comment '#1'}%
               1293
                       \csarg\def{#1}{
               1294
                            \endgroup
               1295
                            \message{Excluding '#1' comment.}%
               1296
                            \begingroup
                               \def\CommentCutFile{comment_#2.cut}
               1297
                                \def\ProcessCutFile{}%
               1298
                               \def\ThisComment###1{}%
               1299
                                \ProcessComment{#1}
               1300
                       }%
               1301
                       \csarg\def{After#1Comment}{\CloseAndInputCutFile \endgroup}
               1302
               1303
                       \CommentEndDef{#1}}
    warpall (env.) Anything in the warpall environment will be generated for print or HTML outputs.
               1304 \LWR@includecomment{warpall}{all}
   warpHTML (env.) For HTML output:
               1305 \ifbool{warpingHTML}
                       {\LWR@includecomment{warpHTML}{html}}
               1307
                       {\LWR@excludecomment{warpHTML}{html}}
 warpprint (env.) Anything in the warpprint environment will be generated for print output only.
                1308 \ifbool{warpingprint}
               1309
                       {\LWR@includecomment{warpprint}{print}}
               1310
                       {\LWR@excludecomment{warpprint}{print}}
                  If warpdisable, turn off both print and HTML output:
               1311 \ifboolexpr{bool {warpingprint} or bool {warpingHTML}}
               1312
                       {}
               1313
                            \LWR@excludecomment{warpHTML}{html}
               1314
                            \LWR@excludecomment{warpprint}{print}
               1315
                            \LWR@excludecomment{warpMathJax}{mathjax}
               1316
               1317
                       }
warpMathJax (env.) Only if MATHJAX is being used along with HTML.
               1318 \begin{warpprint}
               1319 \LWR@excludecomment{warpMathJax}{mathjax}
               1320 \end{warpprint}
               1322 \begin{warpHTML}
```

warpsvg (env.) Only if svG math is being used along with HTML, or in print mode.

LWRcreatelwarpmk (env.) Optionally generate a local copy of lwarpmk. Default to no.

30 Required packages

These packages are automatically loaded by lwarp when generating HTML output. Some of them are also automatically loaded when generating print output, but some are not.

```
for HTML output: 1339 \begin{warpHTML}

fontspec (Pkg) Load fontspec if necessary:

1340 \ifxetexorluatex
1341 \IfPackageLoadedTF{fontspec}{}{
1342 \usepackage[no-math]{fontspec}
1343 }
```

The monospaced font is used for HTML tags, so turn off its TeX ligatures and common ligatures:

```
1344 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
1345 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
1346 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
1347 \else
```

pdflatex only: Only pre-loaded if pdflatex is being used.

microtype(Pkg)

igatures Older browsers don't display ligatures. Turn off letter ligatures, keeping LATEX dash and quote ligatures, which may fail on older browers but at least won't corrupt written words.

```
1348 \RequirePackage{microtype}
```

```
1349
1350 \microtypesetup{
       protrusion=false,
1352
       expansion=false,
1353
       tracking=false,
       kerning=false,
1354
       spacing=false}
1355
1356 %
        \begin{macrocode}
1357 %
1358% Disable ligatures for typewriter fonts.
1359% The comma was causing issues with \MathJax\ and \cs{,} followed by a comma.
1360% Ligatures for f, q, t, etc used to be disabled for non-typewriter fonts, but
1361% are now allowed.
1362% \changes{v0.89}{2020/08/01}{Disable typewriter ligatures.}
1363% ^^A \DisableLigatures[{,},f,q,t,T,Q]{encoding = *,family = *}% previous
       \begin{macrocode}
1365 \DisableLigatures{encoding = *,family = tt*}
1366 \fi
1367 \end{warpHTML}
```

geometry (Pkg) Tactics to avoid unwanted page breaks and margin overflow:

- Uses a very long and wide page to minimize page breaks and margin overflow.
- Uses a scriptsize font.
- Uses extra space at the margin to avoid HTML tag overflow off the page.
- Forces a new PDF page before some environments.
- Forces line break between major pieces of long tags.

for HTML output: 1368 \begin{warpHTML}

If geometry has not yet been loaded, use the preexising page and text sizes to be preserved for later reuse. These will be replaced by lwarp \AtBeginDocument with a very large page size to reduce HTML tag overflow off the page.

```
1369 \IfPackageLoadedTF{geometry}
1370 { } {
1371
        \RequirePackage[
1372
           reset,
            paperwidth=\paperwidth,
1373
            paperheight=\paperheight,
1374
1375
            textwidth=\textwidth,
1376
            textheight=\textheight,
1377
            left=\oddsidemargin,
1378
            top=\topmargin,
            marginparsep=\marginparsep,
1379
            marginparwidth=\marginparwidth,
1380
        ]{geometry}
1381
1382 }
```

Remember the original definitions for later reuse. If the geometry package is loaded by the user, lwarp-geometry will nullify the user-level originals.

```
1383 \LetLtxMacro\LWR@origgeometry\geometry
1384 \LetLtxMacro\LWR@orignewgeometry\newgeometry
1385 \LetLtxMacro\LWR@origrestoregeometry\restoregeometry
1386 \LetLtxMacro\LWR@origsavegeometry\savegeometry
1387 \LetLtxMacro\LWR@origloadgeometry\loadgeometry
```

LWR@allowanothergeometry

geometry may be loaded by the user before lwarp, after lwarp, or not at all. If before lwarp, it will have already been loaded by now and its page layout has already been saved. If geometry is loaded after lwarp, its layout will be set at that time and the user macros nullified. \AtEndPreamble this layout will be saved. If the user never loads geometry, lwarp-geometry will be loaded \AtBeginDocument, but it should not change the page layout set here. This is controlled by the boolean LWR@allowanothergeometry. Geometry may be adjusted throughout the preamble until \AtEndPreamble, when this boolean is set false.

```
1388 \newbool{LWR@allowanothergeometry}
1389 \booltrue{LWR@allowanothergeometry}
```

Use \AtEndPreamble to avoid class and option conflict by changing settings after other packages load, instead of using geometry package options:

```
1390 \AtEndPreamble{
```

Whatever geometry choices the user has made in the preamble, either before or after lwarp was loaded, are now saved for possible temporary reuse, such as by lyluatex.

See the lwarp-geometry section for what happens if geometry is loaded after lwarp.

```
1391 \LWR@origsavegeometry{LWR@usergeometry}
```

The user's paper size is saved for later reuse, such as by the pdfpages or parallel packages.

```
1392 \newlength{\LWR@userspaperwidth}
1393 \setlength{\LWR@userspaperwidth}{\paperwidth}
1394
1395 \newlength{\LWR@userspaperheight}
1396 \setlength{\LWR@userspaperheight}{\paperheight}
1397
1398 \newlength{\LWR@usersmarginparwidth}
1399 \setlength{\LWR@usersmarginparwidth}{\marginparwidth}
1400
1401 \newlength{\LWR@userstextwidth}
1402 \setlength{\LWR@userstextwidth}{\textwidth}
1403
1404 \newlength{\LWR@userstextheight}
1405 \setlength{\LWR@userstextwidth}{\textheight}
```

For lwarp, use a very large page and margins to help avoid letting $\mbox{\sc html}$ tags run off the edge:

```
1406 \LWR@origgeometry{
1407    reset,
1408    paperheight=190in,
1409    paperwidth=20in,
1410    left=2in,
1411    right=6in,
```

```
top=1in,
                    1412
                    1413
                           bottom=1in,
                    1414
                            heightrounded,%
                    1415 }
                      The lwarp page geometry is saved for future restore:
                    1416 \LWR@origsavegeometry{LWR@lwarpgeometry}
                      No longer adjust the page layout when lwarp-geometry is loaded \AtBeginDocument:
                    1417 \boolfalse{LWR@allowanothergeometry}%
                      ltjsbook and other classes can print vertically, and require these to be reset by
                      lwarp:
                    1418 \setlength{\textheight}{0.8\paperheight}
                    1419 \setlength{\textwidth}{0.7\paperwidth}
                    1420
                    1421 \@twosidefalse
                    1422 \@mparswitchfalse
                    1423 }% \AtEndPreamble
                    1425 \end{warpHTML}
 for HTML & PRINT: 1426 \begin{warpall}
        xparse (Pkg)
                      LATEX3 command argument parsing
                    1427 \RequirePackage{xparse}
          calc (Pkg)
                    1428 \RequirePackage{calc}
                    1429 \end{warpall}
   for HTML output: 1430 \begin{warpHTML}
         expl3 (Pkg)
                      LATEX3 programming
                    1431 \RequirePackage{expl3}
gettitlestring(Pkg)
                      Used to emulate \nameref.
                    1432 \RequirePackage{gettitlestring}
                    1433
                    1434
                    1435 \end{warpHTML}
 for HTML & PRINT: 1436 \begin{warpall}
```

filecontents (Pkg)

Used to write helper files while creating the print version.

Recent versions of LATEX (as of Fall 2019) now include the functionality of the filecontents package, but with a new optional argument used to specify whether to force the overwriting of an existing file. If an older LATEX kernel is used, the original filecontents package is used, but it is patched to throw away the new optional argument.

For a newer version of the filecontents package, simply discard the optional argument

```
1445 \renewcommand*{\filec@ntents}[1][]{\LWR@orig@filec@ntents}
1446 }
1447 {% patch older package for morewrites
```

For an older version of filecontents, discard the optional argument, and also patch to work with morewrites, per https://tex.stackexchange.com/questions/312830/does-morewrites-not-support-filecontents-and-can-i-write-body-of-environment-us/312910

For a newer kernel with a filecontents environment which accepts the optional overwrite argument, use the environment as-is.

```
1457 }% newer kernel, filecontents env accepts optional args, do not load package
1458 \end{warpall}

for HTML output: 1459 \begin{warpHTML}
```

```
xifthen (Pkg)  
{}^{1460}\RequirePackage\{xifthen\}} verbatim (Pkg)
```

 $1461 \RequirePackage\{verbatim\}$

```
refcount (Pkg)
                    Provides \setcounterref, \setcounterpageref, etc.
                  1462 \RequirePackage{refcount}
    newfloat(Pkg)
                  1463 \RequirePackage{newfloat}
                  1464 \end{warpHTML}
for HTML & PRINT: 1465 \begin{warpall}
     xstring (Pkg) There was a short-term bug in xstring regarding \lfInteger which affected lwarp's
           index index generation. The updated version is requested here.
                  1466 \RequirePackage{xstring}[2019/02/01]
     environ (Pkg) Used to encapsulate math environments for re-use in HTML <alt> text.
                  1467 \RequirePackage{environ}
                  1468 \end{warpall}
 for HTML output: 1469 \begin{warpHTML}
    printlen (Pkg) Used to convert lengths for image width/height options.
                  1470 \RequirePackage{printlen}
  \LWR@printlength \{\langle length \rangle\}
                    Prints a length using a locally-controlled unit and space. Rounding is used unless
                    the length is small.
                  1471 \newrobustcmd*{\LWR@printlength}[1]{%
                  1472
                          \begingroup%
                  1473
                          \uselengthunit{PT}%
                          \renewcommand*{\unitspace}{}%
                  1474
                          \left\{10pt\right\}
                  1475
                              \printlength{#1}%
                  1476
                          }{%
                  1477
                              \rndprintlength{#1}%
                  1478
                  1479
                          \endgroup%
                  1480
                  1481 }
                  1482 \end{warpHTML}
```

31 Loading packages

\RequirePackage and \usepackage are modified to error-check for certain packages, and for HTML they load the lwarp- version if it exists.

```
for HTML & PRINT: 1483 \begin{warpall}
```

Remember the original \RequirePackage:

```
1484 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
1485 \LetLtxMacro\LWR@origRequirePackageWithOptions\RequirePackageWithOptions
```

\LWR@requirepackagenames Stores the list of required package names.

```
1486 \newcommand*{\LWR@requirepackagenames}{}
```

\LWR@parsedrequirepackagenames Stores the parsed list of required package names after spaces are removed and lwarp- is prepended.

```
1487 \newcommand*{\LWR@parsedrequirepackagenames}{}
```

\LWR@nullifycomment Remove the preexisting comment environment. Certain packages define it for their own use.

```
1488 \newcommand*{\LWR@nullifycomment}{%
1489 \PackageInfo{\lwarp}%
1490 {\Nullifying the comment environment before loading \LWR@strresulttwo,}%
1491 \let\comment\relax%
1492 \let\endcomment\relax%
1493 }
```

 $\label{localization} $$ LWR@findword [(1: separator)] {(2: list)} {(3: index)} [(4: destination)] $$$

Note that argument 4 is passed directly to \StrBetween.

```
1494 \newcommand*\LWR@findword[3][,]{%
1495 \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
1496 }
```

\LWR@checkloadnever $\{\langle bad\ package\ name \rangle\} \{\langle replacement\ package\ names \rangle\}$

From now on, check for incompatible packages loaded via \usepackage, instead of packages loaded before \uselangle \usepackages loaded before \underline{\u

1497 \LetLtxMacro\LWR@checkloadnever\LWR@afterloadnever

\LWR@checkloadfilename $\{\langle filename \rangle\}$ Checks if this filename should be loaded after lwarp, or never at all.

Remember the package name to compare with, to be used by $\LWR@checkloadnever$ and $\LWR@checkloadbefore$.

```
1499 \edef\LWR@tempone{#1}%
```

Check against the list of packages which should never be loaded:

```
1500 \LWR@checkloadnevers
```

The following should only be loaded before lwarp:

```
1501
       \LWR@checkloadbefore{ctex}
1502
       \LWR@checkloadbefore{fontspec}
1503
       \LWR@checkloadbefore{inputenc}
1504
        \LWR@checkloadbefore{inputenx}
       \LWR@checkloadbefore{nfssext-cfr}
1505
       \LWR@checkloadbefore{fontaxes}
1506
       \LWR@checkloadbefore{kotex}
1507
1508
       \LWR@checkloadbefore{kpfonts}% textcomp option clash
       \LWR@checkloadbefore{luatexja}
1509
       \LWR@checkloadbefore{luatexja-fontspec}
1510
       \LWR@checkloadbefore{luatexko}
1511
       \LWR@checkloadbefore{morewrites}
1512
       \LWR@checkloadbefore{newclude}
1513
1514
       \LWR@checkloadbefore{newunicodechar}
1515
       \LWR@checkloadbefore{plext}
1516
        \LWR@checkloadbefore{xeCJK}
1517
        \LWR@checkloadbefore{xetexko}
1518
       \LWR@checkloadbefore{zxjatype}
1519 }
```

\LWR@lookforpackagename $\{\langle index \rangle\}$

If HTML, and if this is an lwarp-supported package name, re-direct it to the lwarp version by renaming it lwarp- followed by the original name.

Looks index deep into the list of package names, \LWR@requirepackagenames, and builds \LWR@parsedrequirepackagenames which is the modified list of names.

```
1520 \newcommand*{\LWR@lookforpackagename}[1]{%
```

Find the index'th package name from the list:

```
1521 \LWR@findword{\LWR@requirepackagenames}{#1}[\LWR@strresult]%
```

Remove blanks. The original name with blanks is in LWR@strresult and the final name with no blanks goes into LWR@strresulttwo.

See if the package name was found:

```
1523 \IfStrEq{\LWR@strresulttwo}{}%
1524{}% no filename
1525{% yes filename was found
```

Possible adjustments before loading the package. Maybe nullify the comment environment if the new package will be redefining it for a new purpose.

```
1526 \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
1527 \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%
```

If HTML, check if the package should be loaded before lwarp, or never at all:

```
1528 \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulttwo}}{}%
```

If HTML, and if found, and if an lwarp-equivalent name exists, use lwarp-* instead.

```
1529
        \ifboolexpr{
1530
            bool{warpingHTML} and
1531
            test{\IfFileExists{lwarp-\LWR@strresulttwo.sty}}
1532
        {% lwarp-* file found
1533
1534
            \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1535
                \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
1536
            }{%
                \edef\LWR@parsedrequirepackagenames{%
1537
                     \LWR@parsedrequirepackagenames, lwarp-\LWR@strresulttwo%
1538
                }%
1539
            }%
1540
        }%
1541
1542
        {%
```

Otherwise, use the current package name.

```
1543
            \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1544
                \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
1545
            }{%
                \edef\LWR@parsedrequirepackagenames{%
1546
                     \LWR@parsedrequirepackagenames,\LWR@strresulttwo%
1547
                }%
1548
            }%
1549
        }% no lwarp-* file
1550
1551 }% yes filename
1552 }
```

 $\ensuremath{\texttt{NequirePackage}}\ [\langle 1: options \rangle] \ \{\langle 2: package \ names \rangle\} \ [\langle 3: version \rangle]$

For each of many package names in a comma-separated list, if an lwarp version of a package exists, select it instead of the LATEX version.

 ${\tt 1553} \ {\tt RenewDocumentCommand} \\ {\tt RequirePackage} \\ {\tt 0 m o} \\ {\tt 0} \\ {\tt 1} \\ {\tt 1}$

Redirect up to twenty names:¹⁷

```
1554 \renewcommand*{\LWR@requirepackagenames}{#2}%
1555 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
1556 \LWR@lookforpackagename{1}%
1557 \LWR@lookforpackagename{2}%
1558 \LWR@lookforpackagename{3}%
1559 \LWR@lookforpackagename{4}%
1560 \LWR@lookforpackagename{5}%
1561 \LWR@lookforpackagename{6}%
1562 \LWR@lookforpackagename{7}%
1563 \LWR@lookforpackagename{8}%
1564 \LWR@lookforpackagename{9}%
1565 \LWR@lookforpackagename{10}%
1566 \LWR@lookforpackagename{11}%
1567 \LWR@lookforpackagename{12}%
1568 \LWR@lookforpackagename{13}%
1569 \LWR@lookforpackagename{14}%
1570 \LWR@lookforpackagename{15}%
1571 \LWR@lookforpackagename{16}%
```

¹⁷This was originally nine names, but then I came across a package which used twelve...

```
1572 \LWR@lookforpackagename{17}%
1573 \LWR@lookforpackagename{18}%
1574 \LWR@lookforpackagename{19}%
1575 \LWR@lookforpackagename{20}%
```

Error if braces are used in optional argument. This can cause an error, so tell how to avoid.

```
1576 \IfSubStr{\detokenize\expandafter{#1}}{\LWRleftbrace}%
1577
1578
            \PackageError{lwarp}{%
1579
                You used:\MessageBreak
                \protect\usepackage[#1]{#2}\MessageBreak
1580
               Braces in the package options will fail with Lwarp.\MessageBreak
1581
                Instead, use:\MessageBreak
1582
                \protect\PassOptionsToPackage{#1}{#2}\MessageBreak
1583
                \protect\usepackage{#2}\MessageBreak
1584
1585
                near the line number given below.\MessageBreak
                Enter 'h' for more info%
1586
            }%
1587
            {%
1588
               See the Lwarp manual troubleshooting index entry for\MessageBreak
1589
1590
                "'package, options with braces''%
            }%
1591
       }%
1592
       {}% no brace
1593
```

\RequirePackage depending on the options and version:

```
1594 \IfValueTF{#1}%
1595 {% options given
1596
        \IfValueTF{#3}% version given?
1597
            {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
1598
            {\tt \{\LWR@origRequirePackage[\#1]{\LWR@parsedrequirepackagenames}\}\%}
1599 }%
1600 {% no options given
        \IfValueTF{#3}% version given?
1601
            {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
1602
            {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
1603
1604 }%
1605 }
1606 \LetLtxMacro\usepackage\RequirePackage
1607 \@onlypreamble\RequirePackage
1608 \@onlypreamble\usepackage
1609 \end{warpall}
```

for HTML output: 1610 \begin{warpHTML}

\LWR@ProvidesPackagePass $\{\langle pkgname \rangle\} [\langle version \rangle]$

Uses the original package, including options.

```
1616 \IfValueTF{#2}%
1617          {\ProvidesPackage{\warp-#1}[#2]}%
1618          {\ProvidesPackage{\warp-#1}}%
1619          \DeclareOption*{%
1620          \PassOptionsToPackage{\CurrentOption}{#1}%
1621        }%
1622          \ProcessOptions\relax%
```

If using catoptions, an error occurs if a package is loaded with an option then loaded again with no options. lwarp does this if a package is preloaded then later patched. To avoid an error while using catoptions, if a package has already been loaded, it is loaded again with its original options.

```
1623
        \IfPackageLoadedTF{#1}{%
            \edef\LWR@tempone{\csuse{opt@#1.sty}}%
1624
1625
            \IfValueTF{#2}%
1626
                {%
                     \expandafter\LWR@origRequirePackage%
1627
                         \expandafter[\LWR@tempone]{#1}[#2]%
1628
                }%
1629
                {%
1630
                     \expandafter\LWR@origRequirePackage%
1631
                         \expandafter[\LWR@tempone]{#1}%
1632
1633
                }%
1634
        }{%
            \IfValueTF{#2}%
1635
                {\LWR@origRequirePackage{#1}[#2]}%
1636
                {\LWR@origRequirePackage{#1}}%
1637
1638
        }%
```

In some cases, the following seems to be required to avoid an "unknown option" error, such as when loading xcolor with options.

```
1639 \DeclareOption*{}%
1640 \ProcessOptions\relax%
1641 }
```

\LWR@ProvidesPackageDropA $\{\langle name \rangle\}$ $\{\langle date\ or\ -NoValue- \rangle\}$

Declares the package. Factored for reuse.

\LWR@ProvidesPackageDropB Nullifies then processes the options.

Seems to be required when options contain curly braces, which were causing "Missing \begin{document}".

```
1651 \newcommand*{\LWR@ProvidesPackageDropB}{%
1652 % \ProcessOptions\relax% original LaTeX code
```

from the original \ProcessOptions

32 File handles

1653 \let\ds@\@empty%

Defines file handles for writes.

33 Include a file

During HTML output, \include{<filename>} causes the following to occur:

1. lwarp creates <filename>_html_inc.tex whose contents are:

```
\input <filename>.tex
                   2. <filename>_html_inc.tex is then \included instead of <filename>.tex.
                   3. <filename>_html_inc.aux is automatically generated and used by IATEX.
for HTML output: 1669 \begin{warpHTML}
       \@include {\langle filename \rangle} Modified to load _html_inc files.
                 (Below, \clearpage caused missing text, and was changed to \newpage.)
              1670 \def\@include#1 {%
              1671 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
              1673 \immediate\closeout\LWR@quickfile% lwarp
              1674 \LWR@maybe@orignewpage% changed from clearpage
              1675 \if@filesw
                      1676
              1677 \fi
              1678 \@tempswatrue
              1679 \if@partsw
                      \@tempswafalse
              1680
                      \edef\reserved@b{#1}%
              1681
              1682
                      \@for\reserved@a:=\@partlist\do
              1683
                      {\ifx\reserved@a\reserved@b\@tempswatrue\fi}%
              1684\fi
              1685 \if@tempswa
                      \let\@auxout\@partaux
              1686
                      \if@filesw
              1687
                         \immediate\openout\@partaux #1_html_inc.aux % changed
              1688
              1689
                          \immediate\write\@partaux{\relax}%
              1690
                      \@input@{#1_html_inc.tex}% changed
              1691
               1692
                      \LWR@maybe@orignewpage% changed from clearpage
              1693
                      \@writeckpt{#1}%
                      \if@filesw
              1694
                         \immediate\closeout\@partaux
              1695
                      ۱fi
              1696
              1697 \else
              1698
                      \deadcycles\z@
              1699
                      \@nameuse{cp@#1}%
              1700\fi
              1701 \let\@auxout\@mainaux%
              1702 }
```

34 Copying a file

1703 \end{warpHTML}

Used to copy the . toc file to . sidetoc to re-print the TOC in the sideTOC navigation pane.

```
1705 \newwrite\LWR@copyoutfile
                                % open the file to write to
1706 \newread\LWR@copyinfile
                                % open the file to read from
1707
1708 \newcommand*{\LWR@copyfile}[2]{%
       \LWR@traceinfo{LWR@copyfile: copying #1 to #2}
1709
1710
       \immediate\openout\LWR@copyoutfile=#2
1711
       \openin\LWR@copyinfile=#1
1712
1713
       \begingroup\endlinechar=-1
       \makeatletter
1714
1715
       \LWR@traceinfo{LWR@copyfile: about to loop}
1716
1717
       \loop\unless\ifeof\LWR@copyinfile
1718
            \LWR@traceinfo{LWR@copyfile: one line}
1719
        \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1720
1721% \LWR@fileline\par
                                             % print the content into the pdf
1722% print the content:
         \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1724
       \immediate\closeout\LWR@copyoutfile
1725
       \LWR@traceinfo{LWR@copyfile: done}
1726
       \endgroup
1727
1728 }
1729 \end{warpHTML}
```

35 Debugging messages

HTML comments To have the HTML output include additional HTML comments, such as which <div> is closing, use

\booltrue{HTMLDebugComments}

debugging information To have debug information written to the log, use

```
\tracinglwarp
```

```
for HTML & PRINT: 1730 \begin{warpall}

LWR@tracinglwarp (bool) True if tracing is turned on.

1731 \newbool{LWR@tracinglwarp}
```

 $\verb|\tracinglwarp| Turns on the debug tracing messages.$

```
1732 \verb|\newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}|
```

\LWR@traceinfo $\{\langle text \rangle\}$ If tracing is turned on, writes the text to the .log file.

```
1733 \newcommand{\LWR@traceinfo}[1]{%
1734 \ifbool{LWR@tracinglwarp}%
```

```
1735 {%
1736 \typeout{*** lwarp: #1}%
1737 }%
1738 {}%
1739 }
```

HTMLDebugComments (bool) Add comments in HTML about closing <div>s, sections, etc.

```
Default: false

1740 \newbool{HTMLDebugComments}

1741 \boolfalse{HTMLDebugComments}
```

If \tracinglwarp, show where preamble hooks occur:

```
1742 \AfterEndPreamble{
1743 \LWR@traceinfo{AfterEndPreamble}
1744 }
1745
1746 \AtBeginDocument{
1747 \LWR@traceinfo{AtBeginDocument}
1748 }
1749 \end{warpall}
```

36 Defining print and HTML versions of macros and environments

The following refers to defining objects inside lwarp, and may also be of some use for package authors to adapt their packages for lwarp. The following is not for the user's document.

Many macros and environments must be provided as both print and HTML versions.

While generating the print version of a document, the original macros as defined by L^AT_FX and its packages are used as-is.

While generating the HTML version of a document, the original macro or environment is redefined to call a new HTML version or a copy of the original print version. The new HTML versions of macros and environments are used most of the time. Copies of the print versions are used inside a lateximage environment, which draws and remembers an image of the printed output, and also several other places.

The general structure for providing print and HTML versions of a macro or environment is as follows:

For a preexisting macro: An HTML version is provided with a special name, inside a warpHTML environment, then \LWR@formatted is used to redefine and patch various macros:

```
\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}
\LWR@formatted{name}
\end{warpHTML}
```

\LWR@formatted{name} copies the original print version to a new name \LWR@print@<name>, then redefines \name to use either the print or HTML version depending on which mode lwarp is using.

For a preexisiting environment: The process is similar. Note the use of \LWR@formattedenv instead of \LWR@formatted.

```
\begin{warpHTML}
\newenvironment{LWR@HTML@name}{...}{..}
\LWR@formattedenv{name}
\end{warpHTML}
```

For a new macro or environment: The print version is defined inside warpall, so that it can also be seen and modified by during HTML outut.

```
\begin{warpall}
\newcommand{\name}{...}% The print version.
\end{warpall}
\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}
\LWR@formatted{name}
\end{warpHTML}
```

Similar for an environment, using \formattedenv.

In general, \LWR@formatted or \LWR@formattedenv are placed inside a warpHTML environment, and while producing an HTML document they do the following:

- Macros are modified:
 - 1. The pre-existing print version \name is saved as \LWR@print@<name>, unless \LWR@print@<name> is already defined.
 - 2. The original \name is redefined to call either the print or HTML version depending on which format is in use at the moment, as set by \LWR@formatting, which is defined as either "print" or "HTML".
- When lwarp is producing a print document, the original definitions are used, as well as any new definitions defined in warpall above.
- When lwarp is generating HTML output, \LWR@formatting is set to "HTML",
 and \name is directed to \LWR@HTML@<name>. For an environment, \endname
 is directed to \endLWR@HTML@<name>.
- When lwarp is generating HTML output but enters a lateximage environment, or for some other reason needs to draw images using the original print defintions, \LWR@formatting is changed to "print" and \name is then redirected to \LWR@print@<name>, which was the original \name.

• Since the new \name does not process any arguments, they are processed by \LWR@print@name or \LWR@HTML@name.

Expandable versions are also provided as well. These usually are necessary for anything which could appear inside a tabular, without which a "Misplaced \omit" error may occur.

\LWR@expandableformatted \LWR@expandableformattedenv

(Older versions of lwarp used \LetLtxMacro for everything, but this could fail when using macros defined by xparse. This older system is still in use for many definitions.)

Print or disabled versions:

```
for HTML & PRINT: 1750 \begin{warpall}

1751 \newcommand*{\LWR@formatted}[1]{}
1752 \newcommand*{\LWR@expandableformatted}[1]{}
1753 \newcommand*{\LWR@formattedenv}[1]{}
1754 \newcommand*{\LWR@expandableformattedenv}[1]{}

1755 \end{warpall}

for HTML output:

HTML versions:
1756 \begin{warpHTML}
```

\LWR@formatting Remembers if selected print/HTML formatting.

Used while \LWR@restoreorigformatting, such as in an lateximage. May be set to either "print" or "HTML".

\LWR@formatted@checkname $\{\langle name \rangle\}$

Misplaced \omit error

Verify that a print and HTML version exist.

```
1758 \newcommand*{\LWR@formatted@checkname}[1]{%
        \ifcsundef{#1}{%
1759
1760
            \ifcsundef{LWR@print@#1}{%
1761
                \PackageError{lwarp}
1762
                    \LWRbackslash#1 or \protect\LWR@print@#1\MessageBreak
1763
                    must be defined before using \protect\LWR@formatted, etc%
1764
1765
                {Perhaps #1 is misspelled.}
1766
1767
            }{\relax}%
        }{\relax}%
1768
        \ifcsundef{LWR@HTML@#1}{%
1769
            \PackageError{lwarp}
1770
1771
                \protect\LWR@HTML@#1 must be defined
1772
                before using \protect\LWR@formatted, etc%
1773
            }
1774
```

\LWR@formatted@checkendname $\{\langle name \rangle\}$

```
1778 \newcommand*{\LWR@formatted@checkendname}[1]{%
        \ifcsundef{end#1}{%
1779
            \ifcsundef{endLWR@print@#1}{%
1780
1781
                \PackageError{lwarp}
1782
                {%
1783
                     \protect\end#1 or \protect\endLWR@print@#1\MessageBreak
1784
                     must be defined before using \protect\LWR@formatted, etc%
1785
1786
                {Perhaps #1 is misspelled.}
1787
            }{\relax}%
1788
        }{\relax}%
        \ifcsundef{endLWR@HTML@#1}{%
1789
1790
            \PackageError{lwarp}
1791
                \protect\endLWR@HTML@#1 must be defined
1792
1793
                before using \protect\LWR@formatted, etc%
1794
1795
            {Perhaps #1 is misspelled.}
1796
        }{\relax}%
1797 }
```

\LWR@formatted $\{\langle macroname \rangle\}$ No backslash in the macro name.

If not yet defined, defines \LWR@print@<name> as the original print-mode \<name>. Also redefines \<name> to use \LWR@<format>@<name>, where <format> is set by \LWR@formatting, and is print or HTML.

```
1798 \renewcommand*{\LWR@formatted}[1]{%
        \LWR@formatted@checkname{#1}%
1799
        \ifcsundef{LWR@print@#1}{%
1800
            \csNewCommandCopycs{LWR@print@#1}{#1}%
1801
1802
        }{}%
1803
        \ifcsundef{#1}{%
1804
            \expandafter\newrobustcmd\csname #1\endcsname{%
1805
                \@nameuse{LWR@\LWR@formatting @#1}%
            }%
1806
1807
       }{%
1808
            \expandafter\renewrobustcmd\csname #1\endcsname{%
                \@nameuse{LWR@\LWR@formatting @#1}%
1809
            }%
1810
        }%
1811
1812 }
```

\LWR@expandableformatted $\{\langle macroname \rangle\}$ No backslash in the macro name.

An expandable version of \LWR@formatted.

```
1813 \renewcommand*{\LWR@expandableformatted}[1]{%
1814 \LWR@formatted@checkname{#1}%
1815 \ifcsundef{LWR@print@#1}{%
1816 \csNewCommandCopycs{LWR@print@#1}{#1}%
1817 }{}%
```

```
\ifcsundef{#1}{%
1818
            \expandafter\newcommand\csname #1\endcsname{%
1819
1820
                \@nameuse{LWR@\LWR@formatting @#1}%
1821
            }%
1822
        }{%
            \expandafter\renewcommand\csname #1\endcsname{%
1823
                \@nameuse{LWR@\LWR@formatting @#1}%
1824
            }%
1825
       }%
1826
1827 }
```

\LWR@formattedenv $\{\langle environmentname \rangle\}$

If not yet defined, defines the environment LWR@print@<name> as the original print-mode <name>. Also redefines the environment <name> to use environment LWR@<format>@<name>, where <format> is set by \LWR@formatting, and is print or HTML.

```
1828 \renewcommand*{\LWR@formattedenv}[1]{%
1829
        \LWR@formatted@checkname{#1}%
1830
        \LWR@formatted@checkendname{#1}%
1831
        \ifcsundef{LWR@print@#1}{%
            \NewEnvironmentCopy{LWR@print@#1}{#1}%
1832
1833
1834
        \DeclareDocumentEnvironment{#1}{}%
1835
        {%
            \@nameuse{LWR@\LWR@formatting @#1}%
1836
       }%
1837
1838
        {%
            \@nameuse{endLWR@\LWR@formatting @#1}%
1839
1840
        }%
1841 }
```

\LWR@expandableformattedenv $\{\langle environmentname \rangle\}$

1856 \end{warpHTML}

An expandable version of LWR@formattedenv.

```
1842 \renewcommand*{\LWR@expandableformattedenv}[1]{%
        \LWR@formatted@checkname{#1}%
1843
        \LWR@formatted@checkendname{#1}%
1844
        \ifcsundef{LWR@print@#1}{%
1845
1846
            \NewEnvironmentCopy{LWR@print@#1}{#1}%
1847
        \DeclareExpandableDocumentEnvironment{#1}{}%
1848
1849
            \@nameuse{LWR@\LWR@formatting @#1}%
1850
       }%
1851
1852
        {%
1853
            \@nameuse{endLWR@\LWR@formatting @#1}%
        }%
1854
1855 }
```

HTML-conversion output modifications 37

These booleans modify the HTML output in various ways to improve conversion to EPUB or word processor imports.

for HTML & PRINT: 1857 \begin{warpall}

37.1 User-level controls

Formatepub (bool) Changes html output for easy epub conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.

```
1858 \newbool{FormatEPUB}
1859 \boolfalse{FormatEPUB}
```

Default: false

FormatWP (bool) Changes HTML output for easier conversion by a word processor. Removes headers and nay, prints footnotes per section, and also forces single-file output and turns off HTML debug comments.

```
1860 \newbool{FormatWP}
1861 \boolfalse{FormatWP}
```

```
WPMarkFloats (bool) Adds
```

```
Default: false
                 === begin table ===
                 === end ===
             or
                 === begin figure ===
                  . . .
                 === end ===
```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions. ¹⁸

```
1863 \boolfalse{WPMarkFloats}
WPMarkMinipages (bool)
                         Adds
          Default: false
                            === begin minipage ===
```

=== end minipage ===

1862 \newbool{WPMarkFloats}

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

```
1864 \newbool{WPMarkMinipages}
1865 \boolfalse{WPMarkMinipages}
```

WPMarkTOC (bool)

While formatting for word processors, adds

Default: true

 $^{^{18}\}mbox{Perhaps}$ some day word processors will have HTML import options for identifying <figure> and caption tags for figures and tables.

```
=== table of contents ===
```

where the Table of Contents would have been. This helps identify where to insert the actual Toc.

If set false, the actual toc is printed instead.

```
1866 \newbool{WPMarkTOC}
1867 \booltrue{WPMarkTOC}
```

WPMarkLOFT (bool)

While formatting for word processors, adds

Default: false

```
=== list of figures === and/or
=== list of tables ===
```

where each of these lists would have been. This helps identify where to insert the actual lists.

If set false, the actual lists are printed instead.

```
1868 \newbool{WPMarkLOFT}
1869 \boolfalse{WPMarkLOFT}
```

WPMarkMath (bool)

Default: false

While formatting for word processors, prints math as LATEX code instead of creating svg images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

```
1870 \newbool{WPMarkMath}
1871 \boolfalse{WPMarkMath}
```

 ${\tt WPTitleHeading}\ (bool)$

Default: false

While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

```
See table 11 on page 187.
```

```
1872 \newbool{WPTitleHeading}
1873 \boolfalse{WPTitleHeading}
1874 \end{warpall}
```

37.2 Heading adjustments

If formatting the HTML for a word processor, adjust heading levels.

If WPTitleHeading is true, adjust so that part is **Heading 1**.

If WPTitleHeading is false, use <h1> for the title, and set part to **Heading 2**.

```
for HTML output: 1875 \begin{warpHTML}
```

```
1876 \AtBeginDocument{
1877 \ifbool{FormatWP}{
1878 \@ifundefined{chapter}{
```

```
1879 \ifbool{WPTitleHeading}{% part and section starting at h2
1880 \renewcommand*{\LWR@tagtitle}{h1}
1881 \renewcommand*{\LWR@tagtitleend}{/h1}
1882 \renewcommand*{\LWR@tagpart}{h2}
1883 \renewcommand*{\LWR@tagpartend}{/h2}
1884 \renewcommand*{\LWR@tagsection}{h3}
1885 \renewcommand*{\LWR@tagsectionend}{/h3}
1886 \renewcommand*{\LWR@tagsubsection}{h4}
1887 \renewcommand*{\LWR@tagsubsectionend}{/h4}
1888 \renewcommand*{\LWR@tagsubsubsection}{h5}
1889 \renewcommand*{\LWR@tagsubsubsectionend}{/h5}
1890 \renewcommand*{\LWR@tagparagraph}{h6}
1891 \renewcommand*{\LWR@tagparagraphend}{/h6}
1892 \renewcommand*{\LWR@tagsubparagraph}{span class=\textquotedbl{}subparagraph\textquotedbl}
1893 \renewcommand*{\LWR@tagsubparagraphend}{/span}
1894 }% WPTitleHeading
1895 {% not WPTitleHeading, part and section starting at h1
1896\renewcommand*{\LWR@tagtitle}{div class=\textquotedbl{}title\textquotedbl}
1897 \renewcommand*{\LWR@tagtitleend}{/div}
1898 \renewcommand*{\LWR@tagpart}{h1}
1899 \renewcommand*{\LWR@tagpartend}{/h1}
1900 \renewcommand*{\LWR@tagsection}{h2}
1901 \renewcommand*{\LWR@tagsectionend}{/h2}
1902 \renewcommand*{\LWR@tagsubsection}{h3}
1903 \renewcommand*{\LWR@tagsubsectionend}{/h3}
1904 \renewcommand*{\LWR@tagsubsubsection}{h4}
1905 \renewcommand*{\LWR@tagsubsubsectionend}{/h4}
1906 \renewcommand*{\LWR@tagparagraph}{h5}
1907 \renewcommand*{\LWR@tagparagraphend}{/h5}
1908 \renewcommand*{\LWR@tagsubparagraph}{h6}
1909 \renewcommand*{\LWR@tagsubparagraphend}{/h6}
1910 }% not WPTitleHeading
1911 }% chapter undefined
1912 {% chapter defined
1913 \ifbool{WPTitleHeading}{}
1914 {% not WPTitleHeading, part and chapter starting at h1
1915 \renewcommand*{\LWR@tagtitle}{div class=\textquotedbl{}title\textquotedbl}
1916 \renewcommand*{\LWR@tagtitleend}{/div}
1917 \renewcommand*{\LWR@tagpart}{h1}
1918 \renewcommand*{\LWR@tagpartend}{/h1}
1919 \renewcommand*{\LWR@tagchapter}{h2}
1920 \renewcommand*{\LWR@tagchapterend}{/h2}
1921 \renewcommand*{\LWR@tagsection}{h3}
1922 \renewcommand*{\LWR@tagsectionend}{/h3}
1923 \renewcommand*{\LWR@tagsubsection}{h4}
1924 \renewcommand*{\LWR@tagsubsectionend}{/h4}
1925 \renewcommand*{\LWR@tagsubsubsection}{h5}
1926 \renewcommand*{\LWR@tagsubsubsectionend}{/h5}
1927 \renewcommand*{\LWR@tagparagraph}{h6}
1928 \renewcommand*{\LWR@tagparagraphend}{/h6}
1929 \renewcommand*{\LWR@tagsubparagraph}{span class=\textquotedbl{}subparagraph\textquotedbl}
1930 \renewcommand*{\LWR@tagsubparagraphend}{/span}
1931 }% not WPTitleHeading
1932 }% chapter defined
1933 }{}% FormatWP
1934 }% AtBeginDocument
1935 \end{warpHTML}
```

38 Remembering original formatting macros

for HTML output: 1936 \begin{warpHTML}

Remember original definitions of formatting commands. Will be changed to HTML commands for most uses. Will be temporarily restored to original meaning inside any lateximage environment and inside a tabbing environment. Also nullify unused commands.

Some packages redefine \#, which is used to generate HTML, so the original must be remembered here.

```
1937 \chardef\LWR@origpound='\#

1938 \let\LWR@origcomma\,
1939 \LetLtxMacro\LWR@origtilde~
1940 \LetLtxMacro\LWR@orignobreakspace\nobreakspace
1941 \let\LWR@orighfil\hfil
1942 \let\LWR@orighs\hss
1943 \let\LWR@origllap\llap
1944 \let\LWR@origrlap\rlap
1945 \let\LWR@orighfilneg\hfilneg
1946 \let\LWR@orighspace\hspace
1947
1948 \let\LWR@origrule\rule
1949
1950 \let\LWR@origmedskip\medskip
1951 \let\LWR@origbigskip\bigskip
```

libertinus-off has too much kerning for \textquotedbl, causing an extra space.

```
1952 \LetLtxMacro\LWR@orig@@textquotedbl\textquotedbl
{\tt 1953 \setminus LetLtxMacro \setminus LWR@orig@textquotedbl \setminus LWR@orig@etextquotedbl} \\
1955 \AtEndPreamble{
1956 \IfPackageLoadedTF{libertinus-otf}{
       \renewcommand{\LWR@orig@textquotedbl}{\LWR@orig@@textquotedbl\kern-.15em}
1957
        \LetLtxMacro\textquotedbl\LWR@orig@textquotedbl
1958
1959 }{}
1960 }
1961 \LetLtxMacro\LWR@origttfamily\ttfamily
1963 \LetLtxMacro\LWR@origem\em
{\tt 1965 \setminus LetLtxMacro \setminus LWR@orignormal font \setminus normal font}
1967 \let\LWR@origonecolumn\onecolumn
1969 \let\LWR@origsp\sp
1970 \let\LWR@origsb\sb
1972 \LetLtxMacro\LWR@origunderline\underline
1973 \let\LWR@orignewpage\newpage
1975 \let\LWR@origpagestyle\pagestyle
```

```
1976 \let\LWR@origthispagestyle\thispagestyle
1977 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
1979 \let\LWR@orignewline\newline
1981 \AtBeginDocument{% in case packages change definition
1982 \let\LWR@orig@trivlist\@trivlist
1983 \let\LWR@origtrivlist\trivlist
1984 \let\LWR@origendtrivlist\endtrivlist
1985 \LetLtxMacro\LWR@origitem\item
1986 \LetLtxMacro\LWR@origitemize\itemize
1987 \LetLtxMacro\LWR@endorigitemize\enditemize
1988 \LetLtxMacro\LWR@origenumerate\enumerate
{\tt 1989 \ LetLtxMacro \ LWR@endorigenumerate \ lendenumerate}
1990 \LetLtxMacro\LWR@origdescription\description
1991 \LetLtxMacro\LWR@endorigdescription\enddescription
1992 \let\LWR@orig@mklab\@mklab
1993 \let\LWR@origmakelabel\makelabel
1994 \let\LWR@orig@donoparitem\@donoparitem
1995 \LetLtxMacro\LWR@orig@item\@item
1996 \let\LWR@orig@nbitem\@nbitem
1997 }
1999 \let\LWR@origpar\par
2001 \LetLtxMacro\LWR@origfootnote\footnote
2002 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
2003
2004
2005 \AtBeginDocument{% in case packages change definition
2006 \LetLtxMacro\LWR@orighline\hline%
2007 \LetLtxMacro\LWR@origcline\cline%
2008 }
2009 \end{warpHTML}
```

39 Accents

Native LATEX accents such as \" will work, but many more kinds of accents are available when using Unicode-aware XALATEX and LuaLATEX. If using accents in section names which will become file names, it is recommended to use the LATEX accents such as \" and \v instead of Unicode accents. The LATEX accents will have the accents stripped when creating the filenames, whereas the Unicode accents will appear in the file names, which may cause issues with some operating systems.

```
for HTML output: 2010 \begin{warpHTML}
```

Without \AtBeginDocument, \t was being re-defined somewhere.

```
2011 \AtBeginDocument{
```

The following are restored for print when inside a lateximage.

For Unicode engines, only \t needs to be redefined:

```
2012 \LetLtxMacro\LWR@origtie\t
```

For PDF LATEX, additional work is required:

```
2013 \ifPDFTeX% pdflatex or dvi latex
2014 \LetLtxMacro\LWR@origgraveaccent\'
2015 \LetLtxMacro\LWR@origcircumflexaccent\'
2016 \LetLtxMacro\LWR@origtildeaccent\\\
2017 \LetLtxMacro\LWR@origtildeaccent\\\\
2018 \LetLtxMacro\LWR@origmacronaccent\=
2019 \LetLtxMacro\LWR@origbreve\u
2020 \LetLtxMacro\LWR@origdotaccent\\\\
2021 \LetLtxMacro\LWR@origdiaeresisaccent\\\\\
2022 \LetLtxMacro\LWR@origdoubleacuteaccent\H
2023 \LetLtxMacro\LWR@origdoubleacuteaccent\H
2024 \LetLtxMacro\LWR@origdotbelowaccent\d
2025 \LetLtxMacro\LWR@origcedillaaccent\c
2026 \LetLtxMacro\LWR@origmacronbelowaccent\b
```

The HTML redefinitions follow.

For PDF LATEX, Unicode diacritical marks are used:

For all engines, a Unicode diacritical tie is used:

```
2041 \def\LWR@t#1#2{#1\HTMLunicode{0361}#2}
2042 \renewcommand*{\t}[1]{\LWR@t#1}
```

\LWR@restoreorigaccents Called from \restoreoriginalformatting when a lateximage is begun.

```
2043 \ifPDFTeX% pdflatex or dvi latex
2044 \newcommand*{\LWR@restoreorigaccents}{%
2045
       \LetLtxMacro\'\LWR@origgraveaccent%
2046
       \LetLtxMacro\'\LWR@origacuteaccent%
2047
       \LetLtxMacro\^\LWR@origcircumflexaccent%
       \LetLtxMacro\~\LWR@origtildeaccent%
2048
       \LetLtxMacro\=\LWR@origmacronaccent%
2049
       \LetLtxMacro\u\LWR@origbreve%
2050
        \LetLtxMacro\.\LWR@origdotaccent%
2051
        \LetLtxMacro\"\LWR@origdiaeresisaccent%
2052
        \LetLtxMacro\H\LWR@origdoubleacuteaccent%
2053
        \LetLtxMacro\v\LWR@origcaronaccent%
2054
2055
        \LetLtxMacro\t\LWR@origtie%
2056
        \LetLtxMacro\d\LWR@origdotbelowaccent%
2057
        \LetLtxMacro\c\LWR@origcedillaaccent%
       \LetLtxMacro\b\LWR@origmacronbelowaccent%
2058
```

```
2059 }%
2060 \else% XeLaTeX, LuaLaTeX:
2061 \newcommand*{\LWR@restoreorigaccents}{%
2062 \LetLtxMacro\t\LWR@origtie%
2063 }%
2064 \fi%
2065 }% AtBeginDocument
2066 \end{warpHTML}
```

40 Configuration files

40.1 Decide whether to generate configuration files

Configuration files are only written if processing the print version of the document, and not processing a pstool image. pstool uses an additional compile for each image using the original document's preamble, which includes lwarp, so the lwarp configuration files are turned off if -pstool is part of the \jobname.

Default to no configuration files:

```
2067 \LWR@excludecomment{LWRwriteconf}{writeconf}
```

Generate configuration files if print mode and not -pstool:

```
for PRINT output: 2068 \begin{warpprint}
                 2069 \fullexpandarg%
                 2070 \IfSubStr*{\jobname}{-pstool}
                 2071
                             \PackageInfo{lwarp}{%
                 2072
                                 Jobname with -pstool is found.\MessageBreak
                 2073
                                 Not generating lwarp configuration files,%
                 2074
                 2075
                             }
                         }
                 2076
                 2077
                         {
                             \PackageInfo{lwarp}{Generating lwarp configuration files,}%
                 2078
                             \LWR@includecomment{LWRwriteconf}{writeconf}
                 2079
                 2081 \end{warpprint}
```

40.2 project>_html.tex

*_html.tex (file) Used to allow an HTML version of the document to exist alongside the print version.

```
Config file: 2082 \begin{LWRwriteconf}
2083 \immediate\openout\LWR@quickfile=\jobname_html.tex
2084 \immediate\write\LWR@quickfile{%
2085 \detokenize{\PassOptionsToPackage}%
2086 {warpHTML,BaseJobname=\jobname}{lwarp}%
2087 }
2088 \immediate\write\LWR@quickfile{%
2089 \detokenize{\input}\string{\jobname.tex\string }%
2090 }
2091 \immediate\closeout\LWR@quickfile
2092 \end{LWRwriteconf}
```

40.3 lwarpmk configuration files

```
Config file: 2093 \begin{LWRwriteconf}
```

\LWR@lwarpconfversion The version number of the configuration file, allowing *lwarpmk* to detect an obsolete configuration file format. Incremented by one each time the configuration file format changes. (This is NOT the same as the *lwarp* version number.)

2094 \newcommand*{\LWR@lwarpconfversion}{2}% also in lwarpmk.lua

40.3.1 Helper macros

\LWR@shellescapecmd The LaTeX compile option for shell escape, if used.

```
2095 \ifshellescape
2096    \def\LWR@shellescapecmd{--shell-escape }
2097 \else
2098    \def\LWR@shellescapecmd{}
2099 \fi
```

```
\LWR@compilecmd \{\langle engine \rangle\} \{\langle suffix \rangle\}
```

Used to form the basic compilation command for a document, adding the optional shell escape.

Engine is *pdflatex*, etc. Suffix is empty or _html

```
2100 \newcommand*{\LWR@compilecmd}[2]{%
2101  #1 \LWR@shellescapecmd \jobname#2%
2102 }
```

```
\LWR@addcompilecmd \{\langle cmd \rangle\} \{\langle suffix \rangle\}
```

Adds to the compilation command.

Cmd is dvipdfmx, etc. Suffix is empty or _html

```
2103 \newcommand*{\LWR@addcompilecmd}[2]{%
2104 \LWRopseq
2105 #1 \jobname#2%
2106 }
```

\LWR@unknownengine Error message if not sure which LATEX engine is being used.

```
\LWR@latexmkvar \{\langle varname \rangle\} \{\langle value \rangle\}
```

Adds a latexmk variable assignment.

\LWR@latexmkcmd {\latexmk options\}

Sets a call to *latexmk* with the given options, possibly adding --shell-escape, and also adding the indexing program.

```
2121 \newcommand*{\LWR@latexmkcmd}[1]{%
2122    latexmk \space \LWR@shellescapecmd \space #1 \space
2123    -recorder \space
2124    \LWR@latexmkvar{makeindex}{\LWR@LatexmkIndexCmd}%
2125 }
```

\LWR@latexmkdvipdfm {\\ dvipdfm or dvipdfmx\\}}

Adds the options settings for *dvipdfm* or *dvipdfmx*.

\LWR@compileuplatex Sets compile options for upIATEX with ujarticle or related classes.

```
2135 \newcommand*{\LWR@compileuplatex}{
       \def\LWR@tempprintlatexcmd{%
2137
            \LWR@compilecmd{uplatex}{}
            \LWR@addcompilecmd{dvipdfmx}{}
2138
2139
       \def\LWR@tempHTMLlatexcmd{%
2140
            \LWR@compilecmd{uplatex}{_html}
2141
            \LWR@addcompilecmd{dvipdfmx}{_html}
2142
2143
       }
2144 }
```

\LWR@PrintLatexCmd If not set by the user, the following sets the command to use to compile the source \LWR@HTMLLatexCmd to PDF form.

If using *latexmk*, a complicated string is created, eventually resulting in something such as:

For *xelatex* with --shell-escape:

```
[[latexmk -xelatex --shell-escape -recorder
```

```
-e '$makeindex = q/makeindex -s lwarp.ist/' <jobname>_html]]
```

For dvipdfmx:

For the following, temporary values are computed, but the permanent values are only set if the originals were not assigned by the user.

```
2145 \ifbool{LWR@latexmk}{
```

For *latexmk* with *pdflatex* or *lualatex*:

```
2146 \ifpdf
```

For *latexmk* with *pdflatex*:

```
2147 \ifPDFTeX
2148 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
2149 \else
```

For *latexmk* with *lualatex*:

For *latexmk* with *xelatex* or DVI *latex*:

```
2157 \ifXeTeX
```

For *latexmk* with *xelatex*:

```
2158 \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
2159 \else% \ifXeTeX
```

For *latexmk* with DVI *latex*:

```
\ifbool{LWR@dvipdfm}{
2160
                     \def\LWR@latexcmd{%
2161
                         \LWR@latexmkcmd{%
2162
                              \LWR@latexmkdvipdfm{dvipdfm}%
2163
2164
                         }
2165
2166
                 }{
                     \ifbool{LWR@dvipdfmx}{
2167
                         \def\LWR@latexcmd{%
2168
                              \LWR@latexmkcmd{%
2169
                                  \LWR@latexmkdvipdfm{dvipdfmx}%
2170
```

```
2171
                                }
                           }
2172
2173
                       }{
                            \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
2174
2175
                       }
2176
                  }
             \fi
2177
        \fi% \ifpdf
2178
```

The final assignment if *latexmk*:

```
2179 \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
2180 \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
2181 }% latexmk
```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```
2182 {% not latexmk
2183 \ifpdf
```

For *pdflatex* or *lualatex*:

```
2184 \ifPDFTeX
```

For *pdflatex*:

For lualatex:

For DVI *latex* or *xelatex*:

```
2196 \ifXeTeX
```

For *xelatex*:

For DVI *latex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```
2200 \ifbool{LWR@dvipdfm}{
```

For DVI *latex* with *dvipdfm*:

```
2201
                     \def\LWR@tempprintlatexcmd{%
                         \LWR@compilecmd{latex}{}
2202
                         \LWR@addcompilecmd{dvipdfm}{}
2203
2204
                     \def\LWR@tempHTMLlatexcmd{%
2205
                         \LWR@compilecmd{latex}{_html}
2206
                         \LWR@addcompilecmd{dvipdfm}{_html}
2207
                     }
2208
                }{
2209
                     \ifbool{LWR@dvipdfmx}{
2210
  For DVI latex with dvipdfmx:
                         \def\LWR@tempprintlatexcmd{%
2211
                             \LWR@compilecmd{latex}{}
2212
2213
                             \LWR@addcompilecmd{dvipdfmx}{}
2214
                         \def\LWR@tempHTMLlatexcmd{%
2215
                             \LWR@compilecmd{latex}{_html}
2216
                             \LWR@addcompilecmd{dvipdfmx}{_html}
2217
2218
                     }{% dvips
2219
  For DVI latex with dvips and ps2pdf:
2220
                         \def\LWR@tempprintlatexcmd{%
2221
                             \LWR@compilecmd{latex}{}
                             \LWR@addcompilecmd{dvips}{}
2222
                            \LWR@addcompilecmd{ps2pdf -dALLOWPSTRANSPARENCY}{}.ps
2223
2224
                         \def\LWR@tempHTMLlatexcmd{%
2225
                             \LWR@compilecmd{latex}{_html}
2226
                             \LWR@addcompilecmd{dvips}{_html}
2227
                      \verb|\LWR@addcompilecmd{ps2pdf -dALLOWPSTRANSPARENCY}{\_html}.ps|
2228
2229
                         }
                     }
2230
2231
                }
2232
            \fi% \ifXeTeX
        \fi% \ifpdf
2234}% latexmk
  For ujarticle, utarticle, and related, using upIATEX and dvipdfmx:
2235 \IfClassLoadedTF{ujarticle}{\LWR@compileuplatex}{}
2236 \IfClassLoadedTF{ujbook}{\LWR@compileuplatex}{}
2237 \IfClassLoadedTF{ujreport}{\LWR@compileuplatex}{}
2238 \IfClassLoadedTF{utarticle}{\LWR@compileuplatex}{}
2239 \IfClassLoadedTF{utbook}{\LWR@compileuplatex}{}
2240 \IfClassLoadedTF{utreport}{\LWR@compileuplatex}{}
  Only make the setting permanent if the original was empty:
2241 \ifdefempty{\LWR@PrintLatexCmd}{
        \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
```

2242 2243 }{}

2245

2246 }{}

2244 \ifdefempty{\LWR@HTMLLatexCmd}{

\def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}

```
\LWR@writeconf \{\langle filename \rangle\}
```

```
2247 \newcommand{\LWR@writeconf}[1]{
2248 \ifcsdef{LWR@quickfile}{\newwrite{\LWR@quickfile}}
2249 \immediate\openout\LWR@quickfile=#1
2250 \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpconfversion]]}
2251 \ifbool{usingOSWindows}{
       \immediate\write\LWR@quickfile{opsystem = [[Windows]]}
2252
2253 }{
       \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
2254
2255 }
2256 \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
2257 \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
2258 \immediate\write\LWR@quickfile{htmlfilename = [[\HTMLFilename]]}
2259 \immediate\write\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}
2260 \immediate\write\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}
2261 \immediate\write\LWR@quickfile{latexmk = [[\ifbool{LWR@latexmk}{true}{false}]]}
2262 \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
2263 \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
2264 \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
2265 \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
2266 \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
2267 \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
2268 \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
2269 \immediate\closeout\LWR@quickfile
2270 }
2271
2272 \end{LWRwriteconf}
```

40.3.2 lwarpmk.conf

or similar for *xelatex* or *lualatex*, in print-document generation mode, which is the default unless the warpHTML option is given. lwarpmk.conf is then used by the utility *lwarpmk*.

```
Config file: 2273 \begin{LWRwriteconf}
2274
2275 \AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}
2276
2277 \end{LWRwriteconf}
```


project.lwarpmkconf (file) A project-specific configuration file for lwarpmk.

The makeindex and xindy options have already been handled for lwarp.conf.

```
Config file: 2278 \begin{LWRwriteconf}
2279
```

```
2280 \AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}
2281
2282 \end{LWRwriteconf}
```

40.4 lwarp.css

lwarp.css (file) This is the base css layer used by lwarp.

This must be present both when compiling the project and also when distributing the HTML files.

```
Config file: 2283 \begin{LWRwriteconf}
          2284 \begin{filecontents*}[overwrite]{lwarp.css}
          2285 /*
          2286 CSS stylesheet for the LaTeX Lwarp package
          2287 Copyright 2016-2022 Brian Dunn - BD Tech Concepts LLC
          2288 */
          2289
          2290
          2291/* a fix for older browsers: */
          2292 header, section, footer, aside, nav, main,
          2293
                  article, figure { display: block; }
          2294
          2295
          2296 A:link {color:#000080 ; text-decoration: none ; }
          2297 A:visited {color:#800000 ; }
          2298 A:hover {color:#000080 ; text-decoration: underline ;}
          2299 A:active {color:#800000 ; }
          2301 a.tocbook {display: inline-block; margin-left: 0em;
          2302
                  font-weight: bold ; margin-top: 1ex ; margin-bottom: 1ex ; }
          2303 a.tocpart {display: inline-block; margin-left: 0em;
                  font-weight: bold ;}
          2304
          2305 a.tocchapter {display: inline-block; margin-left: 0em;
                  font-weight: bold ;}
          2307 a.tocsection {display: inline-block; margin-left: 1em;
                  text-indent: -.5em ; font-weight: bold ; }
          2309 a.tocsubsection {display: inline-block; margin-left: 2em;
                  text-indent: -.5em ; }
          2311 a.tocsubsubsection {display: inline-block; margin-left: 3em;
                  text-indent: -.5em ; }
          2313 a.tocparagraph {display: inline-block; margin-left: 4em;
          2314
                  text-indent: -.5em ; }
          2315 a.tocsubparagraph {display: inline-block; margin-left: 5em;
                  text-indent: -.5em ; }
          2317 a.tocfigure {margin-left: 0em}
          2318 a. tocsubfigure {margin-left: 2em}
          2319 a.toctable {margin-left: 0em}
          2320 a.tocsubtable {margin-left: 2em}
          2321 a.toctheorem {margin-left: 0em}
          2322 a.toclstlisting {margin-left: 0em}
          2323
          2324 body {
                  font-family: "DejaVu Serif", "Bitstream Vera Serif",
          2325
                      "Lucida Bright", Georgia, serif;
          2326
                  background: #FAF7F4;
          2327
          2328
                  color: black;
          2329
                  margin:0em ;
```

```
2330
       padding:0em;
       font-size: 100%;
2331
2332
       line-height: 1.2;
2333 }
2334
2335 p {margin: 1.5ex 0em 1.5ex 0em ;}
2336 table p {margin: .5ex 0em .5ex 0em ;}
2338 /* Holds a section number */
2339 span.sectionnumber { margin-right: 0em }
2340
2341 /* Inserted in front of index lines */
2342 span.indexitem {margin-left: 0em}
2343 span.indexsubitem {margin-left: 2em}
2344 span.indexsubsubitem {margin-left: 4em}
2345 div.indexheading {margin-top: 2ex; font-weight: bold}
2346
2347 div.hidden, span.hidden { display: none ; }
2348
2349 kbd, span.texttt, p span.texttt {
       font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2350
            "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2351
            "Courier New", monospace;
2352
       font-size: 100% ;
2353
2354 }
2355
2356 pre { padding: 3pt ; }
2357
2358 span.strong, span.textbf, div.strong, div.textbf, table td.tdbfseries { font-weight: bold; }
2360 span.textit, div.textit, table td.tditshape { font-style: italic; }
2361
2362 table td.tdbfit { font-weight: bold ; font-style:italic }
2364 span.textnormal, div.textnormal {
2365
       font-weight: normal;
2366
       font-style: normal;
       font-variant: normal;
2367
       font-variant-numeric: normal ;
2368
       font-family: "DejaVu Serif", "Bitstream Vera Serif",
2369
            "Lucida Bright", Georgia, serif;
2370
2371 }
2372
2373 span.textmd, div.textmd { font-weight: normal; }
2375 span.textup, div.textup {
2376
       font-style: normal;
2377
       font-variant: normal;
       font-variant-numeric: normal ;
2378
2379 }
2380
2381
2382 /* For complex number i,j symbols */
2383 span.ijit {font-style: italic; font-variant: normal}
2384 span.ijup {font-style: normal; font-variant: normal}
2385
2386
2387 span.textsc, div.textsc {
       font-variant: small-caps;
2388
       font-variant-numeric: oldstyle-nums ;
2389
```

```
2390 }
2391
2392 span.textulc, div.textulc {
        font-variant: normal ;
2394
        font-variant-numeric: normal ;
2395 }
2396
2397 span.textsl, div.textsl { font-style: oblique; }
2398
2399 span.textrm, div.textrm {
2400
        font-family: "DejaVu Serif", "Bitstream Vera Serif",
2401
        "Lucida Bright", Georgia, serif;
2402 }
2403
2404 span.textsf, div.textsf {
         font-family: "DejaVu Sans", "Bitstream Vera Sans",
            Geneva, Verdana, sans-serif ;
2406
2407 }
2408
2409 /* nfssext-cfr lining figures */
2410 span.textln, div.textln {
2411
        font-variant-numeric: lining-nums ;
2412 }
2413
2414 /* nfssext-cfr proportional figures */
2415 span.textp, div.textp {
2416
        font-variant-numeric: proportional-nums ;
2417 }
2418
2419/* nfssext-cfr tabular figures */
2420 span.textt, div.textt {
        font-variant-numeric: tabular-nums ;
2421
2422 }
2423
2424 /* nfssext-cfr font weights */
2425 span.textdb, div.textdb {
2426
        font-weight: 500 ;
2427 }
2428
2429 span.textsb, div.textsb {
        font-weight: 600 ;
2430
2431 }
2432
2433 span.texteb, div.texteb {
        font-weight: 800 ;
2435 }
2436
2437 span.textub, div.textub {
        font-weight: 900 ;
2438
2439 }
2440
2441 span.textlg, div.textlg {
        font-weight: 300 ;
2442
2443 }
2445 span.textel, div.textel {
2446
       font-weight: 200;
2447 }
2448
2449 span.textul, div.textul {
```

```
font-weight: 100 ;
2450
2451 }
2452
2453
2454
2455 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
2457 span.underline {
        text-decoration: underline ;
2458
2459
        text-decoration-skip: auto ;
2460 }
2461
2462 span.overline {
        text-decoration: overline ;
2464
        text-decoration-skip: auto ;
2465 }
2466
2467 div.hrule { border-top: 1px solid silver }
2468
2469
2470 /* for vertical text: */
2471 div.verticalrl { writing-mode: vertical-rl }
2472 div.horizontaltb { writing-mode: horizontal-tb }
2473
2474
2475 /* for diagbox */
2476 div.diagboxtitleN { border-bottom: 1px solid gray }
2477 div.diagboxtitleS { border-top: 1px solid gray }
2478
2479 div.diagboxE {
2480
        padding-left: 2em ;
2481
        text-align: right;
2482 }
2483
2484 div.diagboxW {
2485
        padding-right: 2em ;
2486
        text-align: left ;
2487 }
2488
2489
2490
2491 /* For realscripts */
2492 .supsubscript {
        display: inline-block;
2493
2494
        text-align:left ;
2495 }
2496
2497 .supsubscript sup,
2498 .supsubscript sub {
        position: relative;
2499
        display: block;
2500
2501
        font-size: .7em;
        line-height: 1;
2502
2503 }
2505 .supsubscript sup {
2506
        top: .3em;
2507 }
2508
2509 .supsubscript sub {
```

```
2510
        top: .3em;
2511 }
2512
2513 div.attribution p {
2514
        text-align: right;
        font-size: 80%
2515
2516 }
2517
2518 span.poemtitle {
2519 font-size: 120%; font-weight: bold;
2520 }
2521
2522 pre.tabbing {
        font-family: "Linux Libertine Mono O", "Lucida Console",
            "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono", "Liberation Mono", "FreeMono", "Andale Mono",
2524
2525
            "Nimbus Mono L", "Courier New", monospace;
2526
2527 }
2528
2529 blockquote {
2530
        display: block;
        margin-left: 2em ;
2531
        margin-right: 2em ;
2532
2533 }
2534
2535 /* quotchap is for the quotchap package */
2536 div.quotchap {
        display: block;
2537
        font-style: oblique ;
2538
2539
        overflow-x: auto ;
2540
        margin-left: 2em ;
2541
        margin-right: 2em ;
2542 }
2543
2544 blockquote p, div.quotchap p {
2545
        line-height: 1.5;
        text-align: left;
2546
2547
        font-size: .85em ;
2548 }
2549
2550 /* gauthor is for the quotchap package */
2551 div.qauthor {
2552 display: block;
2553 text-align: right;
2554 margin-left: auto;
2555 margin-right: 2em;
2556 font-size: 80%;
2557 font-variant: small-caps;
2558 }
2559
2560 div.qauthor p {
2561 text-align: right;
2562 }
2563
2564 div.epigraph, div.dictum {
2565 line-height: 1.2;
2566
        text-align: left;
2567
        padding: 3ex 1em 0ex 1em ;
          margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
2568 /*
        margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
2569
```

```
2570 /*
          margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
        font-size: .85em ;
2572
       max-width: 27em ;
2573 }
2574
2575 div.epigraphsource, div.dictumauthor {
       text-align:right ;
2576
       margin-left:auto ;
2577
          max-width: 50%; */
2578 /*
       border-top: 1px solid #A0A0A0 ;
2579
2580
       padding-bottom: 3ex ;
2581
        line-height: 1.2;
2582 }
2584 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
2585 div.epigraphsource p, div.dictumauthor p { padding: .5ex @ex @ex ; margin: @ex ;}
2586 div.dictumauthor { font-style:italic }
2587
2588
2589 /* copyrightbox package: */
2590 div.copyrightbox { margin: .5ex .5em }
2591 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
2592 div.copyrightboxnote {text-align: left; font-size: 60%}
2593
2594
2595 /* lettrine package: */
2596 span.lettrine { font-size: 4ex ; float: left ; }
2597 span.lettrinetext { font-variant: small-caps ; }
2599 /* ulem, soul, umoline packages: */
2600 span.uline {
2601
        text-decoration: underline ;
        text-decoration-skip: auto ;
2602
2603 }
2604
2605 span.uuline {
2606
       text-decoration: underline;
        text-decoration-skip: auto ;
2607
        text-decoration-style: double;
2608
2609 }
2610
2611 span.uwave {
       text-decoration: underline ;
2612
        text-decoration-skip: auto ;
2613
        text-decoration-style: wavy ;
2614
2615 }
2616
2617 span.sout {
       text-decoration: line-through ;
2618
2619 }
2620
2621 span.oline {
2622
       text-decoration: overline ;
        text-decoration-skip: auto ;
2623
2624 }
2626 span.xout {
2627
       text-decoration: line-through ;
2628 }
2629
```

```
2630 span.dashuline {
        text-decoration: underline ;
2632
        text-decoration-skip: auto ;
2633
        text-decoration-style: dashed ;
2634 }
2635
2636 span.dotuline {
        text-decoration: underline ;
2637
        text-decoration-skip: auto ;
2638
2639
        text-decoration-style: dotted ;
2640 }
2641
2642 span.letterspacing { letter-spacing: .2ex ; }
2644 span.capsspacing {
        font-variant: small-caps ;
2645
        letter-spacing: .1ex ;
2646
2647 }
2648
2649 span.highlight { background: #F8E800 ; }
2650
2651
2652 /* keystroke package: */
2653 span.keystroke {
2654
        border-style: outset ;
2655
        padding: Opt .5em Opt .5em;
2656 }
2657
2658
2659 html body {
2660 margin: 0;
     line-height: 1.2;
2661
2662 }
2663
2664
2665 body div {
2666 margin: 0ex;
2667 }
2668
2669
2670 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2671 {
        font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2672
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2673
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2674
            "Times New Roman", serif;
2675
2676
        font-style: normal ;
        font-weight: bold ;
2677
        text-align: left ;
2678
2679 }
2680
2681 h1 {
            /* title of the entire website, used on each page */
        text-align: center ;
2682
        font-size: 2.5em ;
2683
        padding: .4ex 0em 0ex 0em;
2684
2685 }
2686
2687 div.book {
       text-align: center;
2688
        font-size: 2.325em ;
2689
```

```
padding: .4ex 0em 0ex 0em ;
2690
2691 }
2692
2693 h2 { font-size: 2.25em }
2694 h3 { font-size: 2em }
2695 h4 { font-size: 1.75em }
2696 h5 { font-size: 1.5em }
2697 h6 { font-size: 1.25em }
2698 span.paragraph {font-size: 1em ; font-variant: normal ;
       margin-right: 1em ; }
2700 span.subparagraph {font-size: 1em ; font-variant: normal ;
2701
       margin-right: 1em ; }
2702
2703 div.minisec {
       font-family: "DejaVu Sans", "Bitstream Vera Sans",
2704
          Geneva, Verdana, sans-serif ;
2705
       font-style: normal ;
2706
       font-weight: bold ;
2707
        text-align: left ;
2708
2709 }
2710
2711 h1 {
2712 margin: 0ex 0em 0ex 0em ;
2713 line-height: 1.3;
2714 text-align: center;
2715 }
2716
2717 h2 {
2718 margin: 1ex 0em 1ex 0em ;
2719 line-height: 1.3;
2720 text-align: center;
2721 }
2722
2723 h3 {
2724 margin: 3ex 0em 1ex 0em ;
2725 line-height: 1.3;
2726 }
2727
2728 h4 {
2729 margin: 3ex 0em 1ex 0em ;
2730 line-height: 1.3;
2731 }
2732
2733 h5 {
2734 margin: 3ex 0em 1ex 0em ;
2735 line-height: 1.3;
2736 }
2737
2738 h6 {
2739 margin: 3ex 0em 1ex 0em ;
2740 line-height: 1.3;
2741 }
2742
2744 div.titlepage {
2745 text-align: center;
2746 }
2747
2748 . footnotes {
2749 text-align: left;
```

```
font-size: .85em ;
2750
2751
        margin: 3ex 2em 0ex 2em ;
2752
        border-top: 1px solid silver ;
2753 }
2754
2755 .marginpar, .marginparblock {
        max-width: 50%;
2756
        float: right ;
2757
        clear: both ;
2758
        text-align: left ;
2759
2760
        margin: 1ex 0.5em 1ex 1em ;
2761
        padding: 1ex 0.5em 1ex 0.5em;
2762
        font-size: 85%;
2763
        border-top: 1px solid silver ;
2764
        border-bottom: 1px solid silver ;
2765
        overflow-x: auto ;
2766 }
2767
2768 .marginpar br { margin-bottom: 2ex ; }
2770 div.marginblock, div.marginparblock {
2771
        max-width:50%;
        min-width: 10em; /* room for caption */
2772
2773
        float:right;
2774
        text-align:left;
2775
        margin: 1ex 0.5em 1ex 1em;
2776
        padding: 1ex 0.5em 1ex 0.5em;
        overflow-x: auto;
2777
2778 }
2779
2780 div.marginblock div.minipage,
2781 div.marginparblock div.minipage {
2782
        display: inline-block ;
2783
        margin: Opt auto Opt auto ;
2784 }
2785
2786 div.marginblock div.minipage p ,
2787 div.marginparblock div.minipage p
2788
        { font-size: 85%}
2789
2790 div.marginblock br ,
2791 div.marginparblock br
2792
        { margin-bottom: 2ex ; }
2794 main.bodycontainer {
2795
       float: left;
2796
        width: 80%;
2797 }
2798
2799 div.bodywithoutsidetoc main.bodycontainer {
        float: none;
2800
        width: 100%;
2801
2802 }
2804 section.textbody div.footnotes{
        margin: 1ex 2em 2ex 2em ;
2805
2806
        border-bottom: 2px solid silver ;
2807 }
2808
2809 .footnoteheader {
```

```
border-top: 2px solid silver ;
2810
2811
       margin-top: 3ex ;
2812
       padding-top: 1ex ;
2813
       font-weight: bold ;
2814 }
2815
2816.mpfootnotes {
       text-align: left ;
2817
       font-size: .85em ;
2818
2819
       margin-left: 1em ;
2820
       border-top: 1px solid silver ;
2821 }
2823 /* Remove footnote top border in the title page. */
2824 div.titlepage div.mpfootnotes {
       border-top: none ;
2826 }
2827
2828
2829
2830 ul, ol {
2831 margin: 1ex 1em 1ex 0em;
2832 line-height: 1.2;
2833 }
2834
2835 body dir, body menu {
2836 margin: 3ex 1em 3ex 0em;
2837 line-height: 1.2;
2838 }
2839
2840 li { margin: 0ex 0em 1ex 0em; }
2842 li.p { display: inline ; }
2843
2844 html {
2845 margin: 0;
2846 padding: 0;
2847 }
2848
2849 .programlisting {
2850 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
            "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2851
            "Courier New", monospace;
2852
2853 margin: 1ex 0ex 1ex 0ex;
2854 padding: .5ex Opt .5ex Opt;
2855 overflow-x: auto;
2856 }
2857
2858 section.textbody>pre.programlisting {
2859 border-top: 1px solid silver;
2860 border-bottom: 1px solid silver;
2861 }
2862
2864 div.displaymath {
2865
       text-align: center;
2866 }
2867
2868 div.displaymathnumbered {
2869 text-align: right;
```

```
margin-left: 5% ;
2870
        margin-right: 5% ;
2871
2872
        min-width: 2.5in;
2873 }
2874
2875@media all and (min-width: 400px) {
        div.displaymathnumbered {
2876
            margin-left: 10%;
2877
            margin-right: 10% ;
2878
        }
2879
2880 }
2881
2882 @media all and (min-width: 800px) {
        div.displaymathnumbered {
2884
            margin-right: 20%;
2885
2886 }
2887
2888 @media all and (min-width: 1200px) {
        div.displaymathnumbered {
2889
2890
            margin-right: 30%;
2891
        }
2892 }
2893
2894
2895 .inlineprogramlisting {
     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2896
            "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2897
            "Courier New", monospace;
2898
     overflow-x: auto;
2899
2900 }
2901
2902 span.listinglabel {
        display: inline-block;
2903
        font-size: 70%;
2904
2905
        width: 4em;
2906
        text-align: right;
        margin-right: 2em ;
2907
2908 }
2909
2910 div.abstract {
2911 \, margin: 2em 5% 2em 5% ;
2912 padding: 1ex 1em 1ex 1em;
2913 /* font-weight: bold ; */
2914 font-size: 90%;
2915
        text-align: left;
2916 }
2917
2918 div.abstract dl {line-height:1.5;}
2919 div.abstract dt {color:#304070;}
2920
2921 div.abstracttitle{
        font-family: "URW Classico", Optima, "Linux Biolinum O",
2922
            "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2923
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2924
2925
        font-weight:bold;
2926
        font-size:1.25em;
2927
        text-align: center;
2928 }
2929
```

```
2930 span.abstractrunintitle{
        font-family: "URW Classico", Optima, "Linux Biolinum O",
2932
            "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2933
2934
        font-weight:bold;
2935 }
2936
2937
2938.verbatim {
       overflow-x: auto ;
2939
2940 }
2941
2942 .alltt {
       overflow-x: auto ;
2944 }
2945
2946
2947 .bverbatim {
        margin: 1ex Opt 1ex Opt;
2948
        padding: .5ex 0pt .5ex 0pt ;
2949
2950
        overflow-x: auto ;
2951 }
2952
2953.lverbatim {
2954
        margin: 1ex 0pt 1ex 0pt;
2955
        padding: .5ex 0pt .5ex 0pt;
2956
        overflow-x: auto ;
2957 }
2958
2959 .fancyvrb {
        margin: 3ex 0pt 3ex 0pt;
2960
        font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2961
            "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2962
2963
            "Courier New", monospace;
2964 }
2965
2966 .fancyvrblabel {
        font-size: .85em ;
2967
        text-align: center;
2968
        font-weight: bold ;
2969
        margin-top: 1ex ;
2970
2971
        margin-bottom: 1ex ;
2972 }
2973
2975 .verse {
        font-family: "Linux Libertine Mono O", "Lucida Console",
2976
            "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2977
            "Liberation Mono", "FreeMono", "Andale Mono",
2978
            "Nimbus Mono L", "Courier New", monospace;
2979
        margin-left: 1em ;
2980
2981 }
2982
2984 div.singlespace { line-height: 1.2; }
2985 div.onehalfspace { line-height: 1.5 ; }
2986 div.doublespace { line-height: 2 ; }
2987
2988
2989 /* Word processor format output: */
```

```
2990 div.wpfigure { border: 1px solid red; margin: .5ex; padding: .5ex; }
2991 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2992 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ;}
2993
2994
2995
2996
2997/* Minipage environments, vertically aligned to top, center, bottom: */
2998 .minipage, .fminipage, .fcolorminipage {
       /* display: inline-block ; */
3000
           /* Mini pages which follow each other will be tiled. */
3001
       text-align:left;
3002
       margin: .25em .25em .25em;
       padding: .25em .25em .25em;
3004
       display: inline-flex;
3005
       flex-direction: column;
       overflow: auto;
3006
3007 }
3008
3009 .inlineminipage {
       display: inline-block;
3010
3011
       text-align: left
3012 }
3013
3014/* Paragraphs in the flexbox did not collapse their margins. */
3015 /* Have not yet researched this. */
3016.minipage p {margin: .75ex 0em .75ex 0em ;}
3017
3018.fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
3019 .fcolorbox .minipage, .fcolorboxBlock .minipage
       {border: none ; background: none;}
3020
3021
3022.fbox, .fboxBlock { border: 1px solid black ; padding: 4pt }
3024.fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
3025 .fminipage, .fcolorminipage
       {display: inline-block}
3026
3027
3028 .shadowbox, .shabox {
      border: 1px solid black;
3029
       box-shadow: 3px 3px 4808080;
3030
        border-radius: 0px ;
3031
3032
       padding: .4ex .3em .4ex .3em;
       margin: 0pt .3ex 0pt .3ex;
     display: inline-block ;
3034
3035 }
3036
3037 . doublebox {
      border: 3px double black;
3038
        border-radius: 0px;
3039
       padding: .4ex .3em .4ex .3em ;
3040
3041
       margin: 0pt .3ex 0pt .3ex ;
3042
     display: inline-block ;
3043 }
3045 .ovalbox, .Ovalbox {
3046
      border: 1px solid black;
3047
        border-radius: 1ex;
       padding: .4ex .3em .4ex .3em ;
3048
       margin: 0pt .3ex 0pt .3ex;
3049
```

```
3050 display: inline-block;
3051 }
3052
3053.Ovalbox { border-width: 2px ; }
3054
3055 .framebox {
     border: 1px solid black;
3056
        border-radius: 0px ;
3057
       padding: .3ex .2em 0ex .2em ;
3058
3059
       margin: 0pt .1ex 0pt .1ex ;
3060
     display: inline-block ;
3061 }
3062
3064 /* mdframed, tcolorbox, shadebox packages */
3065 .mdframed, .tcolorbox, .shadebox {
       padding: 0ex;
3066
       margin: 2ex 0em 2ex 0em ;
3067
       border: 1px solid black;
3068
3069 }
3070
3071 .tcolorbox {
       border-radius: 10pt ;
3072
3073
        margin: 2ex 1em 2ex 1em;
3074 }
3075
3076.mdframed p, .tcolorbox p { padding: 0ex .5em 0ex .5em ; }
3077
3078.mdframed dl, .tcolorbox dl { padding: 1ex .5em 0ex .5em ; }
3079
3080 .mdframedtitle, .tcolorboxtitle {
       padding: .5ex 0pt 0pt 0pt;
3081
        border-radius: 10pt 10pt 0pt 0pt;
3082
3083
       display: block;
3084
        margin-bottom: 1ex ;
3085
       border-bottom: 1px solid silver ;
3086 }
3087
3088 .tcolorboxsubtitle .tcolorbox {
       margin: 2ex 0em 2ex 0em ;
3089
       border-radius: 0pt ;
3090
3091 }
3092
3093 .mdframedsubtitle {
       display: block;
3094
3095 }
3096
3097 .mdframedsubsubtitle {
       display: block;
3098
3099 }
3100
3101 .mdtheorem {
       padding: 0ex .5em 0ex .5em;
3102
        margin: 3ex 5% 3ex 5%;
3103
3104 }
3105
3106
3107/* framed package */
3108.framed, pre.boxedverbatim, fcolorbox {
       margin: 3ex 0em 3ex 0em ;
3109
```

```
border: 1px solid black;
3110
3111
         border-radius: 0px ;
3112
       padding: .3ex 1em 0ex 1em;
3113 display: block;
3114 }
3115
3116 . shaded {
       margin: 3ex 0em 3ex 0em ;
3117
       padding: .3ex 1em .3ex 1em ;
3118
3119
       display: block ;
3120 }
3121
3122 .snugframed {
       margin: 3ex 0em 3ex 0em ;
      border: 1px solid black;
3124
       border-radius: 0px ;
3125
3126 display: block;
3127 }
3128
3129 .framedleftbar {
       margin: 3ex 0em 3ex 0em ;
3130
      border-left: 3pt solid black;
3131
        border-radius: 0px ;
3132
       padding: .3ex .2em .3ex 1em ;
3134 display: block;
3135 }
3136
3137.framedtitle {
       margin: 0em ;
3138
       padding: 0em;
3139
3140
       font-size: 130%
3141 }
3142
3143 .framedtitle p { padding: .3em }
3145
3146 /* For the niceframe package: */
3147
3148 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
       padding: 1ex;
3149
       margin: 2ex auto ;
3150
       border-radius: 2ex;
3151
3152 }
3154 div.niceframe {
3155
       border: 6px groove black;
3156 }
3157
3158 div.curlyframe {
       border-left: 3px dotted black ;
3159
3160
       border-right: 3px dotted black ;
3161
       border-radius: 6ex;
3162 }
3163
3164 div.artdecoframe {
3165
       border-left: 10px double black;
       border-right: 10px double black ;
3166
       border-radius: 6ex;
3167
3168 }
3169
```

```
3170 div.generalframe {
        border: 6px groove black;
3172 }
3173
3174
3175/* For beamerarticle: */
3176 div.beamerframe {
       margin: 3ex 1em 3ex 1em ;
3177
      border: 1px solid gray;
3178
3179
        border-radius: 0px ;
3180
        padding: .3ex 1em 0ex 1em ;
3181 display: block;
3182 }
3183
3184
3185 dl {
3186 margin: 1ex 2em 1ex 0em;
3187 line-height: 1.3;
3188 }
3189
3190 dl dt {
        display: block;
3191
        float:left;
3192
3193
        font-weight: bold;
3194
        padding-right: 1em ;
3195 }
3196
3197 dl dd { display: block ; }
3198
3199 dl dd:after { content: "" ; display: block ; clear: both }
3200
3201 dl dd p { margin-top: 0em; }
3202
3203 dd ul, dd ol, dd dl {
3204
        clear: both ;
          padding-top: 1ex ; */
3205 /*
3206 }
3207
3208
3209 nav {
        font-family: "URW Classico", Optima, "Linux Biolinum O",
3210
            "DejaVu Sans", "Bitstream Vera Sans",
3211
            Geneva, Verdana, sans-serif ;
3212
3213
        margin-bottom: 4ex ;
3214 }
3215
3216 nav p {
        line-height: 1.2;
3217
        margin-top:.5ex ;
3218
        margin-bottom:.5ex;
3219
        font-size: .9em ;
3220
3221 }
3222
3223
3225 img, img.hyperimage, img.borderimage {
3226
        max-width: 600px;
        border: 1px solid silver;
3227
        box-shadow: 3px 3px #808080;
3228
       padding: .5%;
3229
```

```
margin: .5%;
3230
3231
       background: none;
3232 }
3233
3234 img.inlineimage{
       padding: 0px ;
3235
       box-shadow: none;
3236
       border: none ;
3237
       background: none;
3238
3239
       margin: 0px;
3240
       display: inline-block ;
3241
       border-radius: 0px;
3242 }
3243
3244 img.logoimage{
       max-width: 300px ;
3245
       box-shadow: 3px 3px #808080;
3246
       border: 1px solid black;
3247
       background:none ;
3248
       padding:0 ;
3249
       margin:.5ex ;
3250
       border-radius: 10px ;
3251
3252 }
3253
3254
3255 .section {
3256 /*
        To have each section float relative to each other:
3257
3258 */
3259 /*
       display: block;
3260
       float: left;
3261
3262
       position: relative;
3263
       background: white;
3264
       border: 1px solid silver;
3265
       padding: .5em;
3266 */
       margin: 0ex .5em 0ex .5em ;
3267
3268
       padding: 0 ;
3269 }
3270
3271
3272 figure {
       margin: 5ex auto 5ex auto ;
       padding: 1ex 1em 1ex 1em;
3275
       overflow-x: auto ;
3276 }
3277
3278
3279 /* To automatically center images in figures: */
3280 /*
3281 figure img.inlineimage {
       margin: 0ex auto 0ex auto ;
3282
3283
       display: block;
3284 }
3285 */
3286
3287 /* To automatically center minipages in figures: */
3288 /*
3289 figure div.minipage, figure div.minipage div.minipage {
```

```
3290
        margin: 1ex auto 1ex auto ;
        display: block;
3291
3292 }
3293 */
3294
3295 figure figure { margin: 0pt }
3296
3297 figure div.minipage p { font-size: 85%; }
3299 figure.subfigure, figure.subtable {
3300
       display: inline-block ; margin: 3ex 1em 3ex 1em ;
3301 }
3302
3303 div.figurecaption .minipage { margin:0; padding: 0 }
3304
3305 /* for subcaptions: */
3306 figure div.minipage div.figurecaption {
       max-width: 100%; /* fallback if min() does not work */
       max-width: min(30em,100%)
3308
3309 }
3310
3311 div.minipage figure { border: none ; box-shadow: none ; }
3312 div.minipage figure.table { margin: 0ex }
3313 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
3315 div.floatrow { text-align: center; }
3316
3317 div.floatrow figure { display: inline-block; margin: 1ex 2%; }
3318
3319 div.floatfoot { font-size: .85em ;
       border-top: 1px solid silver ; line-height: 1.2 ; }
3320
3321
3322 /* Center if only one line, "start" align if more than one line: */
3323 div.figurecaption , .lstlistingtitle {
        font-size: .85em ;
3324
3325
        font-weight: bold ;
3326
        text-align: start;
       margin: 1ex auto;
3327
       width: max-content;
3328
       max-width: 100%;
3329
3330 }
3331
3332 /* A marginblock is small, so always center and don't mess with the width. */
3333 div.marginblock div.figurecaption {
       width: 100%;
3335
        text-align: center;
3336 }
3338 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
3339
       border-bottom: none ; background: none ;
3340 }
3341
3342 div.nonfloatcaption {
3343
       margin: 1ex auto 1ex auto ;
       font-size: .85em ;
3344
       text-align: center;
3345
3346
        font-weight: bold ;
3347 }
3348
3349 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
```

```
3350 figure div.floatrow div.minipage div.figurecaption {
       border: none;
        background: none;
3352
3353 }
3354
3355
3356/* For packages such as float, rotfloat, and algorithm2e: \star/
3358 figure.boxed, figure.boxruled {
       border: 1px solid black;
3359
3360 }
3361
3362 figure.ruled {
3363
        border-top: 1px solid black;
3364
        border-bottom: 1px solid black;
3365
        border-left: 0px ;
3366
       border-right: 0px ;
       border-radius: 0px;
3367
       background: none;
3368
       box-shadow: none ;
3369
3370 }
3371
3372 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
        border-top: 1px solid silver;
        border-bottom: 1px solid silver;
3374
3375 }
3376
3377
3378 table {
3379
       margin: 1ex auto 1ex auto ;
        border-collapse: separate ;
3380
       border-spacing: 0px ;
3381
3382
        line-height: 1.3;
3383
        }
3384
3385 table > tbody > tr.hline > td {border-top: 1px solid #808080; margin-top: 0ex;
        margin-bottom: 0ex; } /* for \hline */
3386
3387
3388 tr.tbrule td {border-top: 1px solid black; margin-top: 0ex;
        margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
3389
3390
3391 td {padding: .5ex .5em .5ex .5em ;}
3393 table td.tdl { text-align: left ; vertical-align: middle ; }
3394 table td.tdc { text-align: center ; vertical-align: middle ; }
3395 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
3396 table td.tdbang { text-align: center ; vertical-align: middle ; }
3397 table td.tdr { text-align: right ; vertical-align: middle ; }
3398\;table\;td.tdp { text-align: left ; vertical-align: bottom ; }
3399 table td.tdm { text-align: left; vertical-align: middle; }
3400 table td.tdb { text-align: left; vertical-align: top; }
3401
3402 table td.tvertbarl { border-left: 1px solid black }
3403 table td.tvertbarldouble { border-left: 4px double black }
3404 table td.tvertbarr { border-right: 1px solid black }
3405 table td.tvertbarrdouble { border-right: 4px double black }
3407 table td.tvertbarldash { border-left: 1px dashed black }
3408 table td.tvertbarldoubledash { border-left: 2px dashed black }
3409 table td.tvertbarrdash { border-right: 1px dashed black }
```

```
3410 table td.tvertbarrdoubledash { border-right: 2px dashed black }
3412 table td.tdcenter { text-align: center}
3413 table td.tdleft { text-align: left}
3414 table td.tdright { text-align: right}
3415
3416
3417 /* for cmidrules: */
3418 table td.tdrule {
       border-top: 1px solid #A0A0A0;
3419
3420 }
3421
3422 table td.tdrulel {
        border-top-left-radius:.5em ;
3424
        border-top: 1px solid #A0A0A0;
3425 }
3426
3427 table td.tdruler {
        border-top-right-radius:.5em ;
3428
        border-top: 1px solid #A0A0A0;
3429
3430 }
3431
3432 table td.tdrulelr {
        border-top-left-radius:.5em ;
3434
        border-top-right-radius:.5em ;
3435
        border-top: 1px solid #A0A0A0;
3436 }
3437
3438
3439 /* Margins of paragraphs inside table cells: */
3440 \; td.tdp \; p , td.tdprule \; p , td.tdPrule \; p { padding-top: 1ex ;
        padding-bottom: 1ex ; margin: 0ex ; }
3441
3442 \; td.tdm \; p , td.tmbrule \; p , td.tdM \; p , td.tdMrule \; p { padding-top: 1ex ;
        padding-bottom: 1ex ; margin: 0ex ; }
3444 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
        padding-bottom: 1ex ; margin: 0ex ; }
3445
3446
3447 td.tdp , td.tdprule , td.tdP , td.tdPrule
        { padding: 0ex .5em 0ex .5em ; }
3448
3449\; td.\, tdm , td.\, tdmrule , td.\, tdM , td.\, tdMrule
        { padding: 0ex .5em 0ex .5em ; }
3450
3451 td.tdb , td.tdbrule , td.tdB , td.tdBrule
3452
        { padding: 0ex .5em 0ex .5em ; }
3453
3455 /* table notes: */
3456 .tnotes {
        margin: 0ex 5% 1ex 5%;
3457
        padding: 0.5ex 1em 0.5ex 1em;
3458
        font-size:.80em;
3459
        text-align: left;
3460
3461 }
3462
3463 .minipage .tnotes {
        margin: 0pt;
3464
        padding: 0pt;
3465
3466 }
3468 .tnotes dl dt p {margin-bottom:0px;}
3469
```

```
3470 .tnoteitemheader {margin-right: 1em;}
3472
3473/* for colortbl and cell color */
3474 div.cellcolor {
       width: 100%;
3475
       padding: .5ex .5em .5ex .5em ;
3476
       margin: -.5ex -.5em -.5ex -.5em ;
3477
3478 }
3479
3480
3481 /* for lyluatex */
3482 span.lyluatex {
       display: inline-block ;
3484 }
3485
3486 div.lyluatex p span.lateximagesource img {
       display: block ;
3487
       margin-top: 3ex ;
3488
       margin-bottom: 3ex ;
3489
3490 }
3491
3493 /* for bigdelim */
3494 .ldelim, .rdelim { font-size: 200% }
3495
3496
3497 /* center, flushleft, flushright environments */
3498 div.center{text-align:center;}
3499 div.center table {margin-left:auto;margin-right:auto;}
3500 div.flushleft{text-align:left;}
3501 div.flushleft table {margin-left:0em ; margin-right:auto;}
3502 div.flushright{text-align:right;}
3503 div.flushright table {margin-left:auto; margin-right: 0em;}
3504
3505
3506 /* Fancybox */
3507 div.Btrivlist table tr td {
       padding: .2ex 0em;
3508
3509 }
3510
3511
3512 /* program listing callouts: */
3513 span.callout {
        font-family: "DejaVu Sans", "Bitstream Vera Sans",
3515
            Geneva, Verdana, sans-serif ;
3516
       border-radius: .5em;
       background-color:black;
3517
       color:white;
3518
       padding:0px .25em 0px .25em;
3519
       margin: 0;
3520
3521
       font-weight: bold;
3522
       font-size:.72em ;
3523 }
3524
3525 div.programlisting pre.verbatim span.callout{
3526
       font-size: .85em ;
3527 }
3528
3529 span.verbatim, span.verb {
```

```
font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
3530
3531
            "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
            "Courier New", monospace;
3532
3533 }
3534
3535
3536
3537 div.titlehead
3538 {
3539
        text-align: left ;
3540
        font-style: normal ;
3541
        font-weight: normal ;
3542
        font-style: normal ;
3543
        font-size: .8em ;
3544
        margin: 1ex 0em 1ex 0em ;
3545 }
3546
3547 div. subject
3548 {
3549
        text-align: center;
        font-style: normal ;
3550
        font-weight: bold ;
3551
        font-style: normal ;
3552
3553
        font-size: .8em ;
3554
        margin: 1ex 0em 1ex 0em ;
3555 }
3556
3557 div.published
3558 {
        text-align: center;
3559
3560
        font-variant: normal ;
        font-style: italic ;
3561
3562
        font-size: 1em ;
3563
        margin: 1ex 0em 1ex 0em ;
3564 }
3565
3566 div.subtitle
3567 {
3568
        text-align: center;
3569
        font-variant: normal ;
        font-style: italic ;
3570
3571
        font-size: 1.25em ;
3572
        margin: 1ex 0em 1ex 0em ;
3573 }
3575 div.subtitle p { margin: 1ex ; }
3576
3577 div.author
3578 {
        text-align: center ;
3579
        font-variant: normal ;
3580
3581
        font-style: normal ;
3582
        font-size: 1em ;
3583
        margin: 1ex 0em 1ex 0em ;
3584 }
3585
3586 div.oneauthor {
        display: inline-block ;
3587
        margin: 0ex 1em 0ex 1em ;
3588
3589 }
```

```
3590
3591 /*
3592 div.author table {
        margin: 1ex auto 0ex auto ;
3594
        background: none;
3595 }
3596
3597 div.author table tbody tr td { padding: .25ex ; }
3598 */
3599
3600 span.affiliation {font-size: .85em ; font-variant: small-caps; }
3602 div.titledate {
        text-align: center;
        font-size: .85em ;
3604
        font-style: italic;
3605
        margin: 1ex 0em 1ex 0em ;
3606
3607 }
3608
3609
3610 nav.topnavigation{
        text-align: left ;
3611
        padding: 0.5ex 1em 0.5ex 1em ;
3613 /*
          margin: 2ex 0em 3ex 0em ; */
3614
        margin: 0;
3615
        border-bottom: 1px solid silver ;
3616
        border-top: 1px solid silver ;
        clear:both ;
3617
3618 }
3619
3620 nav.botnavigation{
        text-align: left ;
3621
3622
        padding: 0.5ex 1em 0.5ex 1em;
3623 /*
           margin: 3ex 0em 2ex 0em ; */
3624
        margin: 0;
3625
        border-top: 1px solid silver ;
        border-bottom: 1px solid silver ;
3626
        clear:both ;
3627
3628 }
3629
3630
3631 header {
3632
        line-height: 1.2;
        font-size: 1em ;
3633
3634
        border-bottom: 1px solid silver ;
3635
        margin: 0px;
3636
        padding: 2ex 1em 2ex 1em;
3637
        text-align:left;
3638 }
3639
3640
3641 footer {
3642
        font-size: .85em ;
        line-height: 1.2;
3643
3644
        margin-top: 1ex ;
3645
        border-top: 1px solid silver ;
3646
        padding: 2ex 1em 2ex 1em;
3647
        clear:both;
        text-align:left ;
3648
3649 }
```

```
3650
3652/* for \LinkHome, \LinkPrevious, and \LinkNext: */
3653 a.linkhome { font-weight:bold ; font-size: 1em ;}
3655
3656 div.lateximagesource { padding: 0px; margin: 0px; display: none; }
3658 img.lateximage{
       padding: 0pt ;
3659
3660
       margin: 0pt;
3661
       box-shadow: none;
3662
       border: none ;
3663
       background: none;
3664
       max-width: 100%;
3665
       border-radius: 0ex;
       border: none ;
3666
3667 }
3668
3669
3670 div.sidetoccontainer {
       font-family: "DejaVu Serif", "Bitstream Vera Serif",
3671
            "Lucida Bright", Georgia, serif;
3672
3673
       float: left;
3674
       width: 19%; /* room for border-right next to 80% main */
3675
       margin: Opt 0em 3ex Opt ;
3676
       border-right: 1px solid silver;
3677
       border-bottom: 1px solid silver;
       background: #FAF7F4;
3678
       font-size:.9em ;
3679
       border-radius: 0px 0px 20px 0px;
3680
3681 }
3682
3683 div.sidetoccontents {
       overflow-y: auto ;
3684
3685
       width: 100%;
3686
       text-align: left;
3687 }
3688
3690 nav.sidetoc p {line-height:1.2; margin: 1ex .5em 1ex .5em;
       text-indent: 0 ; }
3691
3692
3693 nav. sidetoc p a {color:black; font-size: .7em;}
3695 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
       border-bottom: 1px solid silver ;
3698 nav.sidetoc a:hover {text-decoration: underline; }
3699
3700
3702 section.textbody { margin: 0ex 1em 0ex 1em ;}
3703
3705 div.multicolsheading { -webkit-column-span: all;
       -moz-column-span: all; column-span: all; }
3707 div.multicols {
       -webkit-columns: 3 auto ;
3708
       -moz-columns: 3 auto ;
3709
```

```
columns: 3 auto ;
3710
3711 }
3712 div.multicols p {margin-top: 0ex}
3715 /* Used for xfrac and nicefrac: */
3716 span.numerator {
3717
       font-size: 60%;
        vertical-align: .4em ;
3718
3719 }
3720
3721 span.denominator {
        font-size: 60%
3723 }
3724
3725
3726/* Used for algorithm2e: */
3727 div.alg2evline{
        margin-left: 1em ;
3728
3729
        padding-left: 1em ;
        border-left: 1px solid black ;
3730
        border-radius: 0px 0px 0px 1ex;
3731
3732 }
3733
3734 div.alg2evsline{
3735
        margin-left: 1em ;
        padding-left: 1em ;
3736
        border-left: 1px solid black ;
3737
3738 }
3739
3740 div.alg2enoline{
        margin-left: 1em ;
3741
3742
        padding-left: 1em ;
3743 }
3744
3745 span.alg2elinenumber{
        margin-right: .5em ;
3746
        font-size: 60%;
3747
3748
        color: red ;
3749 }
3750
3752 /* Used for algorithmicx: */
3753 span.floatright { float: right ; }
3755
3756/* keyfloat and tocdata: */
3757 .floatnotes {
       margin: 0ex 5% 0ex 5%;
3758
3759
        padding: 0ex 1em 0ex 1em;
3760
        font-size:.80em ;
3761
        text-align: left ;
3762 }
3763
3764 .authorartist{
3765
        display:block;
3766
        font-size:.70em
        font-style: italic;
3767
3768 }
3769
```

```
3770 nav .authorartist{ display:inline; }
3772
3773
3774 /* Native LaTeX theorems: */
3776 .theoremcontents {
        font-style: italic; margin-top: 3ex; margin-bottom: 3ex;
3777
3778 }
3779
3780 .theoremlabel {
3781
        font-style: normal; font-weight: bold ; margin-right: .5em ;
3782 }
3783
3784
3785
3786 /* theorem, amsthm, and ntheorem packages */
3788 span. theoremheader,
3789 span.theoremheaderplain,
3790 span. theoremheaderdefinition,
3791 span. theoremheaderbreak,
3792 span.theoremheadermarginbreak,
3793 span. theoremheaderchangebreak,
3794 span. theoremheaderchange,
3795 span.theoremheadermargin
3796 {
        font-style:normal ; font-weight: bold ; margin-right: 1em ;
3797
3798 }
3799
3800 span.amsthmnameplain,
3801 span.amsthmnamedefinition,
3802 span.amsthmnumberplain,
3803 span.amsthmnumberdefinition
3804 {
        font-style:normal ; font-weight: bold ;
3805
3806 }
3807
3808
3809 span.amsthmnameremark,
3810 span.amsthmnumberremark
3811 {font-style:italic ; font-weight: normal ; }
3812
3813
3814 span.amsthmnoteplain,
3815 span.amsthmnotedefinition
3816 {font-style:normal ;}
3817
3818
3819 span. theoremheaderremark,
3820 span. theoremheaderproof,
3821 span.amsthmproofname
3822 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3823
3824 span. theoremheadersc
3825 {
3826
        font-style:normal ;
3827
        font-variant: small-caps ;
        font-weight: normal ;
3828
        margin-right: 1em ;
3829
```

```
3830 }
3831
3832 .theoremendmark {float:right}
3834 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3835 div.theorembodybreak, div.theorembodynonumberbreak,
3836 div. theorembodymarginbreak,
3837 div. theorembodychangebreak,
3838 div. theorembodychange,
3839 div. theorembodymargin
3840 {
3841
        font-style:italic;
3842
        margin-top: 3ex ; margin-bottom: 3ex ;
3843 }
3844
3845 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3846 div. theorembodyplainupright, nonumberplainuprightsc,
3847 div.amsthmbodydefinition, div.amsthmbodyremark,
3848 div.amsthmproof
3849 {
3850
        font-style: normal ;
3851
        margin-top: 3ex ; margin-bottom: 3ex ;
3852 }
3853
3854 span.amsthmnoteremark {}
3855
3856
3857 /* thmbox */
3858
3859 .thmbox {
        font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ;
3860
3861
        border: 1px solid gray;
        padding: 1ex;
3862
3863 }
3864
3865 .thmboxtitle {
        font-style: normal; font-weight: bold ; margin-right: .5em ;
3866
        border-bottom: 1px solid gray ;
3867
3868 }
3869
3870 span.thmboxproofname, span.thmboxexamplename {
3871
        font-weight: bold ;
3872 }
3873
3874 div.thmboxproof, div.thmboxexample {
3875
        font-size: 0.85em ;
3876
        margin: 2ex;
3877 }
3878
3879 div.thmboxleftbar {
        border-left: 2px solid black ;
3880
3881
        padding-left: 1em ;
3882 }
3883
3886 /* For the backnaur package: */
3887 div.backnaur {
        display: block;
3888
        margin: 2ex 2em 2ex 2em ;
3889
```

```
3890 }
3891
3892 div.backnaur p {
        margin: .25ex 0ex .25ex 0ex ;
3893
3894 }
3895
3896 div.backnaurprod {
        display: inline-block ;
3897
        min-width: 8em;
3898
        text-align:right ;
3899
3900 }
3901
3902 div.backnaurdesc {
3903
        display: inline-block ;
3904 }
3905
3906
3907 /* For the notes package: */
3908 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
        clear: both ;
3909
3910
        margin: 2ex 2em 2ex 2em ;
3911
        border: 1px solid silver;
3912 }
3913
3914 div.notesicon {
3915
        float:left;
3916
        display: inline-block;
3917
        background: gold;
        padding: 0ex 1em 0ex 1em;
3918
        margin-right: 1em ;
3919
        font-weight: bold ;
3920
3921 }
3922
3923 div.notescontents { font-style: italic }
3925
3926 /* nolbreaks package: */
3927 span.nolbreaks { white-space: nowrap ; }
3928
3929
3930 /*
3931 For CSS LaTeX and related logos:
3932 Based on spacing demonstrated by the metafont package.
3934 The subscripts are shrunk instead of lowered below the baseline,
3935 to avoid browser rendering errors with the line height in lists, etc.
3936 */
3937
3938.latexlogofont {
        font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3939
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3940
3941
        font-variant: normal ;
3942 }
3943
3944 .latexlogo {
        font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3946
3947 }
3948
3949 .latexlogosup {
```

```
3950 text-transform: uppercase;
3951 letter-spacing: .03em;
3952 font-size: 0.7em;
3953 vertical-align: 0.25em;
3954 margin-left: -0.4em;
     margin-right: -0.15em;
3955
3956 }
3957
3958.latexlogosub {
3959 text-transform: uppercase;
3960 /* vertical-align: -0.27ex; */
3961 margin-left: -0.08em;
3962 margin-right: -0.07em;
3963 /* font-size: 1em; */
3964
       font-size: .7em ;
3965 }
3966
3967 .latexlogotwoe {
3968 text-transform: none;
3969 font-variant-numeric: oldstyle-nums ;
3970 }
3971
3972 .latexlogotwoesub {
3973 font-style:italic ;
3974 /* vertical-align: -0.27ex; */
3975 margin-left: -0.11em;
3976 margin-right: -0.1em;
3977 /* font-size: 1em; */
       font-size: .7em ;
3978
3979 }
3980
3981 .xelatexlogo {
       font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3982
3983
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3984
       letter-spacing: .03em ;
3985 }
3986
3987 .xelatexlogosub {
3988 /* vertical-align: -0.27ex; */
3989 margin-left: -0.0667em;
3990 margin-right: -.05em;
3991 /* font-size: 1em; */
3992
       font-size: .7em ;
3993 letter-spacing: .03em;
3994 }
3995
3996.amslogo {
       font-family: "TeXGyreChorus","URW Chancery L",
3997
            "Apple Chancery", "ITC Zapf Chancery", "Monotype Corsiva",
3998
            "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
3999
            "Hoefler Text", Times, "Times New Roman", serif;
4000
4001
       font-style: italic ;
4002 }
4003
4004 .lyxlogo {
       font-family: "URW Classico", Optima, "Linux Biolinum O",
4005
           "DejaVu Sans", "Bitstream Vera Sans", Geneva,
4006
           Verdana, sans-serif ;
4007
4008 }
4009
```

```
4011/* Only display top and bottom navigation if a small screen: */
4012 /* Hide the sidetoc if a small screen: */
4013 nav.topnavigation { display:none; }
4014 nav.botnavigation { display:none; }
4015
4016/* Only display the sidetoc's webpage title if a small screen */
4017 span.sidetocthetitle { display: none }
4018
4019 @media screen and (max-width: 100em) {
4020
       div.multicols {
4021
            -webkit-columns: 2 auto ;
4022
            -moz-columns: 2 auto ;
4023
            columns: 2 auto ;
4024
        }
4025 }
4026
4027 @media screen and (max-width: 50em) {
       div.sidetoccontainer {
4028
            float: none ;
4029
            width: 100%;
4030
4031
            padding: 0 ;
            border-radius: 0 ;
4032
            border-bottom: 1px solid black;
4033
4034
            border-top: 1px solid black;
4035
            box-shadow: none ;
4036
        span.sidetocthetitle { display: inline }
4037
        nav.topnavigation { display:block }
4038
        nav.botnavigation { display:block }
4039
        main.bodycontainer { width: 100% }
4040
        .marginpar {
4041
            max-width: 100%;
4042
            float: none;
4043
            display:block;
4044
4045
            margin: 1ex 1em 1ex 1em;
4046
        div.multicols {
4047
            -webkit-columns: 1 auto ;
4048
            -moz-columns: 1 auto ;
4049
            columns: 1 auto ;
4050
       }
4051
4052 }
4053
4054 @media print {
4055
       body {
            font-family: "Linux Libertine O",
4056
            "DejaVu Serif", "Bitstream Vera Serif",
4057
            "Liberation Serif", "Nimbus Roman No 9 L",
4058
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4059
4060
        div.sidetoccontainer { display:none; }
4061
4062
        nav.topnavigation { display: none; }
        nav.botnavigation { display: none; }
4063
        main.bodycontainer { width: 100% }
4064
4065 }
4066
4067@media handheld {
       div.sidetoccontainer { display:none; }
4068
       nav.topnavigation { display:block }
4069
```

```
4070
       nav.botnavigation { display:block }
       main.bodycontainer { width: 100% }
4071
4072 }
4073
4074 @media projection {
       div.sidetoccontainer { display:none; }
4075
       nav.topnavigation { display:block }
4076
       nav.botnavigation { display:block }
4077
       main.bodycontainer { width: 100% }
4078
4079 }
4080 \end{filecontents*}
4081% \end{Verbatim}% for syntax highlighting
4082 \end{LWRwriteconf}
```

40.5 lwarp_sagebrush.css

lwarp_sagebrush.css (file) An optional css which may be used for a semi-modern appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

```
Config file: 4083 \begin{LWRwriteconf}
          4084 \begin{filecontents*}[overwrite]{lwarp_sagebrush.css}
          4085@import url("lwarp.css");
          4086
          4087
          4088 A:link {color:#105030 ; text-decoration: none ; }
          4089 A: visited {color: #705030 ; text-shadow: 1px 1px 2px #a0a0a0;}
          4090 A:hover {color:#006000; text-decoration: underline; text-shadow:0px 0px 2px #a0a0a0;}
          4091 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
          4092
          4093
          4094
          4095 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
          4096 {
                  font-family: "URW Classico", Optima, "Linux Biolinum O",
          4097
                      "Linux Libertine O", "Liberation Serif",
          4098
                      "Nimbus Roman No 9 L", "FreeSerif",
          4099
                      "Hoefler Text", Times, "Times New Roman", serif;
          4100
          4101
                  font-variant: small-caps ;
          4102
                  font-weight: normal ;
                  color: #304070;
          4103
                  text-shadow: 2px 2px 3px #808080;
          4104
          4105 }
          4106
          4107 h1 {
                      /* title of the entire website, used on each page */
                  font-variant: small-caps ;
          4108
                  color: #304070;
          4109
                  text-shadow: 2px 2px 3px #808080;
          4110
                  background-color: #F7F7F0 ;
          4111
          4112
                  background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
          4113 }
          4114
          4115 h1 {
          4116 border-bottom: 1px solid #304070;
          4117/* border-top: 2px solid #304070; */
          4118 }
          4119
```

```
4120 h2 {
4121 border-bottom: 1px solid #304070;
4122 /* border-top: 2px solid #304070; */
       background-color: #F7F7F0 ;
       background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
4124
4125 }
4126
4127
4128
4129 div.abstract {
       background: #f5f5eb;
4130
4131
       background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4132
     border: 1px solid silver;
4134
       border-radius: 1em;
4135 }
4136
4137 div.abstract dl {line-height:1.5;}
4138 div.abstract dt {color:#304070;}
4139
4140 div.abstracttitle{
       font-family: "URW Classico", Optima, "Linux Biolinum O",
4141
            "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4142
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4143
4144
       font-weight:bold;
4145
       font-variant: small-caps ;
4146
       font-size:1.5em;
4147
       border-bottom: 1px solid silver ;
4148
       color: #304070;
4149
       text-align: center;
       text-shadow: 1px 1px 2px #808080;
4150
4151 }
4152
4153 span.abstractrunintitle{
       font-family: "URW Classico", Optima, "Linux Biolinum O",
4154
            "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4155
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4156
       font-weight:bold;
4157
4158 }
4159
4160
4161 div.epigraph, div.dictum {
       background: #f5f5eb;
4162
       background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4163
4164
4165
       border: 1px solid silver;
       border-radius: 1ex ;
4166
4167
       box-shadow: 3px 3px #808080;
4168 }
4169
4170
4171 .example {
4172
       background-color: #f5f5eb;
       background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4173
4174
4175 }
4176
4177 div.exampletitle{
       font-family: "URW Classico", Optima, "Linux Biolinum O",
4178
            "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4179
```

```
"FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4180
4181
       font-weight:bold;
       font-variant: small-caps ;
4182
4183
       border-bottom: 1px solid silver;
4184
       color: #304070;
4185
       text-align: center;
       text-shadow: 1px 1px 2px #808080;
4186
4187 }
4188
4189
4190 .sidebar {
4191
       background-color: #f5f5eb ;
4192
       background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4193
4194 }
4195
4196 div.sidebartitle{
       font-family: "URW Classico", Optima, "Linux Biolinum O",
4197
            "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4198
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4199
       font-weight:bold;
4200
       font-variant: small-caps ;
4201
       border-bottom: 1px solid silver ;
4202
       color: #304070;
4203
4204
       text-align: center;
4205
       text-shadow: 1px 1px 2px #808080;
4206 }
4207
4208
4209 .fancyvrblabel {
       font-family: "URW Classico", Optima, "Linux Biolinum O",
4210
            "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4211
            "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4212
       font-weight:bold;
4213
       font-variant: small-caps ;
4214
4215
       font-size: 1.5em ;
4216
       color: #304070;
       text-align: center;
4217
       text-shadow: 1px 1px 2px #808080;
4218
4219 }
4220
4221 div.minipage {
       background-color: #eeeee7;
4222
       border: 1px solid silver;
4223
       border-radius: 1ex;
4224
4225 }
4226
4227 table div.minipage { background: none ; border: none ; }
4229 div.framebox div.minipage {border:none; background:none}
4231 section.textbody > div.minipage {
4232
       box-shadow: 3px 3px #808080;
4233 }
4235 div.fboxBlock div.minipage { box-shadow: none ; }
4237 .framed .minipage , .framedleftbar .minipage {
4238
       border: none ;
       background: none;
4239
```

```
padding: 0ex;
4240
4241
       margin: 0ex;
4242 }
4243
4244 figure.figure .minipage, div.figurecaption .minipage { border: none; }
4246 div.marginblock div.minipage,
4247 div.marginparblock div.minipage
       { border: none; }
4248
4249
4250 figure , div.marginblock {
       background-color: #eeeee7 ;
4252
       border: 1px solid silver;
4253
       border-radius: 1ex;
4254
       box-shadow: 3px 3px #808080;
4255 }
4256
4257 figure figure {
       border: 1px solid silver;
4258
       margin: 0em ;
4259
4260
       box-shadow: none ;
4261 }
4262
4263 /*
4264 div.figurecaption {
       border-top: 1px solid silver ;
4266
       border-bottom: 1px solid silver ;
4267
       background-color: #e8e8e8 ;
4268 }
4269 */
4270
4271
4272 div.table {
       box-shadow: 3px 3px #808080;
4274 }
4275
4276 /*
4277 .tnotes {
       background: #e8e8e8;
4278
4279
       border: 1px solid silver;
4280 }
4281 */
4282
4283
4284 nav.topnavigation{
       background-color: #b0b8b0 ;
4286
       background-image: linear-gradient(to bottom, #e0e0e0, #b0b8b0);
4287 }
4288
4289 nav.botnavigation{
       background-color: #b0b8b0 ;
4290
4291
       background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
4292 }
4293
4296 header{
       background-color: #F7F7F0 ;
4297
       background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
4298
4299 }
```

```
4300
4301 footer{
        background-color: #F7F7F0 ;
4302
4303
        background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
4304 }
4305
4306
4307
4308 div.sidetoccontainer {
       background-color: #F7F7F0 ;
4309
       background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
4310
4311
       box-shadow: 3px 3px #808080;
4312
4313
4314 div.sidetoctitle {color: #304070; }
4316 nav.sidetoc a:hover {
       color:#006000 ;
4317
       text-decoration: none;
4318
       text-shadow:0px 0px 2px #a0a0a0;
4319
4320 }
4321
4323 @media screen and (max-width: 45em) {
       div.sidetoccontainer { border-radius: 0 ; }
4325 }
4326
4327
4328 \end{filecontents*}
4329% \end{Verbatim}% for syntax highlighting
4330 \end{LWRwriteconf}
```

40.6 lwarp_formal.css

lwarp_formal.css (file) An optional css which may be used for a more formal appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

```
Config file: 4331 \begin{LWRwriteconf}
          4332 \begin{filecontents*}[overwrite]{lwarp_formal.css}
          4333@import url("lwarp.css");
          4334
          4335
          4336
          4337 A:link {color:#802020 ; text-decoration:none; }
          4338 A:visited {color:#802020 ; text-shadow:none ;}
          4339 A:hover {color:#400000 ; text-shadow:none ;}
          4340 A:active {color:#C00000 ; text-shadow:none ;}
          4341
          4342
          4343 body {
                  font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
          4344
                       "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
          4345
                       "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
          4346
                       "Times New Roman", serif;
          4347
                  background: #fffcf5;
          4348
          4349 }
```

```
4350
4351 span.textrm {
        font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4353
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4354
            "Times New Roman", serif;
4355
4356 }
4357
4358 span.textsf {
         font-family: "DejaVu Sans", "Bitstream Vera Sans",
4359
4360
            Geneva, Verdana, sans-serif ;
4361 }
4362
4363
4365 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
4366 {
        font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4367
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4368
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4369
            "Times New Roman", serif;
4370
        color: #800000;
4371
        text-shadow: none ;
4372
4373 }
4374
4375 h1, h2 {
4376
        background-color: #fffcf5 ;
4377
        background-image: none ;
        border-bottom: 1px solid #808080;
4378
          border-top: 2px solid #808080; */
4379 /*
4380 }
4381
4382 div.abstracttitle {
        font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino", "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4384
4385
            "Times New Roman", serif;
4386
        color: black ;
4387
        text-shadow: none ;
4388
4389 }
4390
4391 span.abstractrunintitle {
        font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4392
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4393
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4394
            "Times New Roman", serif;
4395
4396
        color: black ;
4397
        text-shadow: none ;
4398 }
4400 div.abstract { font-size: 100% }
4401
4402 .sidebar {
        background: #fffcf5;
4403
        background-image: none ;
4404
     margin: 2em 5% 2em 5%;
4405
4406
     padding: 0.5em 1em;
4407
     border: none;
4408
     border-top : 1px solid silver;
4409 border-bottom : 1px solid silver;
```

```
4410 font-size: 90%;
4411 }
4412
4413 div.sidebartitle{
       font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4414
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4415
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4416
            "Times New Roman", serif;
4417
       color: #800000;
4418
       text-shadow: none ;
4419
4420
       border: none ;
4421 }
4423 .example {
4424
       background: #fffcf5;
4425
       background-image: none ;
     margin: 2em 5% 2em 5%;
4426
     padding: 0.5em 1em;
4427
     border: none ;
4428
     border-top : 1px solid silver;
4429
     border-bottom : 1px solid silver;
4430
4431 }
4433 div.exampletitle{
       font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4434
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4435
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4436
            "Times New Roman", serif;
4437
       color: #800000;
4438
       text-shadow: none;
4439
       border: none ;
4440
4441 }
4442
4443 div.fancyvrblabel{
       font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4444
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4445
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4446
            "Times New Roman", serif;
4447
       color: #800000 :
4448
       text-shadow: none ;
4449
       border: none ;
4450
4451 }
4452
4453
4454
4455 figure {
4456
       margin: 5ex 5% 5ex 5%;
4457
       padding: 1ex 1em 1ex 1em;
       background-color: #fffcf5;
4458
       overflow-x: auto ;
4459
       border: none ;
4460
4461 /*
          border-top: 1px solid silver; */
          border-bottom: 1px solid silver: */
4462 /*
4463 }
4466 div.figurecaption , .lstlisting {
4467
       border: none;
          border-top: 1px solid silver; */
4468 /*
4469 /*
          border-bottom: 1px solid silver; */
```

```
background-color: #fffcf5;
4470
4471 }
4472
4473 .tnotes {
4474
        background: #fffcf5;
        border-top: 1px solid silver ;
4475
        border-bottom: 1px solid silver ;
4476
4477 }
4478
4479 .theorem {
4480
            background: none;
4481 }
4482
4483 .minipage {
4484
        background-color: #fffcf5;
4485
        border: none ;
4486 }
4487
4488 div.floatrow figure { border: none ; }
4490 figure figure { border: none ; }
4491
4493 nav.toc, nav.lof, nav.lot, nav.lol {
        font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4495
            "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4496
            "Times New Roman", serif;
4497
4498 }
4499
4500 div.sidetoccontainer {
        font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4501
            "Bembo", "Janson", "TeX Gyre Pagella", "Palatino", "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4502
4503
4504
            "Times New Roman", serif;
4505
        background-image: linear-gradient(to bottom, #fffcf5, #C0C0C0);
4506 }
4507
4508 div.sidetoctitle{
4509
        color: #800000;
4510 }
4511
4512 header{
        background-color: #e0e0e0;
        background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
4514
4515
        text-align:center ;
4516 }
4517
4518 footer{
        background-color: #e0e0e0 ;
4519
        background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
4520
4521
        padding: 2ex 1em 2ex 1em;
4522
        text-align:left ;
4523 }
4524
4525 nav.botnavigation {
4526
        background: #dedcd5;
        border-top: 1px solid black;
4527
4528 }
4529 \end{filecontents*}
```

```
4530\,\% \end{Verbatim}\% for syntax highlighting 4531\end{LWRwriteconf}
```

40.7 sample_project.css

sample_project.css (file) The project-specific css file. Use with \CSSFilename.

If used, this must be present both when compiling the project and also when distributing the HTML files.

```
Config file: 4532 \begin{LWRwriteconf}
4533 \begin{filecontents*}[overwrite]{sample_project.css}
4534 /* ( --- Start of project.css --- ) */
4535 /* ( --- A sample project-specific CSS file for lwarp --- ) */
4536
4537 /* Uncomment one of the following: */
4538 @import url("lwarp.css") ;
4539 /* @import url("lwarp_formal.css") ; */
4540 /* @import url("lwarp_sagebrush.css") ; */
4541
4542 /* Project-specific CSS setting follow here. */
4543 /* . . . */
4544
4545 /* ( --- End of project.css --- ) */
4546 \end{filecontents*}
4547 % \end{Verbatim}% for syntax highlighting
4548 \end{LWRwriteconf}
```

40.8 lwarp.ist

lwarp.ist (file) Used to modify the index for lwarp.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The page compositor line is for memoir's \specialindex.

```
Config file: 4549 \begin{LWRwriteconf}
            4550 \begin{filecontents*}[overwrite]{lwarp.ist}
            4551 preamble
            4552 "\\begin{theindex}
            4553 \providecommand*\lettergroupDefault[1]{}
                  \\providecommand*\\lettergroup[1]{%
            4555
                        \\par\\textbf{#1}\\par
                        \\nopagebreak
            4556
            4557 }
            4558 "
            4559 headings_flag 1
            4560 heading_prefix "
            4561 \\lettergroup{"
            4562 heading_suffix "}"
            4563 delim_0 ", \\hyperindexref{" 4564 delim_1 ", \\hyperindexref{" 4565 delim_2 ", \\hyperindexref{"
            4566 delim_n "}, \\hyperindexref{"
            4567 delim_r "} -- \\hyperindexref{"
            4568 delim_t "}"
```

```
4569 page_compositor "."
4570 \end{filecontents*}
4571 \ \end{Verbatim}% for syntax highlighting
4572 \end{LWRwriteconf}
```

40.9 lwarp.xdy

lwarp.xdy (file) Used to modify the index for lwarp.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

See:

https://tex.stackexchange.com/questions/80300/ how-can-i-convince-hyperref-and-xindy-to-play-together-nicely

```
Config file: 4573 \begin{LWRwriteconf}
           4574 \begin{filecontents*}[overwrite]{lwarp.xdy}
           4575 (require "tex/inputenc/latin.xdy")
           4576 (merge-rule "\\PS *" "Postscript")
           4577 (require "texindy.xdy")
           4578 (require "page-ranges.xdy")
           4579 (require "book-order.xdy")
           4580 (define-location-class "arabic-page-numbers"
                    ("arabic-numbers") :min-range-length 1)
           4582 (require "makeindex.xdy")
           4583 (define-attributes (("hyperindexref")))
           4584 (markup-locref :open "\hyperindexref{" :close "}")
           4585 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
           4586 (markup-locref :open "\textbf{\hyperindexref{" :close "}}" :attr "textbf")
4587 (markup-locref :open "\textit{\hyperindexref{" :close "}}" :attr "textit")
           4588 (define-location-class-order ("roman-page-numbers"
                                    "arabic-page-numbers"
                                    "alpha-page-numbers"
           4590
                                    "Roman-page-numbers"
           4591
                                    "Alpha-page-numbers"
           4592
                                    "see"
           4593
                                    "seealso"))
           4594
           4595 \end{filecontents*}
           4596% \end{Verbatim}% for syntax highlighting
           4597 \end{LWRwriteconf}
```

40.10 lwarp_one_limage.cmd

lwarp_one_limage.cmd (file) Used by lwarp to help make lateximages when using WINDOWS.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The arguments are each of the three fields from project>-images.txt, and also the base name of the source file.

MiKTeX does not allow file lwarp_one_limage.cmd to be created directly by *lwarpmk*, so lwarp_one_limage.txt is created instead, then copied to lwarp_one_limage.cmd by *lwarpmk*. This occurs each time *lwarpmk* used to create lateximages.

```
Config file: 4598 \begin{LWRwriteconf}
          4599 \immediate\openout\LWR@quickfile=lwarp_one_limage.txt
          4600 \immediate\write\LWR@quickfile{%
                  pdfseparate -f \LWRpercent 1 -l \LWRpercent 1 \LWRpercent 4_html.pdf %
                 \verb|\LWR@ImagesDirectory| OSPathSymbol lateximagetemp-\LWR percent \LWR percent d.pdf\%| \\
          4602
          4603 }
          4604 \immediate\write\LWR@quickfile{%
                  pdfcrop --hires --margins \LWRopquote0 1 0 0\LWRopquote\space %
          4605
          4606
                  \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf %
          4607
                  \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
          4608 }
          4609 \immediate\write\LWR@quickfile{%
                 pdftocairo -svg -noshrink \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf %
          4610
                  \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.svg%
          4611
          4612 }
          4613 \immediate\write\LWR@quickfile{%
                  del \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
          4614
          4615 }
          4616 \immediate\write\LWR@quickfile{%
                  del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
          4619 \immediate\write\LWR@quickfile{exit}
          4620 \immediate\closeout\LWR@quickfile
          4621 \end{LWRwriteconf}
```

40.11 lwarp_mathjax.txt

($Emulates\ or\ patches\ code\ by\ Davide\ P.\ Cervone.$)

lwarp_mathjax.txt (file)

The default MathJax script used by lwarp when using MathJax. A recent version of MathJax is used, as served by the recommended repository. Adjustments are made to allow IATeX to control the equation tags and provide for starred macros.

\MathJaxFilename determines which script file is copied into the HTML pages, and defaults to lwarp_mathjax.txt. The script files must be present when compiling the project, but do not need to be present when distributing the resulting HTML files.

custom script

To generate a custom script, such as to use a local repository, copy lwarp_mathjax.txt to a new file, make changes while keeping lwarp's adjustments for equation numbering and starred macros, and use \MathJaxFilename to select the new filename.

```
Config file: 4622 \begin{LWRwriteconf}
          4623 \begin{filecontents*}[overwrite]{lwarp_mathjax.txt}
          4624 <script>
          4625 // Lwarp MathJax emulation code
          4626 / /
          4627 // Based on code by Davide P. Cervone.
          4628 // Equation numbering: https://github.com/mathjax/MathJax/issues/2427
          4629 // Starred and ifnextchar macros: https://github.com/mathjax/MathJax/issues/2428
          4630 // \left, \right delimiters: https://github.com/mathjax/MathJax/issues/2535
          4631 //
          4632 // Modified by Brian Dunn to adjust equation numbering and add subequations.
          4633 //
          4634 // LaTeX can use \seteqnumber{subequations?}{section}{number} before each equation.
          4635 // subequations? is 0 usually, 1 if inside subequations.
          4636 // section is a string printed as-is, or empty.
          4637 // number is auto-incremented by MathJax between equations.
```

```
4638 //
4639 \, MathJax = \{
     subequations: "0",
     section: "",
4641
4642
     loader: {
       load: ['[tex]/tagformat', '[tex]/textmacros'],
4643
4644
     },
4645
     startup: {
       ready() {
4646
          // These would be replaced by import commands if you wanted to make
4647
          // a proper extension.
4648
4649
         const Configuration = MathJax._.input.tex.Configuration.Configuration;
4650
          const CommandMap = MathJax._.input.tex.SymbolMap.CommandMap;
4651
          const Macro = MathJax._.input.tex.Symbol.Macro;
4652
          const TexError = MathJax._.input.tex.TexError.default;
4653
          const ParseUtil = MathJax._.input.tex.ParseUtil.default;
          const expandable = MathJax._.util.Options.expandable;
4654
4655
          // Insert the replacement string into the TeX string, and check
4656
          // that there haven't been too many maxro substitutions (prevents
4657
          // infinite loops).
4658
         const useArgument = (parser, text) => {
4659
4660
         parser.string = ParseUtil.addArgs(parser, text, parser.string.slice(parser.i));
4661
           parser.i = 0;
            if (++parser.macroCount > parser.configuration.options.maxMacros) {
4662
              throw new TexError('MaxMacroSub1',
4663
4664
              'MathJax maximum macro substitution count exceeded; ' +
4665
              'is there a recursive macro call?');
4666
            }
          }
4667
4668
         // Create the command map for:
4669
               \ifstar, \ifnextchar, \ifblank, \ifstrequal, \gsub, \seteqnumber
4670
         new CommandMap('Lwarp-macros', {
4671
            ifstar: 'IfstarFunction',
4672
            ifnextchar: 'IfnextcharFunction',
4673
            ifblank: 'IfblankFunction',
4674
            ifstrequal: 'IfstrequalFunction',
4675
            gsubstitute: 'GsubstituteFunction',
4676
            seteqnumber: 'SeteqnumberFunction'
4677
4678
            // This function implements an ifstar macro.
4679
            IfstarFunction(parser, name) {
4680
4681
              const resultstar = parser.GetArgument(name);
              const resultnostar = parser.GetArgument(name);
4682
             const star = parser.GetStar();
                                                           // true if there is a *
4683
              useArgument(parser, star ? resultstar : resultnostar);
4684
4685
            },
4686
            // This function implements an ifnextchar macro.
4687
            IfnextcharFunction(parser, name) {
4688
              let whichchar = parser.GetArgument(name);
4689
4690
              if (whichchar.match(/^(?:0x[0-9A-F]+|[0-9]+)$/i)) {
4691
                // $ syntax highlighting
                whichchar = String.fromCodePoint(parseInt(whichchar));
4692
4693
              const resultnextchar = parser.GetArgument(name);
4694
              const resultnotnextchar = parser.GetArgument(name);
4695
              const gotchar = (parser.GetNext() === whichchar);
4696
              useArgument(parser, gotchar ? resultnextchar : resultnotnextchar);
4697
```

```
4698
            },
4699
            // This function implements an ifblank macro.
4700
            IfblankFunction(parser, name) {
4701
              const blankarg = parser.GetArgument(name);
4702
4703
              const resultblank = parser.GetArgument(name);
              const resultnotblank = parser.GetArgument(name);
4704
              const isblank = (blankarg.trim() == "");
4705
              useArgument(parser, isblank ? resultblank : resultnotblank);
4706
4707
            },
4708
4709
            // This function implements an ifstrequal macro.
4710
            IfstrequalFunction(parser, name) {
4711
              const strequalfirst = parser.GetArgument(name);
4712
              const strequalsecond = parser.GetArgument(name);
4713
              const resultequal = parser.GetArgument(name);
              const resultnotequal = parser.GetArgument(name);
4714
              const isequal = (strequalfirst == strequalsecond);
4715
              useArgument(parser, isequal ? resultequal : resultnotequal);
4716
            },
4717
4718
            // This function implements a gsub macro.
4719
4720
            GsubstituteFunction(parser, name) {
              const gsubfirst = parser.GetArgument(name);
4721
              const gsubsecond = parser.GetArgument(name);
4722
              const gsubthird = parser.GetArgument(name);
4723
              let gsubresult=gsubfirst.replace(gsubsecond, gsubthird);
4724
4725
              useArgument(parser, gsubresult);
4726
            },
4727
            // This function modifies the equation numbers.
4728
            SeteqnumberFunction(parser, name) {
4729
4730
                // Get the macro parameters
              const star = parser.GetStar();
                                                             // true if there is a *
4731
            const optBrackets = parser.GetBrackets(name); // contents of optional brackets
4732
            const newsubequations = parser.GetArgument(name); // the subequations argument
4733
4734
            const neweqsection = parser.GetArgument(name); // the eq section argument
            const neweqnumber = parser.GetArgument(name); // the eq number argument
4735
            MathJax.config.subequations=newsubequations; // a string with boolean meaning
4736
            MathJax.config.section=neweqsection;
                                                          \ensuremath{//} a string with numeric meaning
4737
                parser.tags.counter = parser.tags.allCounter = neweqnumber ;
4738
4739
            }
4740
4741
          });
4742
          // Create the Lwarp-macros package
4743
         Configuration.create('Lwarp-macros', {
4744
4745
            handler: {macro: ['Lwarp-macros']}
4746
          });
4747
         MathJax.startup.defaultReady();
4748
4749
4750
          // For forward references:
4751
         MathJax.startup.input[0].preFilters.add(({math}) => {
            if (math.inputData.recompile){
            MathJax.config.subequations = math.inputData.recompile.subequations;
4753
                MathJax.config.section = math.inputData.recompile.section;
4754
4755
            }
4756
          });
         MathJax.startup.input[0].postFilters.add(({math}) => {
4757
```

```
4758
            if (math.inputData.recompile){
4759
            math.inputData.recompile.subequations = MathJax.config.subequations;
                math.inputData.recompile.section = MathJax.config.section;
4760
            }
4761
          });
4762
4763
            // For \left, \right with unicode-math:
4764
            const {DelimiterMap} = MathJax._.input.tex.SymbolMap;
4765
            const {Symbol} = MathJax._.input.tex.Symbol;
4766
            const {MapHandler} = MathJax._.input.tex.MapHandler;
4767
            const delimiter = MapHandler.getMap('delimiter');
4768
4769
            delimiter.add('\\lBrack', new Symbol('\\lBrack', '\u27E6'));
4770
            delimiter.add('\\rBrack', new Symbol('\\rBrack', '\u27E7'));
            delimiter.add('\\lAngle', new Symbol('\\lAngle', '\u27EA'));
4771
            delimiter.add('\\rAngle', new Symbol('\\rAngle', '\u27EB'));
4772
            delimiter.add('\\lbrbrak', new Symbol('\\lbrbrak', '\u2772'));
4773
            delimiter.add('\\rbrbrak', new Symbol('\\rbrbrak', '\u2773'));
4774
            delimiter.add('\\lbag', new Symbol('\\lbag', '\u27C5'));
4775
            delimiter.add('\\rbag', new Symbol('\\rbag', '\u27C6'));
4776
         delimiter.add('\\llparenthesis', new Symbol('\\llparenthesis', '\u2987'));
4777
         delimiter.add('\\rrparenthesis', new Symbol('\\rrparenthesis', '\u2988'));
4778
            delimiter.add('\\llangle', new Symbol('\\llangle', '\u2989'));
4779
            delimiter.add('\\rrangle', new Symbol('\\rrangle', '\u298A'));
4780
            delimiter.add('\\Lbrbrak', new Symbol('\\Lbrbrak', '\u27EC'));
4781
            delimiter.add('\\Rbrbrak', new Symbol('\\Rbrbrak', '\u27ED'));
4782
            delimiter.add('\\lBrace', new Symbol('\\lBrace', '\u2983'));
4783
            \label{lem:delimiter.add('\rBrace', new Symbol('\rBrace', '\u2984'));}
4784
            \label{lem:delimiter.add('\lParen', new Symbol('\lParen', '\u2985'));}
4785
            \label{lem:condition} delimiter.add('\rParen', new Symbol('\rParen', '\u2986'));
4786
            delimiter.add('\\lbrackubar', new Symbol('\\lbrackubar', '\u298B'));
4787
            delimiter.add('\\rbrackubar', new Symbol('\\rbrackubar', '\u298C'));
4788
         delimiter.add('\\lbrackultick', new Symbol('\\lbrackultick', '\u298D'));
4789
         delimiter.add('\\rbracklrtick', new Symbol('\\rbracklrtick', '\u298E'));
4790
         delimiter.add('\\lbracklltick', new Symbol('\\lbracklltick', '\u298F'));
4791
         delimiter.add('\\rbrackurtick', new Symbol('\\rbrackurtick', '\u2990'));
4792
            delimiter.add('\\langledot', new Symbol('\\langledot', '\u2991'));
4793
            delimiter.add('\\rangledot', new Symbol('\\rangledot', '\u2992'));
4794
            delimiter.add('\\lparenless', new Symbol('\\lparenless', '\u2993'));
4795
            delimiter.add('\\rparengtr', new Symbol('\\rparengtr', '\u2994'));
4796
            delimiter.add('\\Lparengtr', new Symbol('\\Lparengtr', '\u2995'));
4797
            delimiter.add('\\Rparenless', new Symbol('\\Rparenless', '\u2996'));
4798
            delimiter.add('\\lblkbrbrak', new Symbol('\\lblkbrbrak', '\u2997'));
4799
            delimiter.add('\\rblkbrbrak', new Symbol('\\rblkbrbrak', '\u2998'));
4800
            delimiter.add('\\lvzigzag', new Symbol('\\lvzigzag', '\u29D8'));
4801
            delimiter.add('\\rvzigzag', new Symbol('\\rvzigzag', '\u29D9'));
4802
            delimiter.add('\\Lvzigzag', new Symbol('\\Lvzigzag', '\u29DA'));
4803
            delimiter.add('\\Rvzigzag', new Symbol('\\Rvzigzag', '\u29DB'));
4804
          delimiter.add('\\lcurvyangle', new Symbol('\\lcurvyangle', '\u29FC'));
4805
          delimiter.add('\\rcurvyangle', new Symbol('\\rcurvyangle', '\u29FD'));
4806
            delimiter.add('\\Vvert', new Symbol('\\Vvert', '\u2980'));
4807
            // ready
4808
       }
            // startup
4809
     },
4810
4811
       packages: {'[+]': ['tagformat', 'Lwarp-macros', 'textmacros']},
4812
        tags: "ams",
4813
            tagformat: {
4814
                number: function (n) {
4815
4816
                    if(MathJax.config.subequations==0)
4817
                        return(MathJax.config.section + n);
```

```
4818
                     else
                      return(MathJax.config.section + String.fromCharCode(96+n));
4819
4820
                },
4821
            },
4822
     }
4823 }
4824 </script>
4825
4826 <script
        id="MathJax-script"
4827
        src="https://cdn.jsdelivr.net/npm/mathjax@3/es5/tex-svg.js"
4828
4829 ></script>
4830 \end{filecontents*}
4831% \end{Verbatim}% for syntax highlighting
4832 \end{LWRwriteconf}
```

40.12 lwarpmk.lua — lwarpmk option

lwarpmk (Opt) Creates a local copy of lwarpmk.

lwarpmk (Prog) Command-line utility to process lwarp files and images.

parallel processing

lateximages and svG math images are generated using multiple processes in parallel. For Unix and Linux, every 32 images the wait command is issued to wait for the previous batch of images to finish processing before starting a new batch. For Windows, every 32 images one task is dispatched with

```
START /B /WAIT /BELOWNORMAL
```

which causes the operating system to wait until this lesser-priority tasks finishes, hopefully also waiting for the normal priority tasks which were already in progress to also complete. Afterwards, the next batch of images is started.

The following is only generated if the lwarpmk option was given to lwarp.

```
4833 \begin{LWRcreatelwarpmk}
4834 \begin{filecontents*}[overwrite]{lwarpmk.lua}
4835 #!/usr/bin/env texlua
4836
4837 -- Copyright 2016-2024 Brian Dunn
4838
4840 printversion = "v0.915"
4841 requiredconfversion = "2" -- also at *lwarpmk.conf
4842
4843 function printhelp ()
4844 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.");
4845 end
4846
4847
4848 function printusage ()
4850 -- Print the usage of the lwarpmk command:
4851 --
4852 print ( [[
4854 lwarpmk print [-p project]: Compile the print version if necessary.
```

```
4855 lwarpmk print1 [-p project]: Forced single compile of the print version.
4856 lwarpmk printindex [-p project]: Process print indexes.
4857 lwarpmk printglossary [-p project]: Process the glossary for the print version.
4858 lwarpmk html [-p project]: Compile the HTML version if necessary.
4859 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
4860 lwarpmk htmlindex [-p project]: Process HTML indexes.
4861 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
4862 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
4863 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
4864 lwarpmk pdftohtml [-p project]:
4865
       For use with latexmk or a Makefile:
       Converts project_html.pdf to project_html.html and individual HTML files.
       Finishes the HTML conversion even if there was a compile error.
4868 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
4869 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
4870 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
       *.idx, *.ind, *.bbl, *.log, *_html_inc.*, .gl*,
4871
       *_html.pdf, *_html.html, *_html.sidetoc
4872
4873 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
4874 lwarpmk cleanlimages: Removes all images from the "lateximages" directory.
4875 lwarpmk -v: Print the version number.
4876 lwarpmk -h: Print this help message.
4877 lwarpmk --help: Print this help message.
4878
4879]])
4880 -- printconf ()
4881 end
4882
4883
4884 function splitfilename ( pathandfilename )
4885 --
4886 -- Separates out the path and extension from a filename.
4887 -- Returns path, filename with extension, and extension.
4888 -- Ex: thispath, thisfilename, thisextension = splitfilename ("path/to/filename.ext")
4890 -- https://www.fhug.org.uk/wiki/wiki/doku.php?id=plugins:code_snippets:
4891 --
            split_filename_in_to_path_filename_and_extension
4892 --
       if lfs.attributes(pathandfilename, "mode") == "directory" then
4893
         local strPath = pathandfilename:gsub("[\\/]$","") -- $ (syntax highlighting)
4894
            return strPath.."\\","",""
4895
4896
       pathandfilename = pathandfilename.."."
4897
       return pathandfilename:match("^(.-)([^\\/]-)%.([^\\/%.]-)%.?$")
4898
4899 end
4900
4901
4902 function splitfile (destfile, sourcefile)
4903 --
4904 -- Split one large sourcefile into a number of files,
4905 -- starting with destfile.
4906 -- The file is split at each occurance of <!--|Start file|newfilename|*
4907 -- If lwarp is in use, sets usinglwarp.
4908 --
4909 usinglwarp = false ;
4910 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
4911 local sfile = io.open(sourcefile)
4912 io.output(destfile)
4913 for line in sfile:lines() do
4914i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*)|");
```

```
4915 if ( (i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
       -- split the file
       io.output(newfilename) ;
4918 else
4919 if ( (i~= nil) and (copen == "<!--") and (cstart == "Using lwarp")) then
       -- verified the use of \usepackage{lwarp}
       usinglwarp = true ;
4921
4922 else
       -- not a splitpoint
4923
4924
       io.write (line .. "\n") ;
4925 end end
4926 end -- do
4927 io.close(sfile)
4928 if ( usinglwarp == false ) then
4929
       print ("lwarpmk: ===")
       print ("lwarpmk: \\usepackage{lwarp} was not detected.")
4930
       print ("lwarpmk: The HTML output will not be correct.")
4931
       print ("lwarpmk: Ensured that \\usepackage{lwarp} is enabled,")
4932
       print ("lwarpmk: then lwarpmk print and lwarpmk html again.")
4933
       print ("lwarpmk: ===")
4934
4935 end
4936 end -- function
4937
4938
4939 function cvalueerror ( line, linenum , cvalue )
4941 -- Incorrect value, so print an error and exit.
4942 --
       print ("lwarpmk: ===")
4943
       print ("lwarpmk: " .. linenum .. " : " .. line ) ;
4944
       print (
4945
            "lwarpmk: incorrect variable value \"" .. cvalue ..
4946
            "\" in lwarpmk.conf.\n"
4947
4948
       );
       print ("lwarpmk: ===")
4949
4950 --
         printconf ();
4951
       os.exit(1);
4952 end
4953
4954
4955 function printhowtorecompile ()
4956 -- Tells the user how to recompile to regenerate the configuration files.
      print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename..".lwarpmkconf")
4957
       print ("lwarpmk: must be updated. To do so, recompile" )
4958
       print ("lwarpmk: " , sourcename..".tex" )
4959
       if ( printlatexcmd == "" ) then
4960
4961
            print ("lwarpmk: using xe/lua/pdflatex," )
4962
       else
            print ("lwarpmk:
                               using the command:")
4963
            print ("lwarpmk: " , printlatexcmd )
4964
4965
       print ("lwarpmk: then use lwarpmk again.")
4966
4967 end -- printhowtorecompile
4968
4970 function ignoreconf ()
4971 -- Global argument index
4972 \operatorname{argindex} = 2
4973 end
4974
```

```
4975 function loadconf ()
4977 -- Load settings from the project's "lwarpmk.conf" file:
4978 --
4979 -- Default configuration filename:
4980 local conffile = "lwarpmk.conf"
4981 local confroot = "lwarpmk"
4982 -- Global argument index
4983 \operatorname{argindex} = 2
4984 -- Optional configuration filename:
4985 if (arg[argindex] == "-p") then
       argindex = argindex + 1
4987
       confroot = arg[argindex]
4988
       conffile = confroot..".lwarpmkconf"
4989
       argindex = argindex + 1
4990 end
4991 -- Additional defaults:
4992 confversion = "0"
4993 opsystem = "Unix"
4994 imagesdirectory = "lateximages"
4995 imagesname = "image-"
4996 latexmk = "false"
4997 printlatexcmd = ""
4998 HTMLlatexcmd = ""
4999 printindexcmd = ""
5000 HTMLindexcmd = ""
5001 latexmkindexcmd = ""
5002 -- to be removed:
5003 -- indexprog = "makeindex"
5004 -- makeindexstyle = "lwarp.ist"
5005 -- xindylanguage = "english"
5006 -- xindycodepage = "utf8"
5007 -- xindystyle = "lwarp.xdy"
5008 -- pdftotextenc = "UTF-8"
5009 glossarycmd = "makeglossaries"
5010 -- Verify the file exists:
5011 if (lfs.attributes(conffile, "mode") == nil) then
       -- file not exists
5012
       print ("lwarpmk: ===")
5013
       print ("lwarpmk: File \"" .. conffile .."\" does not exist.")
5014
       print ("lwarpmk: Move to the project's source directory,")
5015
5016
       print ("lwarpmk: recompile using pdflatex, xelatex, or lualatex,")
       print ("lwarpmk: then try using lwarpmk again.")
5017
       if ( arg[argindex] ~= nil ) then
5018
5019
                "lwarpmk: (\"" .. confroot ..
5020
                5021
5022
5023
       end
       print ("lwarpmk: ===")
5024
       printhelp ();
5025
5026
       os.exit(1) -- exit the entire lwarpmk script
5027 else -- file exists
5028 -- Read the file:
5029 print ("lwarpmk: Reading " .. conffile ..".")
5030 local cfile = io.open(conffile)
5031 -- Scan each line, parsing each line as: name = [[string]]
5032 local linenum = 0
5033 for line in cfile:lines() do -- scan lines
5034 linenum = linenum + 1
```

```
5035i,j,cvarname,cvalue = string.find (line,"([%w-_]*)%s*=%s*%[%[([^%]]*)%]%]");
5036 -- Error if incorrect enclosing characters:
5037 \, \text{if} \, (\, \, \text{i} == \, \text{nil} \, \,) \, \, \text{then}
       print ("lwarpmk: ===")
       print ("lwarpmk: " .. linenum .. " : " .. line ) ;
5039
       print ("lwarpmk: Incorrect entry in " .. conffile ..".\n" ) ;
5040
       print ("lwarpmk: ===")
5041
5042 --
         printconf ();
5043
       os.exit(1);
5044 end -- nil
5045 if ( cvarname == "confversion" ) then
       confversion = cvalue
5047 elseif ( cvarname == "opsystem" ) then
       -- Verify choice of opsystem:
       if ( (cvalue == "Unix") or (cvalue == "Windows") ) then
5049
5050
            opsystem = cvalue
5051
       else
            cvalueerror ( line, linenum , cvalue )
5052
5053
       end
5054 elseif ( cvarname == "sourcename" ) then sourcename = cvalue
5055 elseif ( cvarname == "homehtmlfilename" ) then homehtmlfilename = cvalue
5056 elseif ( cvarname == "htmlfilename" ) then htmlfilename = cvalue
5057 elseif ( cvarname == "imagesdirectory" ) then imagesdirectory = cvalue
5058 elseif ( cvarname == "imagesname" ) then imagesname = cvalue
5059 elseif ( cvarname == "latexmk" ) then latexmk = cvalue
5060 elseif ( cvarname == "printlatexcmd" ) then printlatexcmd = cvalue
5061 elseif ( cvarname == "HTMLlatexcmd" ) then HTMLlatexcmd = cvalue
5062 elseif ( cvarname == "printindexcmd" ) then printindexcmd = cvalue
5063 elseif ( cvarname == "HTMLindexcmd" ) then HTMLindexcmd = cvalue
5064 elseif ( cvarname == "latexmkindexcmd" ) then latexmkindexcmd = cvalue
5065 elseif ( cvarname == "glossarycmd" ) then glossarycmd = cvalue
5066 elseif ( cvarname == "pdftotextenc" ) then pdftotextenc = cvalue
5067 else
       print ("lwarpmk: ===")
5068
       print ("lwarpmk: " .. linenum .. " : " .. line ) ;
5069
5070
       print (
            "lwarpmk: Incorrect variable name \"" .. cvarname .. "\" in " ..
5071
            conffile ..".\n"
5072
5073
       print ("lwarpmk: ===")
5074
5075 --
         printconf ();
5076 os.exit(1);
5077 end -- cvarname
5078 end -- do scan lines
5079 io.close(cfile)
5080 end -- file exists
5081 -- Error if sourcename is "lwarp".
5082 -- This could happen if a local copy of lwarp has recently been recompiled.
5083 if sourcename=="lwarp" then
       print ("lwarpmk: ===")
5084
5085
      print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
5086
      print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
5087
       print ("lwarpmk: (Perhaps you are not in your project's directory?)")
       print ("lwarpmk: In your project directory, recompile your project")
5088
       print ("lwarpmk: using pdf/lua/xelatex ctname.")
      print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
       print ("lwarpmk: and you may again use lwarpmk.")
5091
       print ("lwarpmk: ===")
5092
5093
       os.exit(1)
5094 end -- sourcename of "lwarp"
```

```
5095 -- Select some operating-system commands:
5096 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
       rmname = "rm"
       mvname = "mv"
5098
       cpname = "cp"
5099
       touchnamepre = "touch"
5100
       touchnamepost = ""
5101
       newtouchname = "touch"
5102
       dirslash = "/"
5103
5104
       opquote= "\'"
5105
       cmdgroupopenname = " ( "
       cmdgroupclosename = " ) "
5106
5107
       seqname = " && "
       bgname = " &"
5108
5109 elseif opsystem=="Windows" then -- For Windows
      rmname = "DEL"
5110
       mvname = "MOVE"
5111
       cpname = "COPY"
5112
       touchnamepre = "COPY /b"
5113
       touchnamepost = "+,,"
5114
       newtouchname = "echo empty >"
5115
       dirslash = "\\"
5116
       opquote= "\""
5117
       cmdgroupopenname = ""
5118
       cmdgroupclosename = ""
5119
5120
       seqname = " & "
       bgname = ""
5121
5122 else
       print ("lwarpmk: ===")
5123
       print ("lwarpmk: Select Unix or Windows for opsystem." )
5124
5125
       print ("lwarpmk: ===")
5126
       os.exit(1)
5127 end --- for Windows
5128 -- Warning if the operating system does not appear to be correct,
5129 -- in case files were transferred to another system.
5130 if ((package.config:sub(1,1)) ~= dirslash) then
       print ("lwarpmk: ===")
5131
      print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system.")
5132
       printhowtorecompile ()
5133
       print ("lwarpmk: ===")
5134
5135
       os.exit(1)
5136 end
5137 -- Error if the configuration file's version is not current:
5138 if ( confversion ~= requiredconfversion ) then
       print ("lwarpmk: ===")
5140
       printhowtorecompile ()
5141
       print ("lwarpmk: ===")
5142
       os.exit(1)
5143 end
5144 end -- loadconf
5145
5146
5147 function executecheckerror (executecommands, errormessage)
5149 -- Execute an operating system call,
5150 -- and maybe exit with an error message.
5151 --
5152 local err
5153 err = os.execute ( executecommands )
5154 if ( err \sim= 0 ) then
```

```
print ("lwarpmk: ===")
5155
        print ("lwarpmk: " .. errormessage )
5156
5157
        print ("lwarpmk: ===")
5158
        os.exit(1)
5159 end
5160 end -- executecheckerror
5161
5162
5163 function refreshdate ()
5164 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
5165 end
5166
5167
5169 function reruntoget (filesource)
5170 --
5171 -- Scan the LaTeX log file for the phrase "Rerun to get",
5172 -- indicating that the file should be compiled again.
5173 -- Return true if found.
5174 --
5175 local fsource = io.open(filesource)
5176 for line in fsource:lines() do
5177 if ( string.find(line, "Rerun to get") ~= nil ) then
        io.close(fsource)
5179
        return true
5180 end -- if
5181 end -- do
5182 io.close(fsource)
5183 return false
5184 end
5185
5186
5187
5188 function onetime (latexcmd, fsuffix)
5190 -- Compile one time, return true if should compile again.
5191 -- fsuffix is "" for print, "_html" for HTML output.
5192 --
5193 print("lwarpmk: Compiling with: " .. latexcmd)
5194 executecheckerror (
        latexcmd ,
5195
        "Compile error."
5196
5197)
5198 return (reruntoget(sourcename .. fsuffix .. ".log") );
5199 end
5200
5201
5202 function manytimes (latexcmd, fsuffix)
5203 --
5204 -- Compile up to five times.
5205 -- fsuffix is "" for print, "_html" for HTML output
5206 --
5207 \, \text{if onetime(latexcmd, fsuffix)} == \text{true then}
5208 if onetime(latexcmd, fsuffix) == true then
5209 if onetime(latexcmd, fsuffix) == true then
5210 if onetime(latexcmd, fsuffix) == true then
5211 if onetime(latexcmd, fsuffix) == true then
5212 end end end end
5213 end
5214
```

```
5216 function verifyfileexists (filename)
5217 --
5218 -- Exit if the given file does not exist.
5219 --
5220 if (lfs.attributes ( filename , "modification" ) == nil ) then
       print ("lwarpmk: ===")
5221
       print ("lwarpmk: " .. filename .. " not found." );
5222
       print ("lwarpmk: ===")
5223
5224
       os.exit (1);
5225 end
5226 end
5227
5228
5229
5230 function pdftohtml ()
5231 --
5232 -- Convert <project>_html.pdf into HTML files:
5233 --
5234 -- Convert to text:
5235 print ("lwarpmk: Converting " .. sourcename
       .."_html.pdf to " .. sourcename .. "_html.html")
5237 err = os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
      .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
5239 if (err \sim= 0) then
5240
       print ("lwarpmk: ===")
5241
       print ("lwarpmk: Ensure that the Poppler utilities are installed." )
      print ("lwarpmk: See the Lwarp manual: 'Installing additional utilities'.")
5242
       print ("lwarpmk: ===")
5243
       os.exit(1)
5244
5245 end
5246 -- Split the result into individual HTML files:
5247 splitfile (homehtmlfilename .. ".html", sourcename .. "_html.html")
5248 end
5249
5250
5251 function removeaux ()
5252 --
5253 -- Remove auxiliary files:
5254 -- All .aux files are removed since there may be many bbl*.aux files.
5255 -- Also removes sourcename_html.pdf, sourcename_html.html,
5256 -- and sourcename_html.sidetoc, plus comment_*.cut.
5258 os.execute ( rmname .. " *.aux " ..
       sourcename ..".toc " .. sourcename .. "_html.toc " ..
       sourcename ..".lof " .. sourcename .. "_html.lof " ..
5260
       sourcename ..".lot " .. sourcename .. "_html.lot " ..
5261
       sourcename ..".bbl " .. sourcename .. "_html.bbl " ..
5262
        " *.idx " ..
5263
       " *.ind " ..
5264
       sourcename ..".ps " .. sourcename .."_html.ps " ..
5265
       sourcename ..".log " .. sourcename .. "_html.log " \,
5266
       sourcename ..".gl* " .. sourcename .. "_html.gl* " ..
5267
       sourcename .. "_html.pdf " ..
5268
       sourcename .. "_html.html " ..
5269
       sourcename .. "_html.sidetoc " ..
5270
        " *_html_inc.* " ..
5271
       " comment_*.cut"
5272
5273
5274 end
```

```
5275
5276 function checkhtmlpdfexists ()
5277 --
5278 -- Error if the HTML document does not exist.
5279 -- The lateximages are drawn from the HTML PDF version of the document,
5280 -- so "lwarpmk html" must be done before "lwarpmk limages".
5281 --
5282 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
5283 if ( htmlpdffile == nil ) then
       print ("")
5284
5285
       print ("lwarpmk: ===")
5286
       print ("lwarpmk: The HTML version of the document does not exist.")
5287
       print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
       print ("lwarpmk: ===")
5289
       os.exit(1)
5290 end
5291 io.close (htmlpdffile)
5292 end -- checkhtmlpdfexists
5293
5294
5295 function warnlimages ()
5297 -- Warning of a missing <sourcename>-images.txt file:
       print ("lwarpmk: ===")
       print ("lwarpmk: \"" .. sourcename .. "-images.txt\" does not exist.")
5299
       print ("lwarpmk: Your project does not use SVG math or other lateximages,")
5300
5301
       print ("lwarpmk: or the file has been deleted somehow.")
5302
       print ("lwarpmk: Use \"lwarpmk html1\" to recompile your project")
       print ("lwarpmk: and recreate \"" .. sourcename .. "-images.txt\".")
5303
      print ("lwarpmk: If your project does not use SVG math or other lateximages,")
5304
      print ("lwarpmk: then \"" \dots sourcename \dots "-images.txt\" will never exist, and")
5305
5306
       print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
       print ("lwarpmk: ===")
5307
5308 end -- warnlimages
5309
5310
5311 function warnlimagesrecompile ()
5312 -- Warning if must recompile before creating limages:
       print ("")
5313
       print ("lwarpmk: ===")
5314
       print ("lwarpmk: Cross-references are not yet correct.")
5315
      print ("lwarpmk: The document must be recompiled before creating the lateximages.")
5316
      print ("lwarpmk: Enter \"lwarpmk html1\" again, then try \"lwarpmk limages\" again.")
5317
       print ("lwarpmk: ===")
5319 end --warnlimagesrecompile
5320
5321
5322 function checklimages ()
5324 -- Check <sourcename>.txt to see if need to recompile first.
5325 -- If any entry has a page number of zero, then there were incorrect images.
5326 --
5327 print ("lwarpmk: Checking for a valid " .. sourcename .. "-images.txt file.")
5328 local limagesfile = io.open(sourcename .. "-images.txt", "r")
5329 if ( limagesfile == nil ) then
       warnlimages ()
5330
5331
       os.exit(1)
5332 end
5333 -- Track warning to recompile if find a page 0
5334 local pagezerowarning = false
```

```
5335 -- Scan <sourcename>.txt
5336 for line in limagesfile:lines() do
        -- lwimgpage is the page number in the PDF which has the image
5338
        -- lwimghash is true if this filename is a hash
5339
       -- lwimgname is the lateximage filename root to assign for the image
5340
      i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
        -- For each entry:
5341
       if ( (i\sim=nil) ) then
5342
            -- If the page number is 0, image references are incorrect
5343
            -- and must recompile the soure document:
5344
            if ( lwimgpage == "0" ) then
5345
5346
                pagezerowarning = true
5347
            end
       end -- if i~=nil
5349 end -- do
5350 -- The last line should be |end|end|end|.
5351 -- If not, the compile must have aborted, and the images are incomplete.
5352 if ( lwimgpage ~= "end" ) then
       warnlimagesrecompile()
5353
       os.exit(1);
5354
5355 end
5356\,\mathrm{if} ( pagezerowarning ) then
5357
       warnlimagesrecompile()
       os.exit(1);
5359 end -- pagezerowarning
5360 end -- checklimages
5361
5362
5363 function createuniximage ( lwimgfullname )
5364 --
5365 -- Create one lateximage for Unix / Linux / Mac OS.
5366 --
5367 executecheckerror (
5368
        cmdgroupopenname ..
        "pdfseparate -f " .. lwimgpage .. " -l " .. lwimgpage .. " " ..
5369
            sourcename .."_html.pdf " ..
5370
            imagesdirectory .. dirslash .."lateximagetemp-%d" .. ".pdf" ..
5371
5372
            seqname ..
        -- Crop the image:
5373
      "pdfcrop --hires --margins \"0 1 0 0\" " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..
5374
            lwimgpage .. ".pdf " ..
5375
5376
            imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
5377
            segname ..
5378
        -- Convert the image to svg:
      "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf " ..
5379
5380
            imagesdirectory .. dirslash .. lwimgname ..".svg" ..
5381
            segname ..
5382
        -- Remove the temporary files:
      \verb|rmname .. " " .. images directory .. dirslash .. lwimgname .. ".pdf" .. seqname .. \\
5383
      rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimgpage .. ".pdf" ..
5384
       cmdgroupclosename .. " >/dev/null " .. bgname
5385
5386
        "File error trying to convert " .. lwimgfullname
5387
5388)
5389 -- Every 32 images, wait for completion at below normal priority,
5390 -- allowing other image tasks to catch up.
5391 numimageprocesses = numimageprocesses + 1
5392 if ( numimageprocesses > 32 ) then
       numimageprocesses = 0
5393
       print ( "lwarpmk: waiting" )
5394
```

```
5395
        executecheckerror ( "wait" , "File error trying to wait.")
5396 end
5397 end -- createuniximage
5398
5400 function createwindowsimage ( lwimgfullname )
5401 --
5402 -- Create one lateximage for Windows.
5403 --
5404 -- Every 32 images, wait for completion at below normal priority,
5405 -- allowing other image tasks to catch up.
5406 numimageprocesses = numimageprocesses + 1
5407 \, \text{if} \, ( \, \, \text{numimageprocesses} \, > \, 32 \, \, ) \, \, \, \text{then}
       numimageprocesses = 0
       thiswaitcommand = "/WAIT /BELOWNORMAL"
5409
       print ( "lwarpmk: waiting" )
5410
5411 else
       thiswaitcommand = ""
5412
5413 end
5414 -- Execute the image generation command
5415 executecheckerror (
        "start /B " .. thiswaitcommand .. " \"\" lwarp_one_limage " ..
5416
        lwimgpage .. " " ..
5417
       lwimghash .. " " ..
5418
       lwimgname .. " " ..
5419
       sourcename .. " <nul >nul"
5420
5421
        "File error trying to create image."
5422
5423)
5424\,\mbox{end} -- createwindowsimage
5425
5426
5427 function createonelateximage ( line )
5429 -- Given the next line of <sourcename>.txt, convert a single image.
5430 --
5431 -- lwimgpage is the page number in the PDF which has the image
5432 -- lwimghash is true if this filename is a hash
5433 -- lwimgname is the lateximage filename root to assign for the image
5434i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
5435 -- For each entry:
5436 if ( (i~=nil) ) then
       -- Skip if the page number is 0:
5437
        if ( lwimgpage == "0" ) then
5438
           pagezerowarning = true
       -- Skip if the page number is "end":
5440
5441
       else if ( lwimgpage == "end" ) then
5442
            -- Skip is this image is hashed and already exists:
5443
          local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
5444
5445
                 (lwimghash ~= "true") or
5446
                (lfs.attributes(lwimgfullname, "mode")==nil) -- file not exists
5447
5448
            then -- not hashed or not exists:
5449
                -- Print the name of the file being generated:
5450
                print ( "lwarpmk: " .. lwimgname )
5451
             -- Touch/create the dest so that only once instance tries to build it:
5452
5453
                executecheckerror (
                     newtouchname .. " " .. lwimgfullname ,
5454
```

```
5455
                    "File error trying to touch " .. lwimgfullname
5456
                -- Separate out the image into its own single-page pdf:
5457
5458
                if opsystem=="Unix" then
5459
                    createuniximage (lwimgfullname)
                elseif opsystem=="Windows" then
5460
                    createwindowsimage (lwimgfullname)
5461
                end
5462
           end -- not hashed or not exists
5463
       end -- not page "end"
5464
5465
       end -- not page 0
5466 end -- not nil
5467 end -- createonelateximage
5470 function createlateximages ()
5471 --
5472 -- Create lateximages based on <sourcename>-images.txt:
5474 -- See if the document must be recompiled first:
5475 checklimages ()
5476 -- See if the HTML version exists:
5477 checkhtmlpdfexists ()
5478 -- Attempt to create the lateximages:
5479 print ("lwarpmk: Creating lateximages.")
5480 local limagesfile = io.open(sourcename .. "-images.txt", "r")
5481 if ( limagesfile == nil ) then
5482
       warnlimages ()
5483
       os.exit(1)
5484 end
5485 -- Create the lateximages directory, ignore error if already exists
5486 err = os.execute("mkdir " .. imagesdirectory)
5487 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
5488 if opsystem=="Windows" then
5489
       executecheckerror (
5490
           cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
         "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
5491
       )
5492
5493 end -- create lwarp_one_limage.cmd
5494 -- Track the number of parallel processes
5495 numimageprocesses = 0
5496 -- Track warning to recompile if find a page 0
5497 pagezerowarning = false
5498 -- Scan <sourcename>.txt
5499 for line in limagesfile:lines() do
5500
       createonelateximage ( line )
5501 end -- do
5502 io.close(limagesfile)
5503 print ( "lwarpmk limages: ===")
5504 print ( "lwarpmk limages: Wait a moment for the images to complete" )
5505 print ( "lwarpmk limages: before reloading the page." )
5506 print ("lwarpmk limages: ===")
5507 print ( "lwarpmk limages: Done." )
5508 if (pagezerowarning == true) then
       print ( "lwarpmk limages: WARNING: Images will be incorrect." )
       print ( "lwarpmk limages: Enter \"lwarpmk cleanlimages\", then" )
       print ( "lwarpmk limages: recompile the document one more time, then" )
5511
       print ( "lwarpmk limages: repeat \"lwarpmk images\" again." )
5513 end -- pagezerowarning
5514 end -- function
```

```
5515
5516
5517 function convertepstopdf ()
5518 --
5519 -- Converts EPS files to PDF files.
5520 -- The filenames are arg[argindex] and up.
5521 -- arg[1] is the command "epstopdf".
5522 --
5523 ignoreconf ()
5524 \, \text{for i} = \text{argindex} , \# \text{arg do}
5525
        if (lfs.attributes(arg[i],"mode")==nil) then
5526
            print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
5527
            print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
5528
5529
            thispath, thisfilename, thisextension = splitfilename(arg[i])
            if ( thispath == nil ) then
5530
                os.execute ( "epstopdf " .. arg[i] )
5531
            else
5532
                os.execute (
5533
                     "epstopdf " ..
5534
                     thispath .. thisfilename .. "." .. thisextension .. " " ..
5535
                     thispath .. thisfilename .. ".pdf"
5536
5537
                )
            end
5538
5539
        end -- if
5540 end -- do
5541 end --function
5542
5543
5544 function convertpdftosvg ()
5545 --
5546 -- Converts PDF files to SVG files.
5547 -- The filenames are arg[argindex] and up.
5548 -- arg[1] is the command "pdftosvg".
5549 --
5550 ignoreconf ()
5551 \text{ for } i = argindex , \#arg do
        if (lfs.attributes(arg[i], "mode")==nil) then
5552
            print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
5553
5554
        else
            print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
5555
            thispath, thisfilename, thisextension = splitfilename(arg[i])
5556
            if ( thispath == nil ) then
5557
                os.execute ( "pdftocairo -svg " .. arg[i] )
5558
            else
5559
5560
                os.execute (
                     "pdftocairo -svg " ..
5561
                     thispath .. thisfilename .. "." .. thisextension .. " " ..
5562
                     thispath .. thisfilename .. ".svg"
5563
5564
                )
5565
            end
5566
        end -- if
5567 end -- do
5568 end --function
5571 -- Force an update and conclude processing:
5572 function updateanddone ()
5573 print ("lwarpmk: Forcing an update of " .. sourcename ..".tex.")
5574 refreshdate ()
```

```
5575 print ("lwarpmk: " .. sourcename ..".tex is ready to be recompiled.")
5576 print ("lwarpmk: Done.")
5577 end -- function
5578
5579
5580 -- Start of the main code: --
5581
5582
5583 -- lwarpmk --version :
5584
5585 if (arg[1] == "--version") then
5586 print ( "lwarpmk: " .. printversion )
5588 else -- not --version
5589
5590
5591 -- print intro:
5593 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX Lwarp package.")
5594
5595
5596 -- lwarpmk print:
5597
5598 if arg[1] == "print" then
5599 loadconf ()
5600 if ( latexmk == "true" ) then
       print ("lwarpmk: Compiling with: " .. printlatexcmd)
5601
5602
       executecheckerror (
            printlatexcmd,
5603
            "Compile error."
5604
5605
       )
       print ("lwarpmk: Done.")
5606
5607 else -- not latexmk
       verifyfileexists (sourcename .. ".tex") ;
        -- See if up to date:
5609
5610
        if (
           ( lfs.attributes ( sourcename .. ".pdf" , "modification" ) == nil ) or
5611
5612
                lfs.attributes ( sourcename .. ".tex" , "modification" ) >
5613
                lfs.attributes ( sourcename .. ".pdf" , "modification" )
5614
            )
5615
5616
        ) then
            -- Recompile if not yet up to date:
5617
            manytimes(printlatexcmd, "")
5618
            print ("lwarpmk: Done.");
5619
5620
            print ("lwarpmk: " .. sourcename .. ".pdf is up to date.") ;
5621
5622
       end
5623 end -- not latexmk
5624
5625
5626 -- lwarpmk print1:
5627
5628 elseif arg[1] == "print1" then
       loadconf ()
5629
        verifyfileexists (sourcename .. ".tex") ;
5630
       onetime(printlatexcmd, "")
5631
       print ("lwarpmk: Done.") ;
5632
5633
5634
```

```
5635 -- lwarpmk printindex:
5636 -- Compile the index then touch the source
5637 -- to trigger a recompile of the document:
5639 elseif arg[1] == "printindex" then
5640 loadconf ()
5641 os.execute ( printindexcmd )
5642 print ("lwarpmk: -----")
5643 updateanddone ()
5644
5645
5646 -- lwarpmk printglossary:
5647 -- Compile the glossary then touch the source
5648 -- to trigger a recompile of the document:
5650 elseif arg[1] == "printglossary" then
5651 loadconf ()
5652 print ("lwarpmk: Processing the glossary.")
5654 os.execute(glossarycmd .. " " .. sourcename)
5655 updateanddone ()
5656
5657
5658 -- lwarpmk html:
5659
5660 elseif arg[1] == "html" then
5661 loadconf ()
5662 if ( latexmk == "true" ) then
       print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
5663
        executecheckerror (
5664
            HTMLlatexcmd
5665
            "Compile error."
5666
5667
       )
       pdftohtml ()
5668
       print ("lwarpmk: Done.")
5669
5670 else -- not latexmk
       verifyfileexists ( sourcename .. ".tex" ) ;
5671
        -- See if exists and is up to date:
5672
        if (
5673
         ( lfs.attributes ( homehtmlfilename .. ".html" , "modification" ) == nil ) or
5674
5675
                lfs.attributes ( sourcename .. ".tex" , "modification" ) >
5676
                lfs.attributes ( homehtmlfilename .. ".html" , "modification" )
5677
            )
5678
        ) then
5679
5680
            -- Recompile if not yet up to date:
5681
            manytimes(HTMLlatexcmd, "_html")
5682
            pdftohtml ()
            print ("lwarpmk: Done.")
5683
5684
            print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
5685
5686
       end
5687 end -- not latexmk
5688
5689
5690 -- lwarpmk html1:
5691
5692 elseif arg[1] == "html1" then
       loadconf ()
5693
       verifyfileexists ( sourcename .. ".tex" ) ;
5694
```

```
onetime(HTMLlatexcmd, "_html")
5695
       pdftohtml ()
5696
5697
       print ("lwarpmk: Done.")
5698
5699
5700 -- lwarpmk pdftohtml:
5701 elseif arg[1] == "pdftohtml" then
5702
       loadconf ()
5703
       pdftohtml ()
5704
5705
5706 -- lwarpmk htmlindex:
5707 -- Compile the index then touch the source
5708 -- to trigger a recompile of the document:
5710 elseif arg[1] == "htmlindex" then
5711 loadconf ()
5712 os.execute ( HTMLindexcmd )
5713 print ("lwarpmk: -----")
5714 updateanddone ()
5715
5716
5717 -- lwarpmk htmlglossary:
5718 -- Compile the glossary then touch the source
5719 -- to trigger a recompile of the document.
5720 -- The <sourcename>.xdy file is created by the glossaries package.
5722 elseif arg[1] == "htmlglossary" then
5723 loadconf ()
5724 print ("lwarpmk: Processing the glossary.")
5725 os.execute(glossarycmd .. " " .. sourcename .. "_html")
5726 updateanddone ()
5727
5728
5729 -- lwarpmk limages:
5730 -- Scan the <sourcename>.txt file to create lateximages.
5732 elseif arg[1] == "limages" then
5733 loadconf ()
5734 print ("lwarpmk: Processing images.")
5735 createlateximages ()
5736 print ("lwarpmk: Done.")
5737
5738
5739 -- lwarpmk again:
5740 -- Touch the source to trigger a recompile.
5742 elseif arg[1] == "again" then
5743 loadconf ()
5744 updateanddone ()
5745
5746
5747 -- lwarpmk clean:
5748 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
5750 elseif arg[1] == "clean" then
5751 loadconf ()
5752 removeaux ()
5753 print ("lwarpmk: Done.")
5754
```

```
5755
5756 -- lwarpmk cleanall
5757 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
         and also project.pdf, project.dvi, *.html
5760 elseif arg[1] == "cleanall" then
5761 loadconf ()
5762 removeaux ()
5763 os.execute ( rmname .. " " ..
        sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
5765
        sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
5766
        "*.html"
5767
5768 print ("lwarpmk: Done.")
5769
5770
5771 -- lwarpmk cleanlimages
5772 -- Remove images from the imagesdirectory.
5774 elseif arg[1] == "cleanlimages" then
5775 loadconf ()
5776 os.execute ( rmname .. " " .. imagesdirectory .. dirslash .. "*" )
5777 print ("lwarpmk: Done.")
5779 -- lwarpmk epstopdf <list of file names>
5780 -- Convert EPS files to PDF using epstopdf
5781 elseif arg[1] == "epstopdf" then
5782 convertepstopdf ()
5783 print ("lwarpmk: Done.")
5784
5785
5786 -- lwarpmk pdftosvg <list of file names>
5787 -- Convert PDF files to SVG using pdftocairo
5788 elseif arg[1] == "pdftosvg" then
5789 convertpdftosvg ()
5790 print ("lwarpmk: Done.")
5791
5792
5793 -- lwarpmk with no argument :
5795 elseif (arg[1] == nil) then
5796 printhelp ()
5797
5799 -- lwarpmk -v:
5801 elseif (arg[1] == "-v" ) then
5802 -- The version number has already been printed
5803 -- by the lwarpmk intro.
5804
5805 -- lwarpmk -h or lwarpmk --help:
5807 elseif (arg[1] == "-h" ) or (arg[1] == "--help") then
5808 printusage ()
5811 -- Unknown command:
5812
5813 else
5814 printhelp ()
```

```
5815 print ("\nlwarpmk: ****** Unknown command \""..arg[1].."\". ******\n")
5816 end
5817
5818 end -- not --version
5819 \end{filecontents*}
5820 \ \end{Verbatim}% for syntax highlighting
5821 \end{LWRcreatelwarpmk}
```

41 Stacks

for HTML output: 5822 \begin{warpHTML}



Stacks are used to remember how to close sections and list items. Before a new section is started, previously nested sections and items must be closed out (un-nested) in proper order. Note that starting a new section may close several levels of previously nested items at the same time. For example, starting a new \section would close any currently open subsection, subsubsection, and paragraph. General environments are not nested on the stack since they have their own close mechanism. List environments are nested, and items inside those environments are nested one level deeper still. List environments may be nested inside other list environments, and list items are nested inside list environments as well. Thus, the stack may have items which are not necessarily in order, since a description may contain an enumerate, for example. Depths to be recorded in \LWR@closedepthone, etc.

41.1 Assigning depths

initial depths for empty stack entries:

```
5823 \newcommand*{\LWR@depthnone}{-5}
```

All sectioning depths are deeper than LWR@depthfinished:

```
5824 \newcommand*{\LWR@depthfinished}{-4}
5825 \newcommand*{\LWR@depthbook}{-2}
5826 \newcommand*{\LWR@depthpart}{-1}
5827 \newcommand*{\LWR@depthchapter}{0}
5828 \newcommand*{\LWR@depthsection}{1}
5829 \newcommand*{\LWR@depthsubsection}{2}
5830 \newcommand*{\LWR@depthsubsection}{3}
5831 \newcommand*{\LWR@depthsubsaction}{4}
5832 \newcommand*{\LWR@depthsubparagraph}{4}
5832 \newcommand*{\LWR@depthsubparagraph}{5}

Used by \itemize, \enumerate, \description:
5833 \newcommand*{\LWR@depthlist}{6}

Used by \item:
5834 \newcommand*{\LWR@depthlistitem}{7}
5835 \let\LWR@depthdescitem\LWR@depthlistitem
```

41.2 Closing actions

A stack to record the action to take to close each nesting level: Add more levels of stack if necessary for a very deeply nested document, adding to \pushclose and \popclose as well.

```
5836 \newcommand*{\LWR@closeone}{}% top of the stack
5837 \newcommand*{\LWR@closetwo}{}
5838 \newcommand*{\LWR@closethree}{}
5839 \newcommand*{\LWR@closefour}{}
5840 \newcommand*{\LWR@closefive}{}
5841 \newcommand*{\LWR@closesix}{}
5842 \newcommand*{\LWR@closeseven}{}
5843 \newcommand*{\LWR@closeeight}{}
5844 \newcommand*{\LWR@closenine}{}
5845 \newcommand*{\LWR@closeten}{}
5846 \newcommand*{\LWR@closeeleven}{}
5847 \newcommand*{\LWR@closetwelve}{}
5848 \newcommand*{\LWR@closethirteen}{}
5849 \newcommand*{\LWR@closefourteen}{}
5850 \newcommand*{\LWR@closefifteen}{}
5851 \newcommand*{\LWR@closesixteen}{}
5852 \newcommand*{\LWR@closeseventeen}{}
5853 \newcommand*{\LWR@closeeighteen}{}
5854 \newcommand*{\LWR@closenineteen}{}
```

41.3 Closing depths

A stack to record the depth of each level:

 \triangle

Note that nested LATEX structures may push depths which are non-sequential.

```
Ex:

\begin{itemize}
  \item{A}
  \begin{description}
    \item{B}
  \end{description}
\end{itemize}
```

```
5855 \newcommand*{\LWR@closedepthone}{\LWR@depthnone}% top of the stack 5856 \newcommand*{\LWR@closedepthtwo}{\LWR@depthnone} 5857 \newcommand*{\LWR@closedepththree}{\LWR@depthnone} 5858 \newcommand*{\LWR@closedepthfour}{\LWR@depthnone} 5859 \newcommand*{\LWR@closedepthfive}{\LWR@depthnone} 5860 \newcommand*{\LWR@closedepthsix}{\LWR@depthnone} 5861 \newcommand*{\LWR@closedepthsix}{\LWR@depthnone} 5862 \newcommand*{\LWR@closedeptheight}{\LWR@depthnone} 5863 \newcommand*{\LWR@closedeptheight}{\LWR@depthnone} 5864 \newcommand*{\LWR@closedepthinne}{\LWR@depthnone} 5865 \newcommand*{\LWR@closedeptheleven}{\LWR@depthnone} 5866 \newcommand*{\LWR@closedeptheleven}{\LWR@depthnone} 5866 \newcommand*{\LWR@closedepthtwelve}{\LWR@depthnone} 5867 \newcommand*{\LWR@closedepththirteen}{\LWR@depthnone} 5868 \newcommand*{\LWR@closedepthfourteen}{\LWR@depthnone}
```

```
5869 \newcommand*{\LWR@closedepthfifteen}{\LWR@depthnone}
5870 \newcommand*{\LWR@closedepthsixteen}{\LWR@depthnone}
5871 \newcommand*{\LWR@closedepthseventeen}{\LWR@depthnone}
5872 \newcommand*{\LWR@closedeptheighteen}{\LWR@depthnone}
5873 \newcommand*{\LWR@closedepthnineteen}{\LWR@depthnone}
```

41.4 Pushing and popping the stack

\LWR@pushclose $\{\langle sectiontype \rangle\}$

Pushes one return action and its LATEX depth onto the stacks.

```
5874 \NewDocumentCommand{\LWR@pushclose}{m}
5875 {%
5876 \global\let\LWR@closenineteen\LWR@closeeighteen%
5877 \global\let\LWR@closeeighteen\LWR@closeseventeen%
5878 \global\let\LWR@closeseventeen\LWR@closesixteen%
5879 \global\let\LWR@closesixteen\LWR@closefifteen%
5880 \global\let\LWR@closefifteen\LWR@closefourteen%
5881 \global\let\LWR@closefourteen\LWR@closethirteen%
5882 \global\let\LWR@closethirteen\LWR@closetwelve%
5883 \global\let\LWR@closetwelve\LWR@closeeleven%
5884 \global\let\LWR@closeeleven\LWR@closeten%
5885 \global\let\LWR@closeten\LWR@closenine%
5886 \global\let\LWR@closenine\LWR@closeeight%
5887 \global\let\LWR@closeeight\LWR@closeseven%
5888 \global\let\LWR@closeseven\LWR@closesix%
5889 \global\let\LWR@closesix\LWR@closefive%
5890 \global\let\LWR@closefive\LWR@closefour%
5891 \global\let\LWR@closefour\LWR@closethree%
5892 \global\let\LWR@closethree\LWR@closetwo%
5893 \global\let\LWR@closetwo\LWR@closeone%
5894 \global\csletcs{LWR@closeone}{LWR@printclose#1}%
5895 \global\let\LWR@closedepthnineteen\LWR@closedeptheighteen%
5896 \global\let\LWR@closedeptheighteen\LWR@closedepthseventeen%
5897 \global\let\LWR@closedepthseventeen\LWR@closedepthsixteen%
5898 \global\let\LWR@closedepthsixteen\LWR@closedepthfifteen%
5899 \global\let\LWR@closedepthfifteen\LWR@closedepthfourteen%
5900 \global\let\LWR@closedepthfourteen\LWR@closedepththirteen%
5901 \global\let\LWR@closedepththirteen\LWR@closedepthtwelve%
5902 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven%
5903 \global\let\LWR@closedeptheleven\LWR@closedepthten%
5904 \global\let\LWR@closedepthten\LWR@closedepthnine%
5905 \global\let\LWR@closedepthnine\LWR@closedeptheight%
5906 \global\let\LWR@closedeptheight\LWR@closedepthseven%
5907 \global\let\LWR@closedepthseven\LWR@closedepthsix%
5908 \global\let\LWR@closedepthsix\LWR@closedepthfive%
5909 \global\let\LWR@closedepthfive\LWR@closedepthfour%
5910 \global\let\LWR@closedepthfour\LWR@closedepththree%
5911 \global\let\LWR@closedepththree\LWR@closedepthtwo%
5912 \global\let\LWR@closedepthtwo\LWR@closedepthone%
5913 \global\csletcs{LWR@closedepthone}{LWR@depth#1}%
```

Error if the deepest depth is no longer \LWR@depthnone, which means that it somehow has been nested too deeply, or things are not being unnested correctly.

```
5914 \ifdefstring{\LWR@closedepthnineteen}{\LWR@depthnone}% 5915 {}%
```

```
5916 {%
5917     \PackageError{\warp}%
5918     {The document is nested too deeply for Lwarp}%
5919     {PLEASE inform the Lwarp maintainer!}%
5920 }%
5921}
```

\LWR@popclose Pops one action and its depth off the stacks.

```
5922 \newcommand*{\LWR@popclose}
5923 {%
5924 \global\let\LWR@closeone\LWR@closetwo%
5925 \global\let\LWR@closetwo\LWR@closethree%
5926 \global\let\LWR@closethree\LWR@closefour%
5927 \global\let\LWR@closefour\LWR@closefive%
5928 \global\let\LWR@closefive\LWR@closesix%
5929 \global\let\LWR@closesix\LWR@closeseven%
5930 \verb|\global\let\LWR@closeseven\LWR@closeeight\%|
5931 \global\let\LWR@closeeight\LWR@closenine%
5932 \global\let\LWR@closenine\LWR@closeten%
5933 \global\let\LWR@closeten\LWR@closeeleven%
5934 \global\let\LWR@closeeleven\LWR@closetwelve%
5935 \global\let\LWR@closetwelve\LWR@closethirteen%
5936 \global\let\LWR@closethirteen\LWR@closefourteen%
5937 \global\let\LWR@closefourteen\LWR@closefifteen%
5938 \global\let\LWR@closefifteen\LWR@closesixteen%
5939 \global\let\LWR@closesixteen\LWR@closeseventeen%
5940 \verb|\global\let\LWR@closeseventeen\LWR@closeeighteen\%|
5941 \global\let\LWR@closeeighteen\LWR@closenineteen%
5942 \global\let\LWR@closedepthone\LWR@closedepthtwo%
5943 \verb|\global\let\LWR@closedepthtwo\LWR@closedepththree\%|
5944 \global\let\LWR@closedepththree\LWR@closedepthfour%
5945 \verb|\global\let\LWR@closedepthfour\LWR@closedepthfive\%|
5946 \global\let\LWR@closedepthfive\LWR@closedepthsix%
5947 \global\let\LWR@closedepthsix\LWR@closedepthseven%
5948 \global\let\LWR@closedepthseven\LWR@closedeptheight%
5949 \global\let\LWR@closedeptheight\LWR@closedepthnine%
5950 \global\let\LWR@closedepthnine\LWR@closedepthten%
5951 \verb|\global\let\LWR@closedepthten\LWR@closedeptheleven\%|
5952 \global\let\LWR@closedeptheleven\LWR@closedepthtwelve%
5955 \global\let\LWR@closedepthfourteen\LWR@closedepthfifteen%
5956 \global\let\LWR@closedepthfifteen\LWR@closedepthsixteen%
5957 \global\let\LWR@closedepthsixteen\LWR@closedepthseventeen%
5958 \global\let\LWR@closedepthseventeen\LWR@closedeptheighteen%
5959 \global\let\LWR@closedeptheighteen\LWR@closedepthnineteen%
```

5961 \end{warpHTML}

42 Data arrays

These macros are similar to the <code>arrayjobx</code> package, except that \LWR@setexparray's argument is expanded only once when assigned.

name has no backslash, index can be a number or a text name, and an empty value must be \relax instead of empty.

To assign an empty value:

```
\LWR@setexparray{name}{index}{}
```

```
for HTML output: 5962 \begin{warpHTML}
 \LWR@setexparray \{\langle name \rangle\} \{\langle index \rangle\} \{\langle contents \rangle\}
                    5963 \newbool{LWR@setexparray@doingparhooks}
                    5964
                    5965 \NewDocumentCommand{\LWR@setexparray}{m m m}{%
```

Temporarily disable paragraph handling during the assignment. This is not done in a group with global assignments because a table may be nested.

```
\let\ifLWR@setexparray@doingparhooks\ifLWR@doingparhooks%
5966
       \setbool{LWR@doingparhooks}{false}%
5967
       \let\LWR@setexparray@par\par%
5968
5969
       \let\par\relax%
```

The name of the control sequence is the given name with the index appended.

```
5970
        \xdef\LWR@thisexparrayname{#1#2}%
```

Locally assign the value to the control sequence:

```
5971
        \ifstrempty{#3}%
5972
            {\csdef{\LWR@thisexparrayname}{}}%
            {\csedef{\LWR@thisexparrayname}{#3}}%
5973
```

Restore the paragraph handling:

```
\let\ifLWR@doingparhooks\ifLWR@setexparray@doingparhooks%
                 5974
                 5975
                          \let\par\LWR@setexparray@par%
                 5976 }
\LWR@getexparray \{\langle name \rangle\} \{\langle index \rangle\}
                 5977 \newcommand*{\LWR@getexparray}[2]{%
                 5978
                          \@nameuse{#1#2}%
                 5979 }
                 5980 \end{warpHTML}
```

43 **Localizing catcodes**

```
for HTML & PRINT: 5981 \begin{warpall}
```

tab character &

Misplaced alignment Place \StartDefiningTabulars and \StopDefiningTabulars before and after defining macros or environments which include the tabular & character in their definitions.

The catcode of & must be changed before the definitions begin, and must be restored afterwards. Doing so avoids the error

Misplaced alignment tab character &.

\StartDefiningTabulars Place before defining something with & in it.

```
5982 \newcommand{\StartDefiningTabulars}{%
5983 \LWR@traceinfo{StartDefiningTabulars}%
5984 \warpHTMLonly{\catcode'\&=\active}%
5985 }
```

 $\verb|\StopDefiningTabulars|| Place after defining something with \& in it.$

```
5986 \newcommand{\StopDefiningTabulars}{%
5987 \LWR@traceinfo{StopDefiningTabulars}%
5988 \warpHTMLonly{\catcode'\&=4}%
5989 }
```

LWR@mathmacro(bool)

True if currently defining math macros. Used to disable svg math hashing and MathJax math contents while defining a macro using inline math. Begin a macro, it is not guaranteed that the contents are static, and so the image must be unique. The contents also almost certainly will not be parsed correctly by MathJax.

```
5990 \newbool{LWR@mathmacro}
5991 \boolfalse{LWR@mathmacro}
```

\StartDefiningMath Place before defining something with \$ in it.

```
5992 \newcommand{\StartDefiningMath}{%
5993 \LWR@traceinfo{StartDefiningMath}%
5994 \warpHTMLonly{\catcode'\$=\active}%
5995 }
```

\StopDefiningMath Place after defining something with \$ in it.

```
5996 \newcommand{\StopDefiningMath}{%
5997 \LWR@traceinfo{StopDefiningMath}%
5998 \warpHTMLonly{\catcode'\$=3}% math shift
5999 }
6000 \end{warpall}
```

for HTML output: 6001 \begin{warpHTML}

A definition for & in case it is referred to after \StartDefiningTabulars but outside a tabular.

```
6002 \StartDefiningTabulars
6003 \protected\gdef&{%
6004 \PackageWarning{\warp}{%
6005 An ampersand is being used inside a tabular\MessageBreak
6006 }%
6007 }%
6008 \StopDefiningTabulars
6009 \end{\warpHTML}
```

44 Localizing dynamic math

Inline svG math usually uses a hash of its contents to generate lateximages which are reusable for multiple instances with the same contents. If the contents may change for each use, such as depending on the current value of a counter, then \inlinemathother must be used before the inline math expression, and \inlinemathnormal must be used after.

For MathJax, the inline math expression is usually printed for MathJax to interpret. When marked as dynamic math, the following inline math expression will be displayed as an unhashed inline svg image instead.

For existing code and packages, it may be possible to patch macros after they have been defined, using the xpatch package, which is pre-loaded by lwarp:

```
\xpatchcmd{\macroname}
    {$math expression$}
    {\inlinemathother$math expression$\inlinemathnormal}
    {}
    {\typeout{Error patching macroname.}}
```

```
for HTML & PRINT: 6010 \begin{warpall}
```

LWR@dynamicmath (*bool*) True to mark inline math which is dynamic in nature, thus should not be hashed for reuse.

```
6011 \newbool{LWR@dynamicmath} 6012 \boolfalse{LWR@dynamicmath}
```

\inlinemathother Place before using \$... \$ or \(... \) if the contents of the math are not static, depending on counters or dynamic macros.

```
6013 \newcommand{\inlinemathother}{%
6014 \LWR@traceinfo{inlinemathother}%
6015 \booltrue{LWR@dynamicmath}%
6016 }
```

\inlinemathnormal Place after using \$... \$ or \(... \) with dynamic contents.

```
6017 \newcommand{\inlinemathnormal}{%
6018 \LWR@traceinfo{inlinemathnormal}%
6019 \boolfalse{LWR@dynamicmath}%
6020 }
6021 \end{warpall}
```

45 HTML entities

```
HTML Unicode entities:
```

```
6023 \let\LWR@origampersand\&
```

```
\LWR@fontfortags \{\langle macro\ name \rangle\} \{\langle argument \rangle\}
```

Forces roman TT font for HTML tags.

```
6024 \newrobustcmd*{\LWR@fontfortags}[2]{%
        \ifmmode%
6025
            \PackageError{lwarp}%
6026
                {%
6027
6028
                    An HTML tag was generated inside math.\MessageBreak
6029
                    This should never occur.\MessageBreak
6030
                    Something is broken in Lwarp.\MessageBreak
6031
                    Enter 'h' for details%
6032
                }%
                {(Using #1{#2}.)}%
6033
        \else%
6034
```

Used by ltjtbook, platex, and related.

Used by babel:

```
6040 \ifdef{\latintext}
6041 {\latintext}
6042 {\fontencoding\encodingdefault}%
6043 }%
6044 \LWR@print@normalfont%
6045 \LWR@origttfamily%
6046 \fi%
6047 }
```

\HTMLentity $\{\langle entitytag \rangle\}$

\protect is in case the tag appears in toc, lof, lot.

```
6048 \newcommand*{\hTMLentity}[1]{%
6049 % \LWR@traceinfo{\hTMLentity \detokenize{#1}}%
6050 \begingroup%
6051 \LWR@hook@processingtags%
6052 \LWR@fontfortags{\hTMLentity}{\detokenize{#1}}%
6053 \protect\LWR@origampersand\LWR@isolate{#1};%
6054 \endgroup%
6055 % \LWR@traceinfo{\hTMLentity \done}%
6056 }
```

```
\HTMLunicode \{\langle hex\_unicode \rangle\}
```

```
\label{lem:code} $$1_{\\rm LWR@orignound_{x\#1}}$$
```

```
\\&
      6058 \renewrobustcmd*{\&}{\\HTMLentity{amp}}

\textless
      6059 \let\LWR@origtextless\textless
      6060 \renewrobustcmd*{\\textless}{\\HTMLentity{lt}}

\textgreater

      6061 \let\LWR@origtextgreater\textgreater
      6062 \renewrobustcmd*{\\textgreater}{\\HTMLentity{gt}}

6063 \end{\\warp\HTML}
```

46 HTML filename generation

The filename of the homepage is set to \HomeHTMLFilename.html. The filenames of additional sections start with \HTMLFilename, to which is appended a section number or a simplified section name, depending on FileSectionNames.

```
for HTML & PRINT: 6064 \begin{warpall}
```

\BaseJobname The \jobname of the printed version, even if currently compiling the HTML version. I.e. this is the \jobname without _html appended. This is used to set \HomeHTMLFilename if the user did not provide one.

```
6065 \providecommand*{\BaseJobname}{\jobname}
```

\HTMLFilename The prefix for all generated HTML files other than the home page, defaulting to empty. See section 7.6.1.

```
6066 \providecommand*{\HTMLFilename}{}
```

\HomeHTMLFilename The filename of the home page, defaulting to the \BaseJobname. See section 7.6.1.

```
6067 \providecommand*{\HomeHTMLFilename}{\BaseJobname}
```

```
\SetHTMLFileNumber \{\langle number \rangle\}
```

Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

```
6068 \newcommand*{\SetHTMLFileNumber}[1]{%
6069 \setcounter{LWR@htmlfilenumber}{#1}%
6070 }
```

Selects how to create HTML file names. FileSectionNames (bool)

Defaults to use section names in the filenames.

```
6071 \newbool{FileSectionNames}
6072 \booltrue{FileSectionNames}
6073 \end{warpall}
```

for HTML output: 6074 \begin{warpHTML}

Updated each time a new HTML file is begun. Used to provide HTML previous/next web page links.

```
6075 \newcounter{LWR@HTMLpagenum}
6076 \setcounter{LWR@HTMLpagenum}{0}
```

LWR@htmlseqfilenumber (Ctr) A sequential count of the number of each HTML file as it is being created. Number 0 is the home page. Unlike \LWR@htmlfilenumber, this one is known to increment by one for each file. This is used to generate previous /next links for each web page, via labels called \BaseJobname-autofile-*, and the last page is also labelled \BaseJobname-autofile-last.

```
6077 \newcounter{LWR@htmlseqfilenumber}
6078 \setcounter{LWR@htmlseqfilenumber}{0}
```

LWR@setseqfilelabel (bool) At each new HTML file, this is false until a sectional unit is used, at which point this is set true and a label is placed. In this way, the previous/next labels will point to a named section.

```
6079 \newbool{LWR@setseqfilelabel}
6080 \setbool{LWR@setseqfilelabel}{false}
```

LWR@htmlfilenumber (Ctr) Records the number of each HTML file as it is being created. Number 0 is the home page. This might not be sequential, as the user may use \SetHTMLFileNumber to create groups of numbered nodes.

```
6081 \newcounter{LWR@htmlfilenumber}
6082 \setcounter{LWR@htmlfilenumber}{0}
```

\LWR@htmlsectionfilename $\{\langle htmlfilenumber\ or\ name \rangle\}$

Prints the filename for a given section: \HTMLFilename{}filenumber/name.html

```
6083 \newcommand*{\LWR@htmlsectionfilename}[1]{%
6084 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
6085 \begingroup%
```

Disable CJK xpinyin while generating file names.

```
6086 \LWR@disablepinyin%
```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```
6087% \LWR@traceinfo{about to assign temp}%
```

```
6088 \LWR@sanitize{#1}%
6089 \LWR@traceinfo{about to compare with ??}%
6090 \ifdefstring{\LWR@sanitized}{??}
        {\LWR@traceinfo{found ??}}%
        {\LWR@traceinfo{not found ??}}%
6093 \LWR@traceinfo{about to compare with zero or empty}%
6094 \ifboolexpr{
        test {\left( \begin{array}{c} LWR@sanitized \\ 0 \end{array} \right)} or
6095
        test {\ifdefstring{\LWR@sanitized}{}} or
6096
        test {\ifdefstring{\LWR@sanitized}{??}}
6097
6098 }
6099 {%
6100
        \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
6101
        \HomeHTMLFilename.html%
6102 }%
```

For a LATEX section named "Index" or "index" without a prefix, create a filename with a trailing -0 to avoid colliding with the HTML filename index.html:

```
6103 {%
        \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@sanitized}%
6104
6105
        \ifboolexpr{
                test{\ifdefvoid{\HTMLFilename}} and
6106
6107
                (
                     test{\ifdefstring{\LWR@sanitized}{Index}} or
6108
                     test{\ifdefstring{\LWR@sanitized}{index}}
6109
                )
6110
        }%
6111
6112
        {%
6113
            \LWR@traceinfo{Adding a zero to the index filename.}%
6114
            \LWR@sanitized-0.html%
6115
        }%
```

Otherwise, create a filename with the chosen prefix:

\LWR@htmlrefsectionfilename $\{\langle label \rangle\}$

Prints the filename for the given label

```
6123 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
6124 \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%
```

\LWR@nullfonts to allow math in a section name.

```
6125 \begingroup%
6126 \LWR@nullfonts%
6127 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
6128 \endgroup%
6129 \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
6130 }
```

```
6131 \end{warpHTML}
```

47 Homepage link

```
for HTML & PRINT: 6132 \begin{warpall}
    \linkhomename Holds the default name for the home link.
    6133 \newcommand{\linkhomename}{Home}
    6134 \end{warpall}

for HTML output: 6135 \begin{warpHTML}
```

\LinkHome May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```
6136 \newcommand*{\LinkHome}{%
6137    \LWR@subhyperrefclass{\HomeHTMLFilename.html}{\linkhomename}{\linkhome}%
6138 }
6139 \end{\warpHTML}

for PRINT output: 6140 \begin{\warpprint}
```

\LinkHome May be used wherever you wish to place a link back to the homepage. For print output, if hyperref is available a hyperlink to the first page is used, named by \linkhomename. If hyperref is not available, a pageref is used instead.

\BaseJobname is included in the link label in case multiple documents are cross-referenced.

```
6141 \AtBeginDocument{
                 6142 \@ifundefined{hyperref}{
                 6143
                         \newcommand*{\LinkHome}{%
                             \linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
                 6144
                 6145
                 6146 }{
                 6147
                         \newcommand*{\LinkHome}{%
                             \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}%
                 6148
                 6149
                 6150 }
                 6151 }
                 6152
                 6153 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}
                 6154 \end{warpprint}
for HTML output: 6155 \begin{warpHTML}
```

\LWR@topnavigation Creates a link to the homepage at the top of the page for use when the window is too narrow for the sideToC.

```
6156 \newcommand*{\LWR@topnavigation}{%
6157 \LWR@htmlelementclassline{nav}{topnavigation}{\LinkHome}
6158 }
```

\LWR@botnavigation Creates a link to the homepage at the bottom of the page for use when the window is too narrow for the sidetoc.

```
6159 \newcommand*{\LWR@botnavigation}{%
6160 \LWR@htmlelementclassline{nav}{botnavigation}{\LinkHome}
6161 }
6162 \end{warpHTML}
```

48 Previous/next navigation links

```
\linkpreviousname What to call the link to the previous web page.

6164 \newcommand*{\linkpreviousname}{Previous}

\linknextname What to call the link to the next web page.

6165 \newcommand*{\linknextname}{Next}

6166 \end{warpall}

for PRINT output: 6167 \begin{warpprint}

\LinkPrevious Creates a link to the previous web page if there is one.

6168 \newcommand*{\LinkPrevious}{}

\LinkNext Creates a link to the next web page if there is one.

6169 \newcommand*{\LinkNext}{}

6170 \end{warpprint}

for HTML output: 6171 \begin{warpHTML}

\LinkPrevious Creates a link to the previous web page if there is one.
```

The links refer to the LATEX labels \Basejobname-autofile-*

```
6172 \newcommand*{\LinkPrevious}{%
6173  \infnumless{\value{LWR@htmlseqfilenumber}}{1}{}{%
6174   \setcounter{LWR@tempcountone}{\value{LWR@htmlseqfilenumber}-1}%
6175   \LWR@subhyperrefclass{%
6176   \LWR@htmlrefsectionfilename{%
6177   \BaseJobname-autofile-\arabic{LWR@tempcountone}%
```

```
6178 }%
6179 }{\linkpreviousname}{linkhome}%
6180 }%
6181}
```

\LinkNext Creates a link to the next web page if there is one.

The links refer to the LATEX labels \Basejobname-autofile-* and the last is the label \Basejobname-autofile-last

```
6182 \newcommand*{\LinkNext}{%
       \ifcsdef{r@\BaseJobname-autofile-last@lwarp}{%
6183
            \edef\LWR@tempone{%
6184
6185
            \LWR@htmlfileref{\BaseJobname-autofile-\arabic{LWR@htmlsegfilenumber}}%
6186
6187
            \edef\LWR@temptwo{%
                \LWR@htmlfileref{\BaseJobname-autofile-last}%
6188
6189
            \ifdefequal{\LWR@tempone}{\LWR@temptwo}{}{%
6190
                \setcounter{LWR@tempcountone}{\value{LWR@htmlseqfilenumber}+1}%
6191
                \LWR@subhyperrefclass{%
6192
                    \LWR@htmlrefsectionfilename{%
6193
                         \BaseJobname-autofile-\arabic{LWR@tempcountone}%
6194
6195
                }{\linknextname}{linkhome}%
6196
6197
6198
       }{}%
6199 }
6200 \end{warpHTML}
```

49 \LWRPrintStack diagnostic tool

Δ

Diagnostics tool: Prints the LATEX nesting depth values for the stack levels. \LWR@startpars is used before printing the stack, so that \LWRPrintStack may be called from anywhere in the normal text flow.

for HTML output: 6201 \begin{warpHTML}

\LWRPrintStack Prints the closedepth stack.

```
6202 \newcommand*{\LWR@subprintstack}{
6203 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
6204 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
6205 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
6206 \LWR@closedepthten\ \LWR@closedeptheleven\ \LWR@closedepthtwelve\
6207 \LWR@closedepthtirteen\ \LWR@closedepthfourteen\ \LWR@closedepthfifteen\
6208 \LWR@closedepthsixteen\ \LWR@closedepthseventeen\ \LWR@closedeptheighteen\
6209 \LWR@closedepthnineteen\
6210 }
6211
6212 \newcommand*{\LWRPrintStack}{
6213 \LWR@startpars
6214 \LWR@subprintstack
6215 }
```

```
6216 \end{warpHTML}

for PRINT output: 6217 \begin{warpprint}
6218 \newcommand*{\LWRPrintStack}{}
6219 \end{warpprint}
```

50 Closing stack levels

```
for HTML output: 6220 \begin{warpHTML}
```

Close one nested level:

```
6221 \newcommand*{\LWR@closeoneprevious}{%
6222
6223 \LWR@closeone
6224
6225 \LWR@popclose
6226 }
```

\LWR@closeprevious $\{\langle sectintype \rangle\}$ Close everything up to the given depth:

```
6227 \newcommand*{\LWR@closeprevious}[1]{%
6228 \LWR@traceinfo{%
6229         LWR@closeprevious to depth \csuse{LWR@depth#1}, %
6230         depths are \LWR@subprintstack%
6231 }%
```

Close any pending paragraph:

```
6232 \LWR@stoppars%
```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```
6233 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{}}} \cspace{LWR@depth#1}}} \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loca
6234 {%
                                     \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
6235
                                      \LWR@closeoneprevious%
6236
6237 }%
\label{lem:comp} $$ if boolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{\csuse{LWR@depth#1}}}} $$
6239 {%
                                     \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
6240
                                      \LWR@closeoneprevious%
6241
6242 }{}%
6243 \LWR@traceinfo\{LWR@closeprevious: done, depths are \LWR@subprintstack\}\%
6244 }
6245 \end{warpHTML}
```

51 PDF pages and styles

```
for HTML output: 6246 \begin{warpHTML}
\LWR@forcenewpage New PDF page a before major environment.
                    This is used just before major environments, such as verse. Reduces the chance
                    of an environment overflowing the HTML PDF output page.
                  6247 \newcommand{\LWR@forcenewpage}{%
                  6248 \LWR@traceinfo{LWR@forcenewpage}%
                  6249 \ifinner\else%
                  6250
                          \LWR@traceinfo{LWR@forcenewpage A}%
                  6251
                          \LWR@stoppars%
                  6252
                          \LWR@traceinfo{LWR@forcenewpage B}%
                          \LWR@maybe@orignewpage%
                          \LWR@traceinfo{LWR@forcenewpage C}%
                  6254
                          \LWR@startpars%
                  6255
                  6256\fi%
                  6257 \LWR@traceinfo{LWR@forcenewpage done}%
                  6258 }
                    \pagestyle, etc. are nullified for HTML output.
        \pagestyle \{\langle style \rangle\}
                  6259 \renewcommand*{\pagestyle}[1]{}
   \thispagestyle \{\langle style \rangle\}
                  6260 \renewcommand*{\thispagestyle}[1]{}
         \markboth \{\langle \mathit{left} \rangle\} \{\langle \mathit{right} \rangle\}
                  6261 \renewcommand*{\markboth}[2]{}
        \markright \{\langle \mathit{right} \rangle\}
                  6262 \renewcommand*{\markright}[1]{}
    \raggedbottom
                  6263 \renewcommand*{\raggedbottom}{}
      \flushbottom
                  6264 \renewcommand*{\flushbottom}{}
```

6265 \renewcommand*{\sloppy}{}

\sloppy

```
\label{thm:command} $$ \{s = \frac{commands}{s} $$ $$ e_{6268} \end{warpHTML} $$
```

52 HTML tags, spans, divs, elements

for HTML output: 6269 \begin{warpHTML}

52.1 Mapping IATEX sections to HTML sections

```
6270 \newcommand*{\LWR@tagtitle}{h1}
6271 \newcommand*{\LWR@tagtitleend}{/h1}
6272 \newcommand*{\LWR@tagbook}{div class=\textquotedbl{}book\textquotedbl}
6273 \newcommand*{\LWR@tagbookend}{/div}
6274 \newcommand*{\LWR@tagpart}{h2}
6275 \newcommand*{\LWR@tagpartend}{/h2}
6276 \newcommand*{\LWR@tagchapter}{h3}
6277 \newcommand*{\LWR@tagchapterend}{/h3}
6278 \newcommand*{\LWR@tagsection}{h4}
6279 \mbox{\WR@tagsectionend}{/h4}
6280 \newcommand*{\LWR@tagsubsection}{h5}
6281 \newcommand*{\LWR@tagsubsectionend}{/h5}
6282 \newcommand*{\LWR@tagsubsubsection}{h6}
6283 \newcommand*{\LWR@tagsubsubsectionend}{/h6}
6284 \newcommand*{\LWR@tagparagraph}{span class=\textquotedbl{}paragraph\textquotedbl}
6285 \newcommand*{\LWR@tagparagraphend}{/span}
6287 \newcommand*{\LWR@tagsubparagraphend}{/span}
6289 \newcommand*{\LWR@tagregularparagraph}{p}
```

52.2 Hook while processing tags

\LWR@hook@processingtags (Hook) [lwarp]

This is used to disable special text processing while processing HTML tags. Special processing includes that done by babel-french, luavina, xevlna.

\LWR@hook@processingtags Disable special text processing while generating tags. Replaces \LWR@FBcancel in most places.

6290 \newcommand*{\LWR@hook@processingtags}{}

52.3 Babel-French tag modifications

Adjust babel-french for HTML spaces. So far, this only works for *pdflatex* and *xelatex*.

```
(Emulates or patches code by DANIEL FLIPO.)
6291 \providecommand*{\LWR@FBcancel}{}
6292
```

6293 \AtBeginDocument{%

In some circumstances, \NoAutoSpacing may be defined when \frenchbsetup is not

```
6294 \@ifundefined{NoAutoSpacing}%
6295
       {}%
6296
       {%
           \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
6297
           \appto{\LWR@hook@processingtags}{\LWR@FBcancel}%
6298
       }%
6299
6300
6301 \@ifundefined{frenchbsetup}%
6302 {}%
6303 {%
6304
       \frenchbsetup{FrenchFootnotes=false}%
6305 %
       \renewrobustcmd*{\FBcolonspace}{%
6306
           \begingroup%
6307
           \LWR@hook@processingtags%
6308
           \LWR@origampersand{}nbsp;%
6309
           \endgroup%
6310
       }%
6311
       \renewrobustcmd*{\FBthinspace}{%
6312
6313
           \begingroup%
6314
           \LWR@hook@processingtags%
6315
           \WR@origampersand\WR@origpound{}x202f;% \,
6316
           \endgroup%
6317
       }%
       \renewrobustcmd*{\FBguillspace}{%
6318
           \begingroup%
6319
           \LWR@hook@processingtags%
6320
           \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
6321
6322
           \endgroup%
       }%
6323
6324
       \DeclareDocumentCommand{\FBmedkern}{}{%
6325
           \begingroup%
6326
           \LWR@hook@processingtags%
           \LWR@origampersand\LWR@origpound{}x202f;% \,
6327
           \endgroup%
6328
       }%
6329
       \DeclareDocumentCommand{\FBthickkern}{}{%
6330
           \begingroup%
6331
6332
           \LWR@hook@processingtags%
6333
           \LWR@origampersand{}nbsp;% ~
6334
           \endgroup%
6335
       6336
       \ifFBunicode%
6337
       \else%
6338
           \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
6339
           \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
6340
6341
       \fi%
6342 }%
```

6343 }

52.4 HTML output formatting

Helps format the output HTML code for human readability.

\LWR@indentHTML Newline and indent the output HTML code.

```
6344 \newcommand*{\LWR@indentHTML}{%
6345 \LWR@orignewline\LWR@origrule{2em}{0pt}%
6346}
```

\LWR@indentHTMLtwo Newline and indent the output HTML code.

52.5 HTML tags

\LWR@htmltagc $\{\langle tag \rangle\}$ Break ligatures and use upright apostrophes in HTML tags.

\protect is in case the tag appears in TOC, LOF, LOT.

```
6350 \newcommand*{\LWR@htmltagc}[1]{%
       \LWR@traceinfo{LWR@htmltagc !\detokenize{#1}!}%
6351
       \begingroup%
6352
6353
       \LWR@hook@processingtags%
       \LWR@fontfortags{LWR@htmltagc}{\detokenize{#1}}%
6354
       \protect\LWR@origtextless%
6355
       \LWR@isolate{#1}%
6356
       \protect\LWR@origtextgreater%
6357
6358
       \endgroup%
6359 }
```

\LWR@spanwarnformat $\{\langle object \rangle\}$

Warns if the given object is used inside a span.

```
6360 \newcommand*{\LWR@spanwarnformat}[1]{%
6361 \ifnumcomp{\value{LWR@spandepth}}{>}{0}{%
6362 \PackageWarning{\warp}{%
6363 A #1 is being used inside a span.\MessageBreak
6364 Formatting may be lost,%
6365 }%
6366 }{}%
6367}
```

\LWR@spanwarninvalid $\{\langle object \rangle\}$

Warns if the given object is used inside a span.

 $6368 \verb|\newcommand*{\LWR@spanwarninvalid}[1]{%}$

LWR@nestspan (env.) Disable minipage, \parbox, and HTML <div>s inside a .

\begin{LWR@nestspan} must follow the opening tag to allow a paragraph to start if the span is at the beginning of a new paragraph.

\(\text{\cond{LWR@nestspan}}\) must follow the or a may appear inside the span.

```
6376 \newcommand*{\LWR@nestspanitem}{%
        \if@newlist\else{
6377
            \LWR@htmltagc{br /}%
6378
            \LWR@orignewline%
6379
        }\fi%
6380
        \LWR@origitem%
6381
6382 }
6383
6384 \newenvironment*{LWR@nestspan}
6385 {%
6386
        \LWR@traceinfo{LWR@nestspan starting}%
6387
        \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
6388
        {%
            \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
6389
        }%
6390
        {% not in a lateximage
6391
            \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
6392
            \addtocounter{LWR@spandepth}{1}%
6393
```

Nullify several objects inside the span:

```
\RenewDocumentEnvironment{minipage}{O{t} o O{t} m}%
6394
                {\LWR@spanwarnformat{minipage or \protect\parbox}}%
6395
                {}%
6396
            \RenewDocumentEnvironment{BlockClass}{o D(){} m}%
6397
                {\LWR@spanwarnformat{multi-paragraph object}}%
6398
6399
                {}%
            \RenewDocumentEnvironment{LWR@BlockClassWP}{m m D(){} m}%
6400
                {\LWR@spanwarnformat{multi-paragraph object}}%
6401
6402
                {}%
6403
            \renewcommand{\BlockClassSingle}[2]{%
                {\LWR@spanwarnformat{multi-paragraph object}}%
6404
                ##2%
6405
            }%
6406
            \renewcommand{\LWR@forcenewpage}{}%
6407
            \renewcommand{\LWR@liststart}{\LetLtxMacro\item\LWR@nestspanitem}%
6408
            \renewcommand{\LWR@listend}{\leavevmode}%
6409
            \renewenvironment{quote}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
6410
         \renewenvironment{quotation}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
6411
6412
        }% not in a lateximage
6413
        \LWR@traceinfo{LWR@nestspan starting: done}%
6414 }% starting env
6415 {% ending env
```

```
6418
                            {\c {\c dtocounter{LWR@spandepth}{-1}}}
                   6419
                   6420
                            \LWR@traceinfo{LWR@nestspan ending: done}%
                   6421 }
     \LWR@htmlspan \{\langle tag \rangle\} \{\langle text \rangle\}
                     \LWR@spandepth is used to ensure that paragraph tags are not generated inside a
             \triangle
                     span. The exact sequence of when to add and subtract the counter is important
                     to correctly handle the paragraph tags before and after the span.
                   6422 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
                            \LWR@ensuredoingapar%
                   6424
                            \LWR@htmltagc{#1}%
                   6425
                            \begin{LWR@nestspan}%
                   6426
                            \LWR@htmltagc{/#1}%
                   6427
                            \end{LWR@nestspan}%
                   6428
                   6429 }
\LWR@htmlspanclass [\langle style \rangle] (\langle aria\ role \rangle) {\langle class \rangle} {\langle text \rangle}
                   6430 \NewDocumentCommand{\LWR@htmlspanclass}{o D(){} m +m}{%
                            \LWR@traceinfo{LWR@htmlspanclass #3}%
                   6431
                            \LWR@ensuredoingapar%
                   6432
                            \ifblank{#2}%
                   6433
                                {\LWR@subhtmlelementclass{span}[#1]{#3}}%
                   6434
                                {\LWR@subhtmlelementclass{span}[#1](#2){#3}}%
                   6435
                            \begin{LWR@nestspan}%
                   6436
                            #4%
                   6437
                            \LWR@htmltagc{/span}%
                   6438
                   6439
                            \end{LWR@nestspan}%
                            \LWR@traceinfo{LWR@htmlspanclass done}%
                   6440
```

\LWR@traceinfo{LWR@nestspan ending}%

\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%

6416 6417

52.6 Block tags and comments

In the following, *\origttfamily* breaks ligatures, which may not be used for HTML codes:

```
\LWR@htmlopencomment
\LWR@htmlclosecomment
6445 \newcommand*{\LWR@htmlopencomment}{%
6446 % \LWR@traceinfo{LWR@htmlopencomment}%
6447 \begingroup%
```

Print an HTML tag: <tag>

6442 \newcommand*{\LWR@htmltag}[1]{%

\LWR@htmltagc{#1}%

6441 }

6443

6444 }

\LWR@htmltag $\{\langle tag \rangle\}$

```
6448
                                                                                          \LWR@hook@processingtags%
                                                                                          \LWR@fontfortags{LWR@htmlopencomment}{}%
                                                                 6449
                                                                                          \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
                                                                 6450
                                                                 6451
                                                                                          \endgroup%
                                                                 6452 }
                                                                 6453
                                                                 6454 \newcommand*{\LWR@htmlclosecomment}{%
                                                                 6455% \LWR@traceinfo{LWR@htmlclosecomment}%
                                                                                         \begingroup%
                                                                 6456
                                                                                          \LWR@hook@processingtags%
                                                                 6457
                                                                 6458
                                                                                          \LWR@fontfortags{LWr@htmlclosecomment}{}%
                                                                 6459
                                                                                          \LWR@print@mbox{-\/-\LWR@origtextgreater}%
                                                                 6460
                                                                                          \endgroup%
                                                                 6461 }
                \LWR@htmlcomment \{\langle comment \rangle\}
                                                                 6462 \verb|\newcommand{\LWR@htmlcomment}[1]{%}
                                                                                          \ifmmode%
                                                                 6463
                                                                                          \else%
                                                                 6464
                                                                                                       \LWR@htmlopencomment{}%
                                                                 6465
                                                                                                       {%
                                                                 6466
                                                                                                                    \LWR@print@normalfont%
                                                                 6467
                                                                                                                    \LWR@origttfamily% break ligatures
                                                                 6468
                                                                 6469
                                                                 6470
                                                                                                       }%
                                                                 6471
                                                                                                        \LWR@htmlclosecomment{}%
                                                                                          \fi%
                                                                 6472
                                                                 6473 }
\LWR@htmlblockcomment \{\langle comment \rangle\}
                                                                 6474 \newcommand {\tt LWR@htmlblockcomment}[1]
                                                                                         {\tt \{LWR@stoppars\LWR@htmlcomment{\#1}\LWR@startpars}}
                                                                 6475
             \LWR@htmlblocktag \{\langle tag \rangle\} print a stand-alone HTML tag
                                                                 6476 \newcommand*{\LWR@htmlblocktag}[1]{%
                                                                 6477
                                                                                         \LWR@stoppars%
                                                                 6478
                                                                                          \LWR@htmltag{#1}%
                                                                 6479
                                                                                          \LWR@startpars%
                                                                 6480 }
```

52.7 Div class and element class

```
\LWR@subhtmlelementclass \{\langle element \rangle\} [\langle style \rangle] (\langle aria\ role \rangle) \{\langle class \rangle\}
```

Factored and reused in several places.

The trailing spaces allow more places for a line break.

The use of quotedbl instead of " provides improved compatibility with xeCJK.

 $6481 \NewDocumentCommand(\LWR@subhtmlelementclass){m O(} D(){} m){% O(} M)$

\LWR@traceinfo{LWR@subhtmlelementclass !#1!#4!}%

6482

```
6483
                                  \ifblank{#2}%
                                  {% empty style
                         6484
                         6485
                                       \LWR@htmltag{%
                         6486
                                           #1%
                                           \ifblank{#3}{}{ role=\textquotedbl#3\textquotedbl}% spaces
                         6487
                                           \ifblank{#4}{}{ class=\textquotedbl#4\textquotedbl}% spaces
                         6488
                                      }%
                         6489
                                  }%
                         6490
                                  {% non-empty style
                         6491
                                       \LWR@htmltag{%
                         6492
                         6493
                                           #1\LWR@indentHTML%
                         6494
                                          \ifblank{#3}{}{role=\textquotedbl#3\textquotedbl\LWR@indentHTML}%
                         6495
                                        \label{thm:local_thm} $$ \left( \frac{44}{class=\text{textquotedbl}^{WR@indentHTML}} \right) $$
                         6496
                                           style=\textquotedbl#2\textquotedbl\LWR@orignewline%
                         6497
                                       }%
                                  }%
                         6498
                                  \LWR@traceinfo{LWR@subhtmlelementclass done}%
                         6499
                         6500 }
   \LWR@htmlelementclass \{\langle element \rangle\} [\langle style \rangle] (\langle aria\ role \rangle) \{\langle class \rangle\}
                         6501 \NewDocumentCommand{\LWR@htmlelementclass}{m o D(){} m}{%
                         6502
                                  \LWR@stoppars%
                         6503
                                  \LWR@forceemptyline%
                         6504
                                  \ifblank{#3}%
                                       {\LWR@subhtmlelementclass{#1}[#2]{#4}}%
                         6505
                                       {\LWR@subhtmlelementclass{#1}[#2](#3){#4}}%
                         6506
                                  \LWR@startpars%
                         6507
                         6508 }
\LWR@htmlelementclassend \{\langle element \rangle\} \{\langle class \rangle\}
                         6509 \newcommand*{\LWR@htmlelementclassend}[2]{%
                                  \LWR@stoppars%
                         6510
                         6511
                                  \LWR@htmltag{/#1}%
                         6512
                                  \ifbool{HTMLDebugComments}{%
                         6513
                                       \ifblank{#2}%
                                           {\LWR@htmlcomment{End of #1}}%
                         6514
                                           {\LWR@htmlcomment{End of #1 ``#2'`}}%
                         6515
                                  }{}%
                         6516
                         6517
                                  \LWR@startpars%
                         6518 }
       \LWR@htmldivclass [\langle style \rangle] (\langle aria\ role \rangle) {\langle class \rangle}
                         \ifblank{#2}
                         6520
                                       {\LWR@htmlelementclass{div}[#1]{#3}}%
                         6521
                                       {\LWR@htmlelementclass{div}[#1](#2){#3}}%
                         6522
                         6523 }
    \LWR@htmldivclassend \{\langle class \rangle\}
                         6524 \newcommand*{\LWR@htmldivclassend}[1]{%
                                  \LWR@htmlelementclassend{div}{#1}%
                         6526 }
```

52.8 Single-line elements

A single-line element, without a paragraph tag for the line of text:

52.9 HTML5 semantic elements

```
\LWR@htmlelement {\\ element\\} \ 6535 \newcommand*{\LWR@htmlelement}[1]{\% 6536 \LWR@htmlblocktag{\#1} 6537 \} \ \LWR@htmlelementend {\\ element\\} \ 6538 \newcommand*{\LWR@htmlelementend}[1]{\% 6539 \LWR@stoppars 6540 \LWR@htmltag{\\#1} 6541 \LWR@startpars 6542 \} 6543 6544 \end{\warpHTML}
```

52.10 High-level block and inline classes

These are high-level commands which allow the creation of arbitrary block or inline sections which may be formatted with css.

Nullified versions are provided for print mode.

For other direct-formatting commands, see section 95.

```
BlockClass (env.) [\langle style \rangle] (\langle aria role \rangle) \{\langle class \rangle \} High-level interface for \langle div \rangle classes.

Ex: \begin{BlockClass} \{ class \} \text \end{BlockClass} \}

for HTML & PRINT: 6545 \begin{warpall} 6546 \NewDocumentEnvironment{BlockClass} \{ o D() \{ \} m} \{ \} \\
6547 \end{warpall} \}

for HTML output: 6548 \begin{warpHTML} \\
6549 \\
6550 \NewDocumentEnvironment{LWR@HTML@BlockClass} \{ o D() \{ \} m} \\
6550 \NewDocumentEnvironment{LWR@HTML@BlockClass} \{ o D() \{ \} m} \\
6560 \Rangle \}
```

```
6551
                                                                                                                                  {\LWR@htmldivclass[#1](#2){#3}}%
                                                                                                                                  {\LWR@htmldivclassend{#3}}
                                                                                              6552
                                                                                              6554 \LWR@formattedenv{BlockClass}
                                                                                              6555 \end{warpHTML}
                    \BlockClassSingle {\langle class \rangle} {\langle text \rangle} A single-line \langle div \rangle, without a paragraph tag for the line of
                                                                                                         text.
             for HTML & PRINT: 6556 \begin{warpall}
                                                                                              6557 \newcommand{\BlockClassSingle}[2]{#2}
                                                                                              6558 \end{warpall}
                   for HTML output: 6559 \begin{warpHTML}
                                                                                              6560 \label{lockClassSingle} \end{thmL@BlockClassSingle} \end{thmL@BlockClassSingle}
                                                                                              6561
                                                                                                                                  \LWR@htmlelementclassline{div}{#1}{#2}%
                                                                                              6562 }
                                                                                              6563
                                                                                              6564 \LWR@formatted{BlockClassSingle}
                                                                                              6565 \end{warpHTML}
                                             \InlineClass (\langle WP \ style \rangle) \ [\langle style \rangle] \ \{\langle class \rangle\} \ \{\langle text \rangle\}
                                                                                                         High-level interface for inline span classes.
                                                                                                         (\langle WP \, style \rangle) is css styling to add when formatting for a word processor import.
                                                                                                         [\langle style \rangle] is the css styling to add when not formatting for a word processor.
             for HTML & PRINT: 6566 \begin{warpall}
                                                                                              6567 \NewDocumentCommand{\InlineClass}{D{()}{}} o m +m}{#4}%  

                                                                                              6568 \end{warpall}
                   for HTML output: 6569 \begin{warpHTML}
                                                                                              6570 \label{lem:command} $$ \end{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\com
                                                                                                                                  \LWR@traceinfo{LWR@HTML@InlineClass #3}%
                                                                                              6572
                                                                                                                                  \ifbool{FormatWP}{%
                                                                                                                                                     \LWR@traceinfo{LWR@HTML@InlineClass: FormatWP}%
                                                                                              6573
                                                                                                                                                     \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
                                                                                              6574
                                                                                                                                 }{%
                                                                                              6575
                                                                                                                                                     \LWR@traceinfo{LWR@HTML@InlineClass: not FormatWP}%
                                                                                              6576
                                                                                              6577
                                                                                                                                                      \LWR@htmlspanclass[#2]{#3}{#4}%
                                                                                              6578
                                                                                                                                  }%
                                                                                                                                   \LWR@traceinfo{LWR@HTML@InlineClass: done}%
                                                                                              6579
                                                                                              6580 }
                                                                                              6582 \LWR@formatted{InlineClass}
                                                                                              6583 \end{warpHTML}
 LWR@BlockClassWP (env.) \{ \langle WPstyle \rangle \} \{ \langle HTMLstyle \rangle \} (\langle aria\ role \rangle) \{ \langle class \rangle \} \quad Low-level\ interface\ for\ <div> \} 
                                                                                                         classes with an automatic float ID. These are often used when \ifbool{FormatWP}.
                                                                                                         The use of \textquotedbl instead of " provides improved compatibility with
                                                                                                         xeCJK.
             for HTML & PRINT: 6584 \begin{warpall}
                                                                                              6585 \NewDocumentEnvironment{LWR@BlockClassWP}{m m D(){} m}{}{}
                                                                                              6586 \end{warpall}
```

```
for HTML output: 6587 \begin{warpHTML}
               6588 \NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m D(){} m}%
               6589
                           \LWR@stoppars%
               6590
                           6591
               6592
                               \addtocounter{LWR@thisautoidWP}{1}%
               6593
                               \LWR@htmltag{%
               6594
                                   div class=\textquotedbl#4\textquotedbl\ % space
               6595
                                   id=\textquotedbl%
               6596
                                        \LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}%
               6597
                                   \textquotedbl%
               6598
                                   \ifblank{#3}{}{ role=\textquotedbl#3\textquotedbl}%
                                   \ifblank{#1}{}{ style=\textquotedbl#1\textquotedbl}%
                               }%
                           }% FormatWP
               6602
                           {% not FormatWP
               6603
                               \LWR@htmltag{%
               6604
                                   div class=\textguotedbl#4\textguotedbl%
               6605
                                   \ifblank{#3}{}{ role=\textquotedbl#3\textquotedbl}%
               6606
                                   \left\{ 2}{} \right. 
               6607
                               }%
               6608
                           }% not FormatWP
                6609
                           \LWR@startpars%
               6610
               6611
                       {\LWR@htmldivclassend{#4}}
               6612
               6613
               6614 \verb|\LWR@formattedenv{LWR@BlockClassWP}|
               6615 \end{warpHTML}
```

52.11 Closing HTML tags

for HTML output: 6616 \begin{warpHTML}

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```
6617 \newcommand*{\LWR@printclosebook}
                                                 {\tt \{\losing book\}} \{\tt \losing book\} \} \{\tt \losing 
6619 \newcommand*{\LWR@printclosepart}
                                                 {\tt \{\losing part\}} \{\tt \losing part\} \} \{\tt \losing 
6621 \newcommand*{\LWR@printclosechapter}
                                                 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
6623 \newcommand*{\LWR@printclosesection}
                                                 {\tt \{\losing section\}} \{\} \\
6625 \newcommand*{\LWR@printclosesubsection}
                                                 {\tt \{\losing subsection\}} \{\} \\
6627 \newcommand*{\LWR@printclosesubsubsection}
                                                 {\tt \{\losing subsubsection\}} \{\} \} 
6629 \newcommand*{\LWR@printcloseparagraph}
                                                 6631 \newcommand*{\LWR@printclosesubparagraph}
                                                 {\tt \{\losing subparagraph\}} \} \\
6632
```

Lists require closing HTML tags:

```
6633 \newcommand*{\LWR@printcloselistitem}
6634 {\LWR@htmltag{/li}}
6635 \newcommand*{\LWR@printclosedescitem}
6636 {\LWR@htmltag{/dd}}
6637 \newcommand*{\LWR@printcloseitemize}
6638 {\LWR@htmltag{/ul}}
6639 \newcommand*{\LWR@printcloseenumerate}
6640 {\LWR@htmltag{/ol}}
6641 \newcommand*{\LWR@printclosedescription}
6642 {\LWR@htmltag{/dl}}
6643 \end{warpHTML}
```

53 Paragraph handling

These commands generate the HTML paragraph tags when allowed and required.

Paragraph tags are or are not allowed depending on many conditions. Section 54 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (LWR@doingstartpars), tags are not generated until a LATEX paragraph is being used (LWR@doingapar). LWR@lateximagedepth is used to prevent nesting tags inside a lateximage. LWR@spandepth is used to prevent nesting paragraph tags inside a paragraph, which became important inside \fbox commands and other spans.

The LATEX paragraph hooks are used to manage tag creation.

```
for HTML output: 6644 \ensuremath{\mathsf{6644}} \ensuremath{\mathsf{MESpandepth}} \ensuremath{\mathsf{C}tr}) Do not create paragraph tags inside of an HTML span. 6645 \ensuremath{\mathsf{Newcounter}} \ensuremath{\mathsf{LWR@spandepth}} \ensuremath{\mathsf{8646}} \ensuremath{\mathsf{80646}} \ensuremath{\mathsf{Newcounter}} \ensuremath{\mathsf{LWR@spandepth}} \ensuremath{\mathsf{80646}} \ensuremath{\mathsf{80646}} \ensuremath{\mathsf{Newcounter}} \ensuremath{\mathsf{MESpandepth}} \ensuremath{\mathsf{80646}} \ensuremath{\mathsf{Newcounter}} \ensuremath{\mathsf{1006}} \ensuremath{
```

LWR@in@multirow@par (bool) Tells whether to generate break instead of paragraph tags inside a \multirow.

```
6649 \newbool{LWR@in@multirow@par} 6650 \boolfalse{LWR@in@multirow@par}
```

LWR@starting@fancybox (bool) Suppresses
 if beginning a fancybox environment.

```
6651 \newbool{LWR@starting@fancybox}
6652 \boolfalse{LWR@starting@fancybox}
```

LWR@doingstartpars (bool) Tells whether paragraphs may be generated.

```
6653 \newbool{LWR@doingstartpars}
6654 \boolfalse{LWR@doingstartpars}
```

 ${\tt LWR@doingapar}\ (bool) \quad \text{Tells whether have actually generated and are currently processing paragraph text.}$

```
6655 \newbool{LWR@doingapar}
6656 \global\boolfalse{LWR@doingapar}
```

LWR@algocf@dopars (*bool*) Tells whether algorithm2e has patched paragraph handling using \everypar. If so, the open paragraph tags are generated by algorithm2e's \algocf@everypar instead of \LWR@openparagraph.

```
6657 \newbool{LWR@algocf@dopars}
6658 \boolfalse{LWR@algocf@dopars}
```

\PN@parnotes@auto Redefined by parnotes to print paragraph notes at the end of each paragraph.

```
6659 \def\PN@parnotes@auto{}%
```

\LWR@ensuredoingapar These were different in older versions of lwarp, but are now the same thing. \LWR@openparagraph

```
6660 \newcommand*{\LWR@openparagraph}
```

See if paragraph handling is enabled:

```
6662 \ifboolexpr{
6663 bool{LWR@doingparhooks} and
6664 bool{LWR@doingstartpars}
6665 }%
6666 {% handling pars
```

See if have already started a lateximage or a . If so, do not generate nested paragraph tags.

```
6667 \ifboolexpr{
6668 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6669 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6670 }% nested par tags?
```

If so: Do nothing if already started a lateximage page. Cannot nest a lateximage. Also do nothing if already inside a . Do not nest paragraph tags inside a .

```
6671 {}% no nested par tags
```

Else: No lateximage or has been started yet, so it's OK to generate paragraph tags.

```
6672 {% yes nest par tags
6673 \ifbool{LWR@doingapar}{}{%
```

If parnotes is used, paragraph notes are inserted before starting the next paragraph:

```
6674 \PN@parnotes@auto%
```

Set flag before creating the tag, so that the tag itself does not trigger a new paragraph:

```
6675 \global\booltrue{LWR@doingapar}%
```

The opening paragraph tag. Do not create tag if doing algorithm2e handling or inside a \multirow.

```
\ifbool{LWR@algocf@dopars}{}{%
6676
                         \ifbool{LWR@in@multirow@par}%
6677
6678
                      {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
6679
6680
                     }%
                }%
6681
            }% end of yes nest par tags
6682
        }% end of handling pars
6683
6684
        {}% not handling pars
6685 }
6686
6687 \let\LWR@ensuredoingapar\LWR@openparagraph
```

\LWR@closeparagraph@br Add an HTML break if in a span, and not in a lateximage, and not in tabular metadata. Factored from \LWR@closeparagraph.

```
6688 \newcommand*{\LWR@closeparagraph@br}
6689 {%
6690
        \ifboolexpr{
6691
            test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
6692
            test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
6693
            not bool {LWR@starting@fancybox} and
            not bool {LWR@intabularmetadata} or
6694
            bool {LWR@in@multirow@par}
6695
        }%
6696
            {\unskip\LWR@htmltagc{br /}}%
6697
6698
            {}%
6699 }
```

\LWR@closeparagraph

```
6700 \newcommand*{\LWR@closeparagraph}
6701 {%
6702 % \LWR@traceinfo{LWR@closeparagraph}%
```

See if paragraph handling is enabled:

```
6703 \ifbool{LWR@doingparhooks}{%
6704 \ifbool{LWR@doingapar}%
```

If currently in paragraph mode:

```
6705 {% handling pars
```

See if already started a lateximage or a :

```
6706 \ifboolexpr{
6707 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6708 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} or
6709 bool{LWR@in@multirow@par}
6710 }%
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
6711 {% no nested par tags
6712 \LWR@closeparagraph@br%
6713 }% no nested par tags
```

If have not already started a lateximage or a :

```
6714 {% yes nest par tags
```

Print a closing tag.

(The fill seems to be required to force the caption package to create flush left caption text in the HTML.)

```
6715 \@hspacer{\fill}% \hspace*{\fill}
6716 \leavevmode\LWR@orignewline%
6717 \LWR@htmltagc{/\LWR@tagregularparagraph}%
```

No longer doing a paragraph:

```
6718 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
6719 \global\boolfalse{LWR@minipagethispar}%
```

If parnotes is used, paragraph notes are inserted after ending the previous paragraph:

```
6720 \PN@parnotes@auto%

6721 }% end of yes nest par tags
6722 }% LWR@doingapar: end of handling pars
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
6723 {% not LWR@doingapar: not handling pars
6724 \LWR@closeparagraph@br%
6725 }% not handling pars
```

In most cases, finish with a IATEX \par, but in the case of paragraphs between lines in a tabular fetch the next token instead. Required for \multicolumn.

```
\ifboolexpr{%
6726
                not bool {LWR@doingapar} and
6727
                test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
6728
6729
               \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
6730
6731
                } and
6732
                bool {LWR@intabularmetadata} and
6733
                not bool {LWR@tableparcell} and
                test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
6734
            }%
6735
                {\LWR@getmynexttoken}%
6736
6737
                {}%
        }% LWR@doingparhooks
6738
        {}% not LWR@doingparhooks
6739
6740% Do not place anything here, due to the above \LWR@getmynexttoken.
6741 }
```

53.1 Paragraph Hooks

```
para/begin (\textit{Hook}) \ [LaTeX] \\ 6742 \land ddToHook\{para/begin\}[lwarp]\{\LWR@openparagraph\} \\ para/end (\textit{Hook}) \ [LaTeX] \\ 6743 \land ddToHook\{para/end\}[lwarp]\{\LWR@closeparagraph\} \\ 6744 \land end\{warpHTML\}
```

54 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 53 has the commands which actually generate the tags.

The LATEX paragraph hooks are used to generate the opening and closing paragraph tags.

```
for HTML output: 6745 \begin{warpHTML}
```

\LWR@startpars Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```
6746 \newcommand*{\LWR@startpars}% 6747 {%
```

Ignore if inside a lateximage or :

```
6748 \ifboolexpr{
6749 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6750 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6751 }%
6752 {}% nesting
6753 {% not nesting
```

The LATEX paragraph hook controls tag generation for the start and end of paragraphs.

See if currently handling HTML paragraphs:

```
6754 \ifboolexpr {bool{LWR@doingparhooks} and bool{LWR@doingstartpars}}%
```

If already in paragraph mode, do nothing.

```
6755 {}%
```

If not currently in paragraph mode:

```
6756 {\par}%
```

Are now handling paragraphs, but have not yet actually started one:

```
6757 \global\booltrue{LWR@doingstartpars}%
```

No <par> tag yet to undo:

```
6758 \qlobal\boolfalse{LWR@doingapar}%
6759 \quad \quad \quad \not nesting
6760 \range \quad \qua
```

\LWR@stoppars Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```
6761 \newcommand*{\LWR@stoppars}% 6762 {%
```

Ignore if inside a lateximage or :

```
6763 \ifboolexpr{
6764 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6765 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6766 }%
6767 {}% nesting
6768 {% not nesting
```

See if currently handling HTML paragraphs:

```
6769 \ifboolexpr{bool{LWR@doingparhooks} and bool{LWR@doingapar}}%
```

if currently in an нтмL paragraph:

```
6770 {%
```

Print a closing tag:

```
6771 \leavevmode\LWR@orignewline%
6772 \LWR@htmltagc{/\LWR@tagregularparagraph}%
6773 \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
6774 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
6775 \qlobal\boolfalse{LWR@minipagethispar}%
6776 \}%
```

If was not in an HTML paragraph:

```
6777 {}%
```

No longer in paragraph mode:

```
6778 \global\setbool{LWR@doingstartpars}{false}%
```

No tag to undo:

```
6779 \global\boolfalse{LWR@doingapar}%
6780 }% not nesting
6781}
6782 \end{warpHTML}
```

55 Indentfirst

indentfirst (*Pkg*) indentfirst redefines \@afterindentfalse to be \@afterindenttrue. This is reversed \AtBeginDocument here.

```
for HTML output: 6783 \begin{warpHTML}

6784 \AtBeginDocument{
6785  \def\@afterindentfalse{\let\if@afterindent\iffalse}
6786  \@afterindentfalse
6787 }

6788 \let\LWR@afterindent@syntaxhighlight\fi% syntax highlighting

6789 \end{warpHTML}
```

56 Page headers and footers

```
for HTML & PRINT: 6790 \begin{warpall}
```

In the following, catcode is manually changed back and forth without groups, since new macros are being defined which must not be contained within the groups.

```
6791 \newcommand{\LWR@firstpagetop}{} % for the home page alone
6792 \newcommand{\LWR@firstpagebottom}{} % for the home page alone
6793 \newcommand{\LWR@pagetop}{} % for all other pages
6794 \newcommand{\LWR@pagebottom}{}

6795 \newcommand{\LWR@HTMLmeta}{}

\HTMLFirstPageTop {\langle text and logos\rangle}}

6796 \newcommand{\HTMLFirstPageTop}[1]{%
6797 \renewcommand{\LWR@firstpagetop}{#1}%
6798 }

\HTMLFirstPageBottom {\langle text and logos\rangle}}

\HTMLFirstPageBottom {\langle text and logos\rangle}}

6799 \newcommand{\HTMLFirstPageBottom}[1]{%
6800 \renewcommand{\LWR@firstpagebottom}{#1}%
6801 }
```

```
\HTMLPageTop \{\langle text \ and \ logos \rangle\}
                  6802 \newcommand{\HTMLPageTop}[1]{%
                           \renewcommand{\LWR@pagetop}{#1}%
                  6804 }
  \HTMLPageBottom \{\langle text \ and \ logos \rangle\}
                  6805 \newcommand{\HTMLPageBottom}[1]{%
                           \renewcommand{\LWR@pagebottom}{#1}%
                  6806
                  6807 }
         \HTMLMeta \{\langle name \rangle\} \{\langle content \rangle\}
                    Sets a custom meta tag for the following pages.
                  6808 \newcommand{\HTMLMeta}[2]{%
                           \renewcommand{\LWR@HTMLmeta}{%
                  6810
                               \LWR@htmltag{%
                  6811
                                meta name=\LWR@orig@textquotedbl{}#1\LWR@orig@textquotedbl\ % space
                  6812
                                    content=\LWR@orig@textquotedbl{}#2\LWR@orig@textquotedbl\ /%
                  6813
                               }\LWR@orignewline%
                  6814
                          }{}{}%
                  6815 }
      \label{eq:html} $$ \ HTMLAddMeta {\langle name \rangle} {\langle content \rangle}$
                    Adds to the custom meta tags for the following pages.
                  6816 \newcommand{\HTMLAddMeta}[2]{%
                           \apptocmd{\LWR@HTMLmeta}{%
                  6817
                               \LWR@htmltag{%
                  6818
                                meta name=\LWR@orig@textquotedbl{}#1\LWR@orig@textquotedbl\ % space
                  6819
                                    content=\LWR@orig@textquotedbl{}#2\LWR@orig@textquotedbl\ /%
                  6820
                               }\LWR@orignewline%
                  6821
                  6822
                          }{}{}%
                  6823 }
                  6824 \end{warpall}
                     57
                            CSS
for HTML output: 6825 \begin{warpHTML}
  \LWR@currentcss The css filename to use. This may be changed mid-document using \CSSFilename,
                    allowing different css files to be used for different sections of the document.
                  6826 \newcommand*{\LWR@currentcss}{lwarp.css}
      \CSSFilename {\langle new-css-filename.css\rangle}
                                                     Assigns the css file to be used by the following HTML
                    pages.
```

```
6827 \newcommand*{\CSSFilename}[1]{%
6828 \renewcommand*{\LWR@currentcss}{#1}%
6829 \@onelevel@sanitize\LWR@currentcss%
6830 }
6831
6832 \end{warpHTML}

for PRINT output: 6833 \begin{warpprint}
6834 \newcommand*{\CSSFilename}[1]{}
6835 \end{warpprint}
```

58 MATHJAX script

```
for HTML output: 6836 \begin{warpHTML}
Default: \verb|lwarp_mathjax.txt|
   \LWR@mathjaxfilename The MathJax script filename to use. This file is copied into the head of each html
                          page. This may be changed mid-document using \MathJaxFilename, allowing
                          the use of a custom MATHJAX script, such as for a local repository, or different
                          MATHJAX script files to be used for different sections of the document.
                        6837 \verb| newcommand*{LWR@mathjaxfilename}{lwarp\_mathjax.txt}|
       \mathsf{MathJaxFilename} \{\langle filename \rangle\}
                                             Assigns the MathJax script file to be used by the following html
                          pages.
                        6838 \newcommand*{\MathJaxFilename}[1]{%
                                \renewcommand*{\LWR@mathjaxfilename}{#1}%
                        6839
                                \@onelevel@sanitize\LWR@mathjaxfilename%
                        6840
                        6841 }
                        6842
                        6843 \end{warpHTML}
      for PRINT output: 6844 \begin{warpprint}
                        6845 \newcommand*{\MathJaxFilename}[1]{}
                        6846 \end{warpprint}
```

59 Title, HTML meta author, HTML meta description

```
for HTML output: 6847 \begin{warpHTML}
            \title {\langle title \rangle} Modified to remember \thetitle, which is used to set the HTML page
                    titles.
                 6848 \let\LWR@origtitle\title
                 6849
                 6850 \renewcommand*{\title}[1]{%
                          \LWR@origtitle{#1}%
                 6851
                 6852
                          \begingroup%
                              \mbox{renewcommand{\thanks}[1]{}}%
                 6853
                               \protected@xdef\thetitle{#1}%
                 6854
                          \endgroup%
                 6855
```

6856 }

```
6857 \end{warpHTML}
for HTML & PRINT: 6858 \begin{warpall}
         \HTMLTitle \{\langle Titlename \rangle\}
                                         The Title to place into an HTML meta tag. The default is to use
                     the document \title's setting.
                  6859 \providecommand{\thetitle}{\BaseJobname}
                  6861 \newcommand{\theHTMLTitle}{\thetitle}
                  6863 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}
        \HTMLAuthor \{\langle authorname \rangle\}
                                            The author to place into an HTML meta tag. If none given,
                     the default is \theauthor, which is empty unless the titling package is used.
                  6864 \providecommand{\theauthor}{}
                  6865
                  6866 \newcommand{\theHTMLAuthor}{\theauthor}
                  6868 \newcommand{\HTMLAuthor}[1]{\renewcommand{\theHTMLAuthor}{#1}}
                     This is placed inside an HTML meta tag at the start of each file. This may be
                     changed mid-document using \HTMLAuthor, allowing different HTML authors to
                     be used for different sections of the document.
   HTML author Do not use double quotes, and do not exceed 150 characters.
  \HTMLDescription \{\langle New\ html\ meta\ description.\rangle\}
                                                           Assigns the HTML file's description meta tag.
                  6869 \newcommand{\LWR@currentHTMLDescription}{}
                  6871 \newcommand{\HTMLDescription}[1]{%
                  6872 \renewcommand{\LWR@currentHTMLDescription}{#1}
                  6873 }
      \HTMLKeywords \{\langle New\ html\ meta\ keywords.\rangle\}
                                                          Assigns the HTML file's keywords meta tag.
                  6874 \newcommand{\LWR@currentHTMLKeywords}{}
                  6876 \newcommand{\HTMLKeywords}[1]{%
                  6877 \end{\label{locality} $$6877 \end{\label{locality} $$41} $
                  6878 }
                  6879
```

60 Footnotes

6880 \end{warpall}

lwarp uses native LATEX footnote code, although with its own \box to avoid the LATEX output routine. The usual functions mostly work as-is.

footnote numbering To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For bigfoot, manyfoot, or perpage:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by FootnoteDepth, which is not necessarily by HTML page. This is recommended for \alph, \Alph, or \fnsymbol footnotes, due to the limited number of symbols which are available.

MATHJAX Also for MATHJAX, \footnotename is used for a \footnotemark if the actual footnote number is not known. To redefine it, provide it before loading lwarp:

```
\providecommand{\footnotename}{something}
\usepackage{lwarp}
```

Similar for sidenotes. For endnotes:

```
\def\endnotename{something}% \def allows name to start with
"end"
```

For the pagenote package, there is no \pagenotename to define, since there is no \pagenotemark command.

footmisc The footmisc stable option is emulated by lwarp.

sectioning commands

When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the footmisc package with the stable option, provide a short TOC entry, and \protect the \footnote:

memoir with footmisc memoir If using memoir class, with which lwarp preloads footmisc, the stable option must be declared before lwarp is loaded:

```
\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
...
```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust \secnumdepth instead.

Several kinds of footnotes are used: in a regular page, in a minipage, or as thanks in the titlepage. Each of these is handle differently.

60.1 Regular page footnotes

In HTML documents, footnotes are placed at the bottom of the web page or the section, depending on FootnoteDepth, using the LATEX box \LWR@footnotebox. Using this instead of the original \footins box avoids having footnotes be printed by the output routine, since footnotes should be printed per HTML page instead of per PDF page.

See section 60.4 for the implementation.

Minipage footnotes 60.2

See section 60.5 for how minipage footnotes are gathered. See section 94.4 for how minipage footnotes are placed into the document.

Titlepage thanks 60.3

See section 69.7 for titlepage footnotes.

60.4 Regular page footnote implementation

```
for HTML & PRINT: 6881 \begin{warpall}
```

FootnoteDepth (Ctr) Determines how deeply to place footnotes in the HTML files, similar to tocdepth.

The default of 3 places footnotes before each \subsubsection or higher. See ta-Default: 3

ble 12 for a table of LATEX section headings.

```
6882 \newcounter{FootnoteDepth}
6883 \setcounter{FootnoteDepth}{3}
```

footnoteReset (Ctr) If non-zero, the footnote counter is reset to this value each time the footnotes Default: 0 are printed, as controlled by FootnoteDepth. For the manyfoot and bigfoot packages, additional counters such as footnote<suffix>Reset will be defined as well. These counters may be set non-zero by the user, and are also set if the perpage's \MakePerPage or \MakeSortedPerPage macros are used for the footnote or footnote<suffix> counters.

> (The name is not capitalized because it is made from the counter's name with "Reset" appended.)

```
6884 \newcounter{footnoteReset}
6885 \setcounter{footnoteReset}{0}
6886 \end{warpall}
```

for HTML output: 6887 \begin{warpHTML}

Required for footnotes inside description or amstheorem square braces:

```
6888 \AtBeginDocument{
6889 \robustify{\footnote}
6890 \robustify{\footnotemark}
```

\LWR@footnotebox Patch IATEX footnotes to use a new \box instead of an insert for lwarp footnotes. This avoids having the original \footins appear at the bottom of a lateximage, which is on its own new page.

6892 \newbox\I WR@footnotebox

LWR@spewingnotes (*bool*) Used with the footnote package to suppress paragraph tags before and after \spewnotes.

6893 \newbool{LWR@spewingnotes}% For the footnote package.

Much of the following has unneeded print-mode formatting removed.

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or lateximage, in which case paragraph tags must be added manually.

In a lateximage during HTML output, the lateximage is placed inside a print-mode minipage, but the footnotes are broken out by:

```
\def\@mpfn{footnote}
\def\thempfn{\thefootnote}
\let\@footnotetext\LWR@footnotetext
```

```
\LWR@@footnotetext \{\langle text \rangle\} \{\langle footnote\ box\ name \rangle\}
```

Factored to allow multiple footnote boxes for manyfoot.

```
6898 \long\def\LWR@footnotetext#1#2{% 6899 \LWR@traceinfo{LWR@footnotetext}}
```

Perhaps generate an autopage in the text to link a citation backreference closer to its usage.

```
6900 \LWR@newautopagelabel{page}% 6901 \LWR@ensuredoingapar%
```

Locally disable auto page labels inside the footnote text. Footnotes are accumulated in the current page before finally being placed in a potentially later page, so the autopages would be incorrect.

```
6902 \begingroup% 6903 \let\LWR@newautopagelabel\LWR@null@newautopagelabel%
```

Take the existing footnote box and add the new content:

```
6904 \global\setbox\csname #2\endcsname=\vbox{% 6905 \unvbox\csname #2\endcsname%
```

Remember the footnote number for \ref:

```
6906 \protected@edef\@currentlabel{%
```

```
\csname p@footnote\endcsname\@thefnmark%
                6907
                6908
                       }% @currentlabel
                  Open a group:
                6909
                       \color@begingroup%
                  Disable CJK xpinyin while generating footnotes.
                       \LWR@disablepinyin%
                6910
                  Use HTML superscripts in the footnote even when the main text is inside a
                  lateximage, because the footnote will be in HTML:
                6911
                       Use paragraph tags if in a tabular data cell or a lateximage:
                6912
                       \ifbool{LWR@spewingnotes}{}{%
                6913
                            \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline%
                6914
                  Append the footnote to the list:
                6915
                       \@makefntext{#1}%
                  Closing paragraph tag:
                       \ifbool{LWR@spewingnotes}{}{%
                6916
                            \LWR@orignobreakspace\LWR@orignewline%
                6917
                            \LWR@htmltagc{/\LWR@tagregularparagraph}%
                6918
                            \LWR@orignewline%
                6919
                6920
                       }%
                  Close the group:
                6921
                       \color@endgroup%
                6922 }% vbox
                6923 \endgroup%
                6924 }%
\LWR@footnotetext \{\langle text \rangle\}
                6925 \long\def\LWR@footnotetext#1{\LWR@@footnotetext{#1}{LWR@footnotebox}}%
  \@footnotetext \{\langle text \rangle\}
                6926 \verb|\LetLtxMacro|\@footnotetext| LWR @footnotetext|
```

60.5 Minipage footnote implementation

Patch LATEX minipage footnotes to use a new \box instead of an insert for lwarp minipage footnotes. This avoids having the original \@mpfootins appear at the bottom of a lateximage, which is on its own new page.

```
\ensuremath{\texttt{Qmpfootnotetext}}\ \{\langle \textit{text} \rangle\}
                6928 \long\def\@mpfootnotetext#1{%
                6929 \LWR@traceinfo{@mpfootnotetext}%
                6930 \LWR@ensuredoingapar%
                6931 \global\setbox\LWR@mpfootnotes\vbox{%
                        \unvbox\LWR@mpfootnotes%
                6933
                        \reset@font\footnotesize%
                6934
                        \hsize\columnwidth%
                6935
                        \@parboxrestore%
                        \protected@edef\@currentlabel%
                6936
                            {\csname p@mpfootnote\endcsname\@thefnmark}%
                6937
                        \color@begingroup%
                6938
                  Add paragraph tag:
                6939
                        \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline%
                6940
                        \@makefntext{%
                6941
                             \ignorespaces#1%
                6942
                  Add the closing paragraph tag:
                        \leavevmode\LWR@orignewline%
                6943
                        \LWR@htmltagc{/\LWR@tagregularparagraph}%
                6944
                        \color@endgroup%
                6945
                6946 }% vbox
                  Paragraph handling:
                6947 \LWR@ensuredoingapar%
                6948 \LWR@traceinfo{@mpfootnotetext: done}%
                6949 }
  \thempfootnote Redefined to remove the \itshape, which caused an obscure compiling error in
                  some situations.
                6950 \AtBeginDocument{
                        \def\thempfootnote{\@alph\c@mpfootnote}
                6951
                6952 }
```

60.6 Printing pending footnotes

Create a new autopage in case citation back references occur inside the footnotes:

```
6957 \LWR@newautopagelabel{page}%
```

```
6958
        \unvbox\csuse{LWR@#1box}
6959
        \setbox\csuse{LWR@#1box}=\vbox{}
6960
6961
        \end{BlockClass}
6962
        \ifltxcounter{#1Reset}{%
            \ifnumgreater{\value{#1Reset}}{0}{%
6963
                 \setcounter{#1}{\value{#1Reset}}%
6964
                 \verb| \addtocounter{#1}{-1}| %
6965
            }{}%
6966
        }{}%
6967
6968\fi
6969 }
```

\LWR@printpendingfootnotes Enclose the footnotes in a class, print, then clear. For manynotes, new footnotes may be added via \appto.

```
6970 \newcommand*{\LWR@printpendingfootnotes}{%
6971 \LWR@@printpendingfootnotes{footnote}%
6972 }
```

\LWR@maybeprintpendingfootnotes $\{\langle depth \rangle\}$ Used to print footnotes before sections only if formatting for an EPUB or word processor:

```
6973 \newcommand*{\LWR@maybeprintpendingfootnotes}[1]{%
6974 \ifboolexpr{
6975     not test{\ifnumcomp{#1}{<}}{\value{FootnoteDepth}}} or
6976     bool{FormatEPUB} or
6977     bool{FormatWP}
6978 }%
6979 {\LWR@printpendingfootnotes}%
6980 {}%
6981 }</pre>
```

\LWR@printpendingmpfootnotes Enclose the minipage footnotes in a class, print, then clear.

```
6982 \newcommand*{\LWR@printpendingmpfootnotes}{%
6983 \ifvoid\LWR@mpfootnotes\else
6984 \LWR@forcenewpage
6985 \begin{BlockClass}(note){footnotes}%
6986 \null
6987 \unvbox\LWR@mpfootnotes
6988 \setbox\LWR@mpfootnotes=\vbox{}
6989 \end{BlockClass}
6990 \fi
6991 }
```

\LWR@nullifyfootnotes Cancels footnotes, such as inside an HTML comment or a \nameref.

```
6992 \newcommand*{\LWR@nullifyfootnotes}{%
6993 \renewcommand{\footnote}[2][]{}%
6994 \renewcommand{\footnotemark}[1][]{}%
6995 }
6996 \end{warpHTML}
```

61 **Marginpars**

\marginpar

 $[\langle left \rangle] \{\langle right \rangle\}$ \marginpar may contains paragraphs, but in order to remain inline with the surrounding text lwarp nullifies block-related macros inside the \marginpar. Paragraph breaks are converted to
 tags.

\marginparBlock $[\langle left \rangle] \{\langle right \rangle\}$ To include block-related macros, use \marginparBlock, which takes the same arguments but creates a <div> instead of a . A line break will occur in the text where the \marginBlock occurs.

```
for HTML output: 6997 \begin{warpHTML}
        \marginpar [\langle left \rangle] \{\langle right \rangle\}
                  6998 \renewcommand{\marginpar}[2][]{%
                  6999 \ifbool{FormatWP}%
                  7000 {%
                           \begin{LWR@BlockClassWP}%
                  7001
                  7002
                                {width:2in; float:right; margin:10pt}{}(note){marginblock}%
                  7003
                  7004
                           \end{LWR@BlockClassWP}%
                  7005 }%
                  7006 {%
                           \LWR@htmlspanclass(note){marginpar}{#2}%
                  7007
                  7008 }%
                  7009 }
```

\marginparBlock $[\langle left \rangle] \{\langle right \rangle\}$

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```
7010 \newcommand{\marginparBlock}[2][]{%
        \LWR@stoppars%
7011
        \ifbool{FormatWP}%
7012
7013
        {%
7014
             \begin{LWR@BlockClassWP}%
7015
                 {width:2in; float:right; margin:10pt}{}%
                 (note) \{ marginblock \} \%
7016
7017
            #2
             \end{LWR@BlockClassWP}
7018
        }%
7019
        {%
7020
             \begin{BlockClass}[width:2in; float:right; margin:10pt]%
7021
                 (note){marginparblock}%
7022
7023
             \end{BlockClass}
7024
7025
7026
        \LWR@startpars%
7027 }
```

\reversemarginpar

```
\normalmarginpar
```

```
7029 \renewcommand*{\normalmarginpar}{}
                     7030 \end{warpHTML}
for PRINT output: 7031 \begin{warpprint}
  \marginparBlock [\langle left \rangle] \{\langle right \rangle\}
```

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

Print version.

7033 \end{warpprint}

 $7032 \verb|\LetLtxMacro| marginparBlock| marginp$

Tracking internal cross references 62

Cross references are generated using the PDF file's page number during LATEX compilation. Internal labels are generated which include these page numbers in the label.

*_html.aux (file) A new entry in the *_html.aux file is used to help cross-references:

\newlabel{autopage-<nnn>}{{<x>}}

LWR@currentautosecpage (Ctr)

Records the page number when the section was created. (If a math expression is included in the section name, and svg math is used, the corresponding lateximage will cause the page number to change by the time the following autosec label is created, thus the initial page number is recorded here.) LWR@currentautosecfloatpage is updated more often than LWR@currentautosecpage.

```
7034 \newcounter{LWR@currentautosecpage}
7035 \setcounter{LWR@currentautosecpage}{1}
```

LWR@currentautosecfloatpage The HTML output's PDF page number at the start of a new HTML file, section, or (Ctr) float. Updated more often than LWR@currentautosecpage, such as when a new float occurs. Used only for table of contents, list of figures, list of tables, but not for general cross references such as \label, citation backlinks, etc.

> $\verb|\LWRsetnextfloat| is written with this and the autoid by the modified \verb|\addcontentsline| | line | line$ just before each float's entry.

```
7036 \newcounter{LWR@currentautosecfloatpage}
7037 \setcounter{LWR@currentautosecfloatpage}{1}
```

LWR@previousautopagelabel Remembers which autopage label was most recently generated. Used to avoid (Ctr) duplicates.

```
7038 \newcounter{LWR@previousautopagelabel}
7039 \setcounter{LWR@previousautopagelabel}{-1}
```

\LWR@newautopagelabel $\{\langle pagenumber\ counter\rangle\}$

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
7040 \newcommand*{\LWR@newautopagelabel}[1]{%
```

No action if this autopage label has already been defined:

```
7041 \ifnumequal{\value{LWR@previousautopagelabel}}{\value{page}}% 7042 {}%
```

If the PDF page has changed, create a label using the desired counter.

If the counter is LWR@currentautosecpage, that was the page number when the section generation began, but the current PDF page may be different by now if the section name had an svG image, such as svG math. To allow the cross-reference to point just after the section heading, the label must be made after the section heading is complete, which may have generated a new PDF page. Thus, the label is made with the given counter, which may be the PDF page number where the section heading began, then if the PDF page number has changed, another label is made for the current page number.

If there are intervening pages, such as an svg image, define another label for the new page:

```
7045 \ifnumequal{\value{#1}}{\value{page}}%
7046 {}%
7047 {\label{\BaseJobname-autopage-\csuse{thepage}}}%
```

Remember the latest autopage label:

```
7048 \setcounter{LWR@previousautopagelabel}{\value{page}}%
7049 }%
7050 }
```

\LWR@null@newautopagelabel $\{\langle pagenumber\ counter \rangle\}$

Inside a footnote, the page numbers will be incorrect, so this is nullified.

```
7051 \newcommand*{\LWR@null@newautopagelabel}[1]{}
```

63 Splitting HTML files

- Files are split according to FileDepth and CombineHigherDepths.
- Filenames are sanitized by \LWR@filenamenoblanks.
- \LWR@newhtmlfile finishes an HTML page, adds a comment to tell where and how to split the file, then starts a new HTML page.

FileDepth (Ctr) { $\langle section \ depth \rangle$ } determines how deeply to break into new HTML files, similar to tocdepth. The default of -5 produces one large HTML file.

```
7053 \newcounter{FileDepth}
7054 \setcounter{FileDepth}{-5}
```

CombineHigherDepths (bool) Combile higher-level sections together into one file?

```
7055 \newbool{CombineHigherDepths}
7056 \booltrue{CombineHigherDepths}
```

\FilenameLimit Maximum length of the generated filenames.

```
7057 \newcommand*{\FilenameLimit}{80}
7058 \end{warpall}
```

for HTML output: 7059 \begin{warpHTML}

\LWR@thisfilename The currently-active filename or number. At first, this is the homepage.

\LWR@thisnewfilename The filename being sanitized.

```
7065 \newcommand*{\LWR@thisnewfilename}{}
```

 $\verb|LWR@simplifyname| * { \langle expression \rangle } Simplify \verb|LWR@thisnewfilename|.$

If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.

```
7066 \NewDocumentCommand{\LWR@simplifyname}{s m}{%
7067 \IfBooleanTF{#1}{%
       \StrSubstitute{\LWR@thisnewfilename}%
7069
            {\detokenize{#2}}%
            {\detokenize{-}}[\LWR@thisnewfilename]%
7070
7071 }{%
       \StrSubstitute{\LWR@thisnewfilename}%
7072
7073
            {#2}%
7074
            {\detokenize{-}}[\LWR@thisnewfilename]%
7075 }
7076 }
```

\LWR@simplifycustom User-defined filename simplifications. Redefine with \newcommand.

```
7077 \newcommand*{\LWR@simplifycustom}{}
```

\FilenameSimplify $*\{\langle phrase \rangle\}$ Assign a user-defined filename simplification. Appends to \LWR@simplifycustom.

```
7078 \NewDocumentCommand{\FilenameSimplify}{s m}{%
7079 \IfBooleanTF{#1}{%
        \appto{\LWR@simplifycustom}{%
7081
            \LWR@simplifyname*{#2}%
7082
        }%
7083 }{%
        \appto{\LWR@simplifycustom}{%
7084
            \LWR@simplifyname{#2}%
7085
7086
        }%
7087 }%
7088 }
```

\LWR@avoiddupfilenames

Instructions for how to avoid duplicate filenames. This is used in a warning in \LWR@filenamenoblanks, and in an error in \LWR@newhtmlfile.

```
7089 \newcommand*{\LWR@avoiddupfilenames}{%
       To avoid duplicate filenames, use the optional\MessageBreak
7090
       short Table of Contents entry:\MessageBreak
7091
7092
        \space\space\protect\section[Unique name, no math]{Name with math}%
7093
            \MessageBreak
       or use \protect\texorpdfstring, from the hyperref package:\MessageBreak
7094
7095
        \space\space%
7096
            \protect\section{\MessageBreak
7097
                \space\space\space\space\protect\texorpdfstring\MessageBreak
7098
                    \space\space\space\space\space\
7099
                    {Name\ with\ math}{Unique\ name,\ no\ math}\MessageBreak}
7100
            \space\space}
7101 }
```

\LWR@filenamenoblanks $\{\langle filename \rangle\}$

Convert blanks into dashes, removes short words, store result in $\LWR@thisfilename$.

Also see \LWR@nullfonts for nullified macros.

```
7102 \newcommand*{\LWR@filenamenoblanks}[1]{%
7103 \begingroup
```

Locally temporarily disable direct-formatting commands, not used in filenames:

```
7104 \LWR@nullfonts%
7105 \renewcommand*{\LWR@htmltagc}[1]{}%
7106 \edef\LWR@thisnewfilename{#1}%
```

Replaces common macros with hyphens. (\& is done by \LWR@nullfonts.)

```
7107 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
7108 \LWR@simplifyname{\_}
7109 \LWR@simplifyname{\#}
7110 \LWR@simplifyname{\textbackslash}
7111 \LWR@simplifyname{\protect}
7112 \LWR@simplifyname{\}
7113 \LWR@simplifyname{\textless}
7114 \LWR@simplifyname{\textgreater}
```

7115 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%

Warn if there is dollar math in the section name:

```
7116 \ifbool{FileSectionNames}{%
7117
       \IfSubStr{\LWR@thisnewfilename}{\LWRdollar}{%
7118
            \PackageWarning{lwarp}
7119
                This section name:\MessageBreak
7120
                \space\space''\detokenize\expandafter{#1}''\MessageBreak
7121
7122
                at the line number listed below,\MessageBreak
7123
                is using $dollar-delimited math$,
7124
                which generates\MessageBreak
                complicated file names. It is better to use\MessageBreak
7125
                \space\space%
7126
               \protect\section{Name with \protect\(parenthesis math\protect\)}%
7127
                    \MessageBreak
7128
7129
                The math then will be removed from the file name.\MessageBreak
7130
                \MessageBreak
7131
                \LWR@avoiddupfilenames%
7132
                \MessageBreak
7133
                This section is found before or%
7134
7135
       }{}%
7136 }{}
7137 \LWR@traceinfo{LWR@filenamenoblanks edef: !\LWR@thisnewfilename!}%
7138 \fullexpandarg%
  Convert spaces into hyphens:
7139 \LWR@simplifyname*{ }
  Convert punctutation into hyphens:
7140 \LWR@simplifyname*{*}
7141 \LWR@simplifyname*{()
7142 \LWR@simplifyname*{)}
7143 \LWR@simplifyname*{.}
7144 \LWR@simplifyname*{!}
7145 \LWR@simplifyname*{,}
7146 \LWR@simplifyname*{'}
7147 \LWR@simplifyname*{+}
7148 \LWR@simplifyname*{/}
7149 \LWR@simplifyname*{:}
7150 \LWR@simplifyname*{;}
7151 \LWR@simplifyname*{=}
7152 \LWR@simplifyname*{?}
7153 \LWR@simplifyname*{@}
7154 \LWR@simplifyname*{^}
7155 \LWR@simplifyname*{&}
7156 \LWR@simplifyname*{"}
7157 \LWR@simplifyname*{<}
7158 \LWR@simplifyname*{>}
7159 \LWR@simplifyname{\LWRbackslash}
```

Braces are removed entirely to avoid extra dashes in the result.

```
7160 \verb|\StrSubstitute{\LWR@thisnewfilename}| \%
```

```
{\LWRleftbrace}{}[\LWR@thisnewfilename]%
7162 \StrSubstitute{\LWR@thisnewfilename}%
        {\LWRrightbrace}{}[\LWR@thisnewfilename]%
7164 \LWR@simplifyname{\LWRpercent}
7165 \LWR@simplifyname{\LWRdollar}
7166 \LWR@simplifyname*{|}
7167 \LWR@simplifyname*{^}
7168 \LWR@simplifyname*{~}
7169 \LWR@simplifyname*{[}
7170 \LWR@simplifyname*{]}
7171 \LWR@simplifyname*{'}
  Convert short words:
7172 \LWR@simplifyname*{-s-}
7173 \LWR@simplifyname*{-S-}
7174 \LWR@simplifyname*{-a-}
7175 \LWR@simplifyname*\{-A-\}
7176 \LWR@simplifyname*{-an-}
7177 \LWR@simplifyname*{-AN-}
7178 \LWR@simplifyname*{-to-}
7179 \LWR@simplifyname*{-TO-}
7180 \LWR@simplifyname*{-by-}
7181 \LWR@simplifyname*{-BY-}
7182 \LWR@simplifyname*{-of-}
7183 \LWR@simplifyname*{-OF-}
7184 \LWR@simplifyname*{-and-}
7185 \LWR@simplifyname*{-AND-}
7186 \LWR@simplifyname*{-for-}
7187 \LWR@simplifyname*{-FOR-}
7188 \LWR@simplifyname*{-the-}
7189 \LWR@simplifyname*{-THE-}
  Convert custom words:
7190 \LWR@simplifycustom%
  If PDF LATEX and not utf8 encoding, don't try to convert emdash, endash:
7191 \ifPDFTeX% pdflatex or dvi latex
7192 \ifdefstring{\inputencodingname}{utf8}{%
        \LWR@simplifyname*{-}
7193
          emdash
7194~\%
7195
        \LWR@simplifyname*{-}
7196~\%
          endash
7197 }{}%
7198 \else% not PDFTeX
        \LWR@simplifyname*{-}
7199
        \LWR@simplifyname*{-}
7200
7201\fi%
  Convert multiple hyphens:
7202 \LWR@simplifyname*{----}
7203 \LWR@simplifyname*{----}
7204 \LWR@simplifyname*\{---\}
7205 \LWR@simplifyname*\{--\}
```

If starts with a dash, remove the leading dash:

```
\label{thm:condition} $$7206 \left[ \KWR@thisnewfilename \right]_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@thisnewfilename}_{\KWR@this
```

If ends with a dash, remove the trailing dash:

Limits the length of the filename:

```
7212 \StrLeft{\LWR@thisnewfilename}{\FilenameLimit}[\LWR@thisnewfilename]%
```

Return the global result:

```
7213 \global\let\LWR@thisfilename\LWR@thisnewfilename%
7214 \endgroup%
7215 \LWR@traceinfo{LWR@filenamenoblanks: result is \LWR@thisfilename}%
7216 }
```

63.1 Sanitizing expressions for HTML

Math expressions are converted to lateximages, and some math environments may contain &, <, or >, which should not be allowed inside an HTML <alt> tag, so must convert them to HTML entities.

```
\LWR@replacestrings \{\langle search \rangle\} \{\langle replace \rangle\}
```

Replaces strings inside \tmpb.

Modified from the original, by Petr Olsak, from the opmac package.

```
7217 \bgroup
7218 \catcode'!=3 \catcode'?=3
7220 \long\gdef\LWR@replacestrings@addto#1#2{%
7221
                               \expandafter\def\expandafter#1\expandafter{#1#2}%
7222 }
7223
7224 \gdef\LWR@replacestrings#1#2{%
                              \label{longdef} $$ \end{area} $$ \end{area
7226
                           \long\def\LWR@replacestringsB##1#1{%
7227
                                               \ifx!##1\relax \else\LWR@replacestrings@addto\tmpb{#2##1}%
7228
                                               \expandafter\LWR@replacestringsB\fi%
                           }%
                                                                                                                                                                                     improved version <May 2016> inspired
7229
                         \expandafter\LWR@replacestringsA\tmpb?#1!#1% from pysyntax.tex by Petr Krajnik
7230
                              \long\def\LWR@replacestringsA##1?{%
7231
                                               \def\tmpb{##1}%
7232
7233
                               }\expandafter\LWR@replacestringsA\tmpb%
7234 }
7235 \egroup
```

 \triangle

HTML sanitization was occurring too early, and minted would then colorize the sanitized results, breaking the HTML entities in lwarp's HTML output.

```
7236 \newbool{LWR@HTMLsanitize@tmpb@enable}
7237 \booltrue{LWR@HTMLsanitize@tmpb@enable}
```

LWR@HTMLsanitize@tmpb@removebackslash

(bool)

Allow to enable / disable sanitization of the macros \%, \#, \%. This is usually enabled to allow the user to enter these macros in URLs, for example, but is disabled for ALT tags and MATHJAX output where the literal LATEX source must be preserved.

```
7238 \newbool{LWR@HTMLsanitize@tmpb@removebackslash} 7239 \booltrue{LWR@HTMLsanitize@tmpb@removebackslash}
```

LWR@MathJax@silentquotes (bool)

If true, double quotes (\" and ") are removed (used for mathspec). This unfortunately includes double quotes used inside \text with MATHJAX. If false, double quotes are escaped.

```
7240 \newbool{LWR@MathJax@silentquotes}
7241 \boolfalse{LWR@MathJax@silentquotes}
```

\LWR@HTMLsanitize@tmpb Sanitizes HTML for \tmpb. These characters may be interpreted by the browser.

```
7242 \catcode'\&=12
7243 \newcommand*{\LWR@HTMLsanitize@tmpb}{%
7244 \ifbool{LWR@HTMLsanitize@tmpb@enable}%
7245 {%
```

HTML entities:

```
\LWR@replacestrings{&}{&}% must be first because & is used for lt, gt, etc.
\text{LWR@replacestrings{<}{&lt;}%
\text{LWR@replacestrings{>}{&gt;}%
\text{LWR@replacestrings{'}{&apos;}%
\text{LWR@replacestrings{'}{&grave;}%
\text{LWR@replacestrings{_}{\detokenize{_}}}%
\text{LWR@replacestrings{_}{\detokenize{_}}}%
```

Neutralize \%, \#, \& in case used by the author.

\@tempa is built to be

```
\LWR@replacestrings{\#}{#}
```

and similar for % and &.

```
\ifbool{LWR@HTMLsanitize@tmpb@removebackslash}%
7252
            {%
7253
                \def\@tempa{\LWR@replacestrings}%
7254
            \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\detokenize{\\#}}}%
7255
            \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\LWRhash}}%
7256
                \@tempa%
7257
                \def\@tempa{\LWR@replacestrings}%
7258
7259
            \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\detokenize{\%}}}%
```

```
7260 \expandafter\appto\expandafter\@tempa\expandafter{\LWRpercent}}%
7261 \@tempa%
7262 \def\@tempa{\LWR@replacestrings}%
7263 \expandafter\appto\expandafter\@tempa\expandafter{\detokenize{\&}}}%
7264 \expandafter\appto\expandafter\@tempa\expandafter{\LWRamp}}%
7265 \@tempa%
7266 }%
7267 {}%
```

The quotes occasionally causes problems. For MathJax, also allow neutralization of \" and the " character.

```
\ifbool{LWR@MathJax@silentquotes}
7268
7269
                  \expandafter\LWR@replacestrings\expandafter{\LWRbackslash"}{}%
7270
                     \LWR@replacestrings{"}{}%
7271
7272
7273
                {\LWR@replacestrings{"}{"}}%
        }% enabled
7274
        {}% not enabled
7275
7276 }
7277 \catcode '\&=4
```

\LWR@HTMLsanitize@use@tmpb $\{\langle text \rangle\}$

Sanitizes via \LWR@HTMLsanitize@tmpb and then immediately uses the result.

```
7278 \newcommand{\LWR@HTMLsanitize@use@tmpb}[1]{%
         \ifbool{LWR@HTMLsanitize@tmpb@enable}%
7279
7280
             {%
                  \left( \frac{1}{m} \right)
7281
7282
                  \LWR@HTMLsanitize@tmpb%
7283
                  \tmpb%
7284
             }%
7285
             {#1}%
7286 }
```

\LWR@subHTMLsanitize \LWR@strresult must first be set by \LWR@HTMLsanitizedetokenized, \LWR@HTMLsanitizeexpanded, or \CustomizeMathJax.

```
7287 \catcode'\#=12
7288 \newcommand{\LWR@subHTMLsanitize}{%
7289 \edef\tmpb{\detokenize\expandafter{\LWR@strresult}}%
7290 \LWR@HTMLsanitize@tmpb%
```

MATHJAX allows expressions to be defined with \newcommand. These expressions would appear with ## for each argument, and each must be changed to a single #. This must be done after all the above changes. Attempting another conversion after this causes an error upon further expansion.

```
7291 \LWR@replacestrings{##}{#}%
7292 \edef\LWR@strresult{\detokenize\expandafter{\tmpb}}%
7293 }
7294 \catcode'\#=6
```

\LWR@HTMLsanitizedetokenized $\{\langle detokenized\ text \rangle\}$

Prints the sanitized text, already detokenized.

```
7295 \newrobustcmd{\LWR@HTMLsanitizedetokenized}[1]{% 7296 \LWR@traceinfo{LWR@HTMLsanitizedetokenized !#1!}%
```

Cancel French babel character handling, and fully expand the strings:

```
7297 \begingroup%
7298 \LWR@hook@processingtags%
7299 \edef\LWR@strresult{#1}%
7300 \LWR@subHTMLsanitize%
7301 \LWR@strresult%
7302 \endgroup%
7303 \LWR@traceinfo{LWR@HTMLsanitize done}%
7304}
```

\LWR@HTMLsanitizeexpanded $\{\langle text \rangle\}$

This version must be given the detokenized and expanded text. This is only used for adding math to MATHJAX expressions or lateximage alt tags.

```
7305 \edef\LWR@beginspaceleftbrace{begin \LWRleftbrace}
7306 \edef\LWR@beginspaceleftbrace{\detokenize\expandafter{\LWR@beginspaceleftbrace}}
7307 \edef\LWR@beginleftbrace{begin\LWRleftbrace}
7308 \edef\LWR@beginleftbrace{\detokenize\expandafter{\LWR@beginleftbrace}}
7309
7310 \edef\LWR@endspacerightbrace{end \LWRrightbrace}
7311 \edef\LWR@endspacerightbrace{\detokenize\expandafter{\LWR@endspacerightbrace}}
7312 \edef\LWR@endrightbrace{end\LWRrightbrace}
7313 \edef\LWR@endrightbrace{\detokenize\expandafter{\LWR@endrightbrace}}
7314
7315 \newrobustcmd{\LWR@HTMLsanitizeexpanded}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
7316 \begingroup%7317 \LWR@hook@processingtags%7318 \edef\LWR@strresult{#1}%
```

The math expression may includes spaces between tokens, but MathJax does not want a space between \begin or \end and the following brace. This space is removed here.

```
7319 \protect\StrSubstitute{\LWR@strresult}%
7320 {\LWR@beginspaceleftbrace}{\LWR@beginleftbrace}[\LWR@strresult]%
7321 \protect\StrSubstitute{\LWR@strresult}%
7322 {\LWR@endspacerightbrace}{\LWR@endrightbrace}[\LWR@strresult]%
7323 \LWR@subHTMLsanitize%
7324 \LWR@strresult%
7325 \endgroup%
7326}
```

63.2 Customizing MATHJAX

\LWR@customizedMathJax Additional MathJax definitions to be added to the start of each html page.

```
7330 \newcommand*{\LWR@subcustomizedmathjax}[1]{%
7331
        \begingroup%
        \LWR@hook@processingtags%
7332
        \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
7333
        \edef\LWR@strresult{\detokenize{#1}}%
7334
        \LWR@subHTMLsanitize%
7335
7336
        \xdef\LWR@customizedMathJax{%
            \LWR@customizedMathJax%
7337
                \LWR@strresult%
7338
7339
7340
        \endgroup%
7341 }
7342 \@onlypreamble\LWR@subcustomizedmathjax
```

 $\CustomizeMathJax {\langle macro definition \rangle}$

7364 \typeout{---}

A warning is issued if a very long argument is given.

```
7343 \newcommand*{\CustomizeMathJax}[1]{%
                                  \ifbool{LWR@warnedcustomizemathjax}{}{%
                          7345
                                       \StrLen{\detokenize{#1}}[\LWR@tempone]%
                                       \ifnumgreater{\LWR@tempone}{350}{\%}
                          7346
                                           \AtEndDocument{%
                          7347
                                               \PackageNoteNoLine{lwarp}{%
                          7348
                                               To ensure faster MathJax compilation, place each\MessageBreak
                          7349
                                             custom macro in its own \protect\CustomizeMathJax.\MessageBreak
                          7350
                                              See the Lwarp documentation regarding customizing\MessageBreak
                          7351
                                                    MathJax%
                          7352
                                               }%
                          7353
                                           }%
                          7354
                          7355
                                           \booltrue{LWR@warnedcustomizemathjax}%
                          7356
                                       }{}%
                          7357
                                   \appto\LWR@customizedMathJax{\LWRbackslash(}%
                          7358
                                   \LWR@subcustomizedmathjax{#1}%
                          7359
                                   \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
                          7360
                          7361 }
                          7362 \@onlypreamble\CustomizeMathJax
\LWR@infoprocessingmathjax \{\langle package \ name \rangle\}
                          7363 \newcommand*{\LWR@infoprocessingmathjax}[1]{%
```

```
7365 \typeout{Package lwarp: Processing MathJax customizations for #1.}
7366 \typeout{\space This may take a moment.}
7367 \typeout{---}
7368 }
```

defaults Default customizations:

In the MathJax code, footnotes are only referenced. For equations, they are also generated in the HTML when the LATEX math is generated inside the HTML comment. For other math environments, the \footnotemark/\footnotetext method must be used. See section 8.5.4 regarding \footnotemark.

\footnotemark

For footnotes, \footnotename is used in most cases, however for equation the footnote is picked up from LATEXin \LWR@doendequation.

First, \footnotename for MATHJAX is copied from LATEX.

```
7369 \providecommand{\footnotename}{footnote}
7371% due to warpMathJax:
7372 \end{warpHTML}
7374 \begin{warpMathJax}
7375 \xdef\LWR@customizedMathJax{\LWR@customizedMathJax%
        \LWRbackslash(%
7377
        \LWRbackslash{}newcommand%
7378
       \{\LWRbackslash{}footnotename\}%
7379
        \{\footnotename\}%
        \LWRbackslash)\par%
7380
7381 }
7382 \end{warpMathJax}
```

\LWRfootnote is set per equation if a footnote is detected in the equation's math expression, otherwise it defaults to \footnotename.

```
7383 \begin{warpMathJax}
7384 \CustomizeMathJax{\def\LWRfootnote{1}}
7385 \CustomizeMathJax{\newcommand{\footnote}[2][\LWRfootnote]{{}^{\mathrm{#1}}}}
7386 \CustomizeMathJax{\newcommand{\footnotemark}[1][\LWRfootnote]{{}^{\mathrm{#1}}}}
```

\hspace is modified to accept and ignore a star:

```
\label{lem:continuous} $7387 \customizeMathJax{\let\LWRorighspace\hspace} $7388 \customizeMathJax{\renewcommand{\hspace}{\letchirp.}} $$
```

Various other customizations:

```
7389 \CustomizeMathJax{\newcommand\\mathnormal}[1]{{#1}}
7390 \CustomizeMathJax{\newcommand\ensuremath[1]{#1}}
7391 \CustomizeMathJax{\% absorb two optional arguments
7392 \newcommand{\LWRframebox}[2][]{\fbox{#2}}
7393 \newcommand{\framebox}[1][]{\LWRframebox}
7394 }
7395 \CustomizeMathJax{\newcommand{\setlength}[2]{}}
7396 \CustomizeMathJax{\newcommand{\addtolength}[2]{}}
7397 \CustomizeMathJax{\newcommand{\setcounter}[2]{}}
7398 \CustomizeMathJax{\newcommand{\addtocounter}[2]{}}
7399 \CustomizeMathJax{\newcommand{\addtocounter}[2]{}}
7399 \CustomizeMathJax{\newcommand{\arabic}[1]{}}
```

```
7400 \CustomizeMathJax{\newcommand{\number}[1]{}}
                  7401 \CustomizeMathJax{\newcommand{\noalign}[1]{\text{#1}\notag \\}}
                  7402 \c wcommand \c line [1]{}}
                  7403 \customizeMathJax{\newcommand{\directlua}[1]{\text{(directlua)}}} \\
                  7404 \CustomizeMathJax{\newcommand{\luatexdirectlua}[1]{\text{(directlua)}}}}
                    \protect, \mathchar, and \delimiter are silently discarded; and \mathcode and
                    \delcode are ignored.
                  7405 \CustomizeMathJax{\newcommand{\protect}{}}
                  7406 \CustomizeMathJax{\def\LWRabsorbnumber#1 {}}
                  7407 \CustomizeMathJax{\def\LWRabsorbquotenumber"#1 {}}
                  7409 \verb|\CustomizeMathJax{\newcommand{\LWRabsorbtwooptions}[1][]{\LWRabsorboption}}|
                  7410 \c Sorbquotenumber \LWR absorbquotenumber \LWR absorbnumber)\}
                  7411 \CustomizeMathJax{\def\mathcode#1={\mathchar}}
                  7412 \CustomizeMathJax{\let\delcode\mathcode}
                  7413 \CustomizeMathJax{\let\delimiter\mathchar}
                    Some text symbols missing from MathJax:
                  7414 \CustomizeMathJax{\def\oe{\unicode{x0153}}}
                  7415 \CustomizeMathJax{\def\OE{\unicode{x0152}}}
                  7416 \code{x00E6})}
                  7417 \CustomizeMathJax{\def\AE{\unicode{x00C6}}}
                  7418 \CustomizeMathJax{\def\aa{\unicode{x00E5}}}
                  7419 \CustomizeMathJax{\def\AA{\unicode{x00C5}}}
                  7420 \code{x00F8}}
                  7421 \CustomizeMathJax{\def\O{\unicode{x00D8}}}
                  7422 \CustomizeMathJax{\def\l{\unicode{x0142}}}
                  7423 \CustomizeMathJax{\def\L{\unicode{x0141}}}
                  7424 \CustomizeMathJax{\def\ss{\unicode{x00DF}}}}
                  7425 \CustomizeMathJax{\def\SS{\unicode{x1E9E}}}
                  7426 \code{x2020})}
                  7427 \CustomizeMathJax{\def\ddag{\unicode{x2021}}}
                  7428 \CustomizeMathJax{\def\P{\unicode{x00B6}}}
                  7429 \comizeMathJax{\def\copyright{\unicode{x00A9}}}}
                  7430 \CustomizeMathJax{\def\pounds{\unicode{x00A3}}}
                  7431 \end{warpMathJax}
                  7432
                  7433
                  7434 \begin{warpHTML}% due to warpMathJax
\LWR@customizeMathJax Prints MathJax commands to the html output.
                  7435 \newcommand{\LWR@customizeMathJax}{%
                  7436 \ifbool{mathjax}{
                  7437 \LWR@stoppars
                  7438 \LWR@htmlcomment{MathJax customizations:}
                  7439 \LWR@htmlelementclass{div data-nosnippet}[display:none]{}
                  7440 \LWR@stoppars
                    Avoid ligatures while printing MATHJAX customizations:
                  7441 {
```

```
\LWR@print@ttfamily
                                                          7442
                                                          7443
                                                                                     \LWR@customizedMathJax
                                                          7444 }
                                                          7445 \LWR@htmlelementclassend\{div\}\{\}
                                                          7446 }{}
                                                          7447 }
                                                          7448 \end{warpHTML}
for PRINT output: 7449 \begin{warpprint}
\CustomizeMathJax The print-mode version:
                                                          7450 \newcommand*{\CustomizeMathJax}[1]{}
\FilenameSimplify * \{\langle expression \rangle\}
                                                          7451 \NewDocumentCommand{\FilenameSimplify}{s m}{}
                                                          7452 \end{warpprint}
for HTML output: 7453 \begin{warpHTML}
\LWR@createfooter If specified, create the first or later web page footer.
                                                          7454 \newcommand*{\LWR@createfooter}{%
                                                                                     \ifnumless{\value{LWR@htmlseqfilenumber}}{1}{%
                                                          7455
                                                                                                    \ifdefempty{\LWR@firstpagebottom}{}{%
                                                          7456
                                                          7457
                                                                                                                   \LWR@htmlelement{footer}
                                                          7458
                                                          7459
                                                                                                                   \LWR@firstpagebottom
                                                          7460
                                                                                                                   \LWR@htmlelementend{footer}
                                                          7461
                                                                                                    }%
                                                          7462
                                                                                     }{%
                                                          7463
                                                                                                    \label{localized} $$ \left( LWR@pagebottom \right)_{3}(\%) $$ $$ if defempty $$ LWR@pagebottom $$_{3}(\%) $$ if defempty $$ LWR@pagebottom $$_{3}(\%) $$ if defempty $$_{3}(\%) $$ if 
                                                          7464
                                                                                                                   \LWR@htmlelement{footer}
                                                          7465
                                                          7466
                                                          7467
                                                                                                                   \LWR@pagebottom
                                                          7468
                                                                                                                   \LWR@htmlelementend{footer}
                                                          7469
                                                          7470
                                                                                                    }%
                                                          7471
                                                                                     }%
                                                          7472 }
```

Finishes the current HTML page with footnotes, footer, navigation, then starts a new HTML page with an HTML comment telling where to split the page and what the new filename and css are, then adds navigation, side TOC, header, and starts the text body.

```
7473 \newcommand*{\LWR@newhtmlfile}[1]{
7474 \LWR@traceinfo{LWR@newhtmlfile}
```

\LWR@newhtmlfile $\{\langle section \ name \rangle\}$

At the bottom of the ending file:

```
7475 \LWR@htmlelementclassend{section}{textbody}
7476 \LWR@htmlelementclassend{main}{bodycontainer}
7477 \LWR@htmlelementclassend{div}{bodyandsidetoc}
7478
7479 \LWR@printpendingfootnotes
7480
```

No footer between files if EPUB:

```
7481 \ifbool{FormatEPUB}{}{\LWR@createfooter}
```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```
7482 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7483 {}
7484 {\ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}
```

End of this HTML file:

```
7485 \LWR@stoppars
7486 \LWR@htmltag{/body}\LWR@orignewline
7487 \LWR@htmltag{/html}\LWR@orignewline
7488 \LWR@traceinfo{LWR@newhtmlfile: about to LWR@orignewpage}
7489 \LWR@maybe@orignewpage

7490 \addtocounter{LWR@htmlfilenumber}{1}%
7491 \addtocounter{LWR@htmlseqfilenumber}{1}%
```

If using a filename based on section name, create a version without blanks. The filename without blanks will be placed into \LWR@thisfilename. Duplicates will be detected using MD5 hashes.

If not using a filename, the file number will be used instead.

```
7492 \ifbool{FileSectionNames}%
7493 {%
```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```
7494 \LWR@filenamenoblanks{#1}%
```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```
\label{local-control} $$ \edship \ \edship \
```

If the macro name is not yet defined, this filename is unique.

```
7496 \ifcsundef{LWR@filename\LWR@hashedname}{%
```

If the filename is unique, create a macro using the hashed name, to be used to test for additional duplicates in the future.

```
7497 \csdef{LWR@filename\LWR@hashedname}{}% 7498 \}{%
```

If the filename is not unique, create an error.

```
\PackageError{lwarp}%
7499
7500
                    The section name:\MessageBreak
7501
                     ''#1'',\MessageBreak
7502
                    at the line number listed below,\MessageBreak
7503
                    generates the filename\MessageBreak
7504
                    ''\LWR@thisfilename'',\MessageBreak
7505
                    which appears to be a duplicate. There is a\MessageBreak
7506
                 previous section with an identical or similar name.\MessageBreak
7507
7508
                 While generating file names, Lwarp sanitizes math, \MessageBreak
7509
                    most symbols, and a few common short words,\MessageBreak
                    and this may cause a conflict.\MessageBreak
7510
                    Enter 'H' for possible solutions%
7511
                }%
7512
                {%
7513
                     \LWR@avoiddupfilenames%
7514
7515
                }%
7516
        }%
7517 }%
```

If using file numbers instead of names, the name is set to the next file number.

```
7518 {\tt \cmale}{\tt \cmale} {\tt \c
```

Include an HTML comment to instruct lwarpmk where to split the files apart. Uses pipe-separated fields for split_html.gawk. Uses monospaced font with ligatures disabled for everything except the title.

```
7519 \LWR@traceinfo{LWR@newhtmlfile: about to print start file}%
```

\LWR@nullfonts to allow math in a section name.

```
7520 \begingroup%
7521 \LWR@nullfonts%
7522 \LWR@htmlblockcomment{%
7523 |Start file|%
7524 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
7525 }
7526 \endgroup%
```

At the top of the starting file:

```
7527 \LWR@stoppars
```

Start a new file with the given section name:

```
7529 \LWR@filestart[#1]
7530
```

Track the PDF page numbers of the HTML output. This is updated more frequently than LWR@currentautosecpage.

```
7531 \setcounter{LWR@currentautosecfloatpage}{\value{page}}% 7532 \LWR@newautopagelabel{LWR@currentautosecfloatpage}%
```

No navigation between files if formatting for an EPUB or word processor:

```
7533 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7534 {}
7535 {\LWR@topnavigation}
```

No header if between files if formatting for an EPUB or word processor:

```
7537 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7538
        {}
7539
        {
            \ifdefempty{\LWR@pagetop}{}{
7540
                 \LWR@htmlelement{header}
7541
7542
7543
                 \LWR@pagetop
                 \LWR@htmlelementend{header}
7545
7546
            }
        }
7547
7548
```

The container for the sidetoc and text body:

```
7549 \LWR@htmlelementclass{div}{bodyandsidetoc}
```

No sidetoc if formatting for an EPUB or word processor:

```
7550 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7551 {}
7552 {\LWR@sidetoc}
7553
```

Start of the <textbody>:

```
7554 \LWR@htmlelementclass{main}{bodycontainer}
7555 \LWR@htmlelementclass{section}{textbody}
```

Not yet found a new section in this file. Once one is found, a label will be placed for previous/next links.

```
7556 \boolfalse{LWR@setseqfilelabel}
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```
7557 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
7558 {}%
7559 {%
7560 \ifcsvoid{thetitle}{}{%
7561 \LWR@printthetitle%
7562 }%
7563 }%
```

Keep paragraph tags disabled for now:

```
7564 \LWR@stoppars
7565

If using MATHJAX, print the customizations here.
7566 \LWR@customizeMathJax
7567 \LWR@traceinfo{LWR@newhtmlfile: done}
7568 }
```

64 Sectioning

7569 \end{warpHTML}

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing LATEX code and packages. Formatting is handled by css, so the emulated code has much less work to do than the print versions.

Unicode

accents in filenames

Section names and the resulting filenames with accented characters are partially supported, depending on the ability of *pdflatex* to generate characters and *pdftotext* to read them. If extra symbols appear in the text, it may be that *pdflatex* is actually producing a symbol over or under a character, resulting in *pdftotext* picking up the accent symbol separately.

X¬ILATEX and LualATEX directly support accented section and file names, but it may be necessary to use IATEX accents instead of native Unicode accents. IATEX accents will have the accents stripped when creating file names, whereas using Unicode accents will create filenames which include accents, which may cause issues with some operating systems.

for HTML output: 7570 \begin{warpHTML}

64.1 User-level starred section commands

\ForceHTMLPage For HTML output, forces the next section to be on its own HTML page, if FileDepth allows, even if starred. For use with \printindex and others which generate a starred section which should be on its own HTML page. Also see \ForceHTMLTOC.

For print output, no effect.

```
7571 \newbool{LWR@forcinghtmlpage}
7572 \boolfalse{LWR@forcinghtmlpage}
7573
7574 \newcommand*{\ForceHTMLPage}{%
7575 \global\booltrue{LWR@forcinghtmlpage}%
7576 }
```

\ForceHTMLTOC For HTML output, forces the next section to have a TOC entry, even if starred. For use with \printindex and others which generate a starred section which should be in the TOC so that it may be accessed via HTML. Not necessary if used with tocbibind. Also see \ForceHTMLPage.



For print output, no effect.

```
7577 \newbool{LWR@forcinghtmltoc}
7578 \boolfalse{LWR@forcinghtmltoc}
7579
7580 \newcommand*{\ForceHTMLTOC}{%
7581 \global\booltrue{LWR@forcinghtmltoc}%
7582 }

7583 \end{warpHTML}

for PRINT output: 7584 \begin{warpprint}
7585 \newcommand*{\ForceHTMLPage}{}
7586 \newcommand*{\ForceHTMLTOC}{}
7587 \end{warpprint}

for HTML output: 7588 \begin{warpprint}
```

64.2 Book class commands

\mainmatter Declare the main matter section of the document. Does not reset the page number, which must be consecutive arabic numbers for the HTML conversion.

```
7589 \newbool{LWR@mainmatter}
7590 \DeclareDocumentCommand{\mainmatter}{}{%
7591 \booltrue{LWR@mainmatter}%
7592 }
```

\frontmatter Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```
7593 \DeclareDocumentCommand{\frontmatter}{}{%
7594 \boolfalse{LWR@mainmatter}%
7595 }
```

\backmatter Declare the back matter section of the document. Does not reset the page number.

```
7596 \DeclareDocumentCommand{\backmatter}{}{%
7597 \boolfalse{LWR@mainmatter}
7598 }
```

64.3 Sectioning support macros

```
\LWR@sectionumber \{\langle section \ type \rangle\}
```

Typeset a section number and its trailing space with css formatting:

```
7599 \newcommand*{\LWR@sectionnumber}[1]{%
7600 \InlineClass{sectionnumber}{#1}%
7601 }
```

autosec A tag used by the ToC and index.

```
\LWR@createautosec \{\langle section \ type \rangle\}
```

Create an autosection tag.

The use of \textquotedbl instead of " provides improved compatibility with xeCJK.

```
7602 \newcommand*{\LWR@createautosec}[1]{%
7603 \LWR@htmltag{%
7604  #1 % space
7605  id=\textquotedbl\LWR@print@mbox{autosec-\arabic{page}}\textquotedbl%
7606 }%
7607 }
```

\LWR@pushoneclose {\sectiontype\}} Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.

 \triangle

\LWR@stoppars must be executed first.

```
7608 \NewDocumentCommand{\LWR@pushoneclose}{m}{%
7609 \LWR@traceinfo{LWR@pushoneclose #1}%
7610 \LWR@pushclose{#1}%
7611}
```

\LWR@startnewdepth $\{\langle sectiontype \rangle\}$

Closes currently stacked tags of a lesser level, then opens the new nesting level by saving this new sectioning level's closing tag for later use.

 Λ

\LWR@stoppars must be executed first.

```
7612 \NewDocumentCommand{\LWR@startnewdepth}{m}{%}
```

Close any stacked sections up to this new one.

```
7613 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
7614 \LWR@pushoneclose{#1}% 7615 }
```

LWR@prevFileDepth (Ctr) Remembers the previous LWR@FileDepth.

Initialized to a deep level so that any section will trigger a new HTML page after the home page.

```
\label{lem:counter} $$7616 \enskip Counter_LWR@prevFileDepth_{\LWR@depthsubparagraph} $$ \enskip Counter_{\LWR@prevFileDepth}_{\LWR@depthsubparagraph} $$ \enskip Counter_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@depthsubparagraph} $$ \enskip Counter_{\LWR@prevFileDepth}_{\LWR@depthsubparagraph} $$ \enskip Counter_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@depthsubparagraph} $$ \enskip Counter_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_{\LWR@prevFileDepth}_
```

\simplechapterdelim Used by tocbibind and anonchap.

```
7619 \newcommand*{\simplechapterdelim}{}
```

```
\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath}\ensuremath{\mbox{\ensuremath}}\ensuremath{\mbox{\ensuremath}}\ensuremath}\ensuremath{\mbox{\ensuremath}}\ensuremath}\ensuremath{\mbox{\ensuremath}}\ensuremath}\ensuremath{\mbox{\ensuremath}}\ensuremath}\ensuremath}\ensuremath{\mbox{\ensuremath}}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensuremath}\ensu
                                                       \let to \@seccntformat by default, but may be redefined by \simplechapter and
                                                       \restorechapter from tocbibind or anonchap.
                                                 7620 \let\@chapcntformat\@seccntformat
               \ensuremath{\texttt{Qpartcntformat}}\ \{\langle sectiontype \rangle\}
                                                       \let to \@seccntformat by default, but may be redefined by ctex.
                                                 7621 \let\@partcntformat\@seccntformat
             \@partnameformat Prints "Part" for part sections.
                                                       Nullified by ctex.
                                                 7622 \newcommand*{\@partnameformat}{\LWR@isolate{\partname}~}%
\LWR@printchaptername Print \chaptername in most cases, but this is nullified for ctexbook, komascript,
                                                       uit* classes.
                                                 7623 \newcommand*{\LWR@printchaptername}{%
                                                                    \ifdefvoid{\chaptername}{}{\chaptername~}%
                                                 7624
                                                 7625 }
                       \LWR@section * [\langle TOC \ name \rangle] \{\langle name \rangle\} \{\langle section type \rangle\}
                                                       The common actions for the high-level sectioning commands.
                                                 7626 \DeclareDocumentCommand{\LWR@section}{m m m}{%
                                                 7627 \IfValueTF{#2}%
                                                                    {\LWR@traceinfo{LWR@section: starting #4 #2}}%
                                                 7628
                                                 7629
                                                                    {\LWR@traceinfo{LWR@section: starting #4 #3}}%
                                                       Warn if starting a section inside a <span>:
                                                                    \LWR@spanwarninvalid{section}%
                                                 7630
                                                 7631 \verb|\LWR@maybeprintpendingfootnotes{\LWR@depth#4}}| %
                                                 7632 \LWR@stoppars%
                                                 7633 \LWR@startnewdepth{#4}%
                                                       Cancel special minipage horizontal space interaction:
                                                 7634 \global\boolfalse{LWR@minipagethispar}%
                                                       Start a new HTML file unless starred, and if is a shallow sectioning depth.
                                                       Exception: Also start a new HTML file for \part*, for appendix.
                                                       Generate a new LATEX page so that TOC and index page number points to the
                                                       section:
```

7635 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%

```
7636 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
7637 \ if bool \{LWR@forcinghtmlpage\} \{LWR@traceinfo\{LWR@section: forcinghtmlpage\}\} \} \} \% 
7638 \ifthenelse{%
7639
        \(%
            \(\NOT\equal{#1}{\BooleanTrue}\)\OR%
7640
            \label{local-control} $$ \operatorname{LWR@depth#4}}{=}_{\LWR@depthpart})\OR% $$
7641
            \(\boolean{LWR@forcinghtmlpage}\)%
7642
        \)%
7643
        \AND%
7644
        \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
7645
        \AND%
7646
7647
        \(%
7648
            \NOT\boolean{CombineHigherDepths}\OR%
7649
            \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
7650
        \)%
        \AND%
7651
        \(% phantomsection
7652
            \NOT\isempty{#3}%
7653
7654
            \(\NOT\equal{#1}{\BooleanTrue}\)%
7655
        \)%
7656
7657 }%
  If so: start a new HTML file:
7658 {% new file
        \LWR@traceinfo{LWR@section: new HTML file}%
  See if there was an optional TOC name entry:
        \IfNoValueTF{#2}%
7660
  If no optional entry
            {\LWR@newhtmlfile{#3}}%
7661
  If yes an optional entry
7662
            {\LWR@newhtmlfile{#2}}%
7663 }% new file
  Else: No new html file:
7664 {% not new file
  Generate a new LATEX page so that TOC and index page number points to the
  section:
7665
       \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
7666
        \LWR@stoppars%
        \LWR@maybe@orignewpage%
7668}% not new file
7669 %
7670 % Remember this section's name for \cs{nameref}:
7671 %
         \begin{macrocode}
```

```
7672 \IfValueT{#3}{%
7673    \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
7674    \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
7675 }%
```

Print an opening comment with the level and the name; ex: "section" "Introduction" Footnotes may be used in section names, which would also appear in the HTML section opening comments, so the short ToC entry is used if possible, and a limited opening comment is made if the sectional unit is starred.

Avoid extra <par> tag:

7676 \LWR@stoppars%

Form a sectioning comment:

```
7677 \begingroup%
7678 \LWR@nullfonts%
7679 \LWR@nullifyfootnotes%
7680 \LWR@htmlcomment{%
        \LWR@orignewline%
7681
7682
        \IfValueTF{#2}%
7683
            {.....}%
7684
            {.....}%
7685
       \LWR@orignewline%
7686 }%
7687 \LWR@orignewline%
7688 \verb|\ifbool{HTMLDebugComments}| %
7689
       {%
            \IfBooleanTF{#1}% starred
7690
                {%
7691
                    \IfNoValueTF{#2}% short TOC
7692
7693
                        {\LWR@htmlcomment{Opening #4* ''#3''}}%
                        {\LWR@htmlcomment{Opening #4* ''#2''}}%
                }%
7695
7696
                {%
                    \IfNoValueTF{#2}% short TOC
7697
                        {\LWR@htmlcomment{Opening #4 ''#3''}}%
7698
                        {\LWR@htmlcomment{Opening #4 ''#2''}}%
7699
                }%
7700
7701
            \LWR@orignewline%
7702
       }%
7703
       {}%
7704 \endgroup%
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
7705 \ifthenelse{%
7706 \cnttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
7707 }%
7708 {\LWR@startpars}%
7709 {}%
```

Create the opening tag with an autosec:

```
7710 \LWR@traceinfo{LWR@section: about to LWR@createautosec}% 7711 \LWR@createautosec{\@nameuse{LWR@tag#4}}%
```

7712 \setcounter{LWR@currentautosecpage}{\value{page}}%

Check if starred:

```
7713 \IfBooleanTF{#1}%
7714 {%
7715 \LWR@traceinfo{LWR@section: starred}%
```

Starred, but also forcing a TOC entry, so add unnumbered TOC name or regular name:

Not starred, so step counter and add to TOC:

```
7724 {% not starred
```

Only add a numbered TOC entry if section number is not too deep:

```
7725 \ifthenelse{%
7726 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
7727 }%
7728 {% if secnumdepth</pre>
```

If in the main matter, step the counter and add the TOC entry. For article class, lwarp assumes that all is mainmatter.

```
7729 \LWR@traceinfo{LWR@section: about to test main matter}%
7730 \ifbool{LWR@mainmatter}%
7731 {%
7732 \LWR@traceinfo{LWR@section: yes mainmatter}%
7733 \refstepcounter{#4}%
```

Add main matter numbered ToC entry with the ToC name or the regular name:

```
\LWR@traceinfo{LWR@section: about to addcontentsline}%
7734
                \addcontentsline{toc}{#4}%
7735
                {%
7736
                     \protect\numberline{%
7737
                         \@nameuse{pre#4name}%
7738
                         \@nameuse{the#4}%
7739
                         \@nameuse{post#4name}%
7740
                     }%
7741
7742
                     {%
7743
                         \ignorespaces%
                  \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
7744
7745
                     }%
                }%
7746
                \LWR@traceinfo{LWR@section: finished addcontentsline}%
7747
            }% end of if main matter
7748
```

If not main matter, add unnumbered TOC name or regular name:

\IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%

```
7749
         {% not main matter
             \LWR@traceinfo{LWR@section: no main matter}%
7750
             \addcontentsline{toc}{#4}{\%}
7751
                7752
7753
             }%
7754
         }% end of not main matter
      }% end of secnumdepth
7755
 Deeper than secnumdepth, so add an unnumbered Toc entry:
7756
```

```
7760 }%
```

\addcontentsline{toc}{#4}{%

For part, print "Part":

}%

7757

7758

7759

```
\ifbool{LWR@mainmatter}%
7761
7762
             \ifthenelse{%
7763
                  \(\cnttest{\@nameuse{LWR@depth#4}}{<=}%
7764
                      {\value{secnumdepth}}\) \AND%
7765
                  \label{local-control} $$ \operatorname{LWR@depth#4}}{=}{\LWR@depthpart}\)% $$
7766
             }%
7767
7768
                  {\@partnameformat}%
7769
                  {}%
```

Print the section number:

```
\LWR@traceinfo{LWR@section: about to print section number}%
7770
            \ifthenelse{%
7771
7772
                \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
7773
            }%
                {%
                    \ifstrequal{#4}{part}%
                    {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%
7776
                    {%
7777
                         \ifstrequal{#4}{chapter}%
7778
                             {%
7779
                                 \LWR@printchaptername%
7780
                                 \protect\LWR@sectionnumber{\@chapcntformat{#4}}%
7781
7782
                             {\protect\LWR@sectionnumber{\@seccntformat{#4}}}%
7783
7784
                    }%
                }%
7785
                {}%
7786
            \LWR@traceinfo{LWR@section: finished print section number}%
7788
       }{}%
7789 }% not starred
```

Print the section name:

```
7790 \LWR@traceinfo{LWR@section: about to print the section name}% 7791 \LWR@isolate{#3}%
```

Close the heading tag, such as /H2:

```
7792 \LWR@traceinfo{LWR@section: about to close the heading tag}% 7793 \LWR@htmltag{\@nameuse{LWR@tag#4end}}% 7794 \LWR@orignewline%
```

Generate a LATEX label.

Track the PDF page numbers of the HTML output. A new autopage label may be generated for LWR@currentautosecpage for the start of the section, and also for the current page if it is different due to an svg image in the section name. Also, the final page after the section has been created is updated in LWR@currentautosecfloatpage.

```
7795 \LWR@traceinfo{LWR@section: about to create the LaTeX label}% 7796 \setcounter{LWR@currentautosecfloatpage}{\value{page}}% 7797 \LWR@newautopagelabel{LWR@currentautosecpage}\LWR@orignewline%
```

If this is the first section found in this file, create a label for prevous/next links:

Start paragraph handing unless is an inline paragraph or subparagraph:

If not starred, remember the previous depth to possibly trigger a new HTML page.

HOWEVER, allow a \part* to start a new HTML page. This is used by appendix.

A starred section does not trigger a new HTML page at the beginning of this macro, so it should not affect it here at the end either. This became an issue when a \listoftables was tested in the middle of the document. The \chapter* for the list was not allowing a new HTML page for the section following it while CombineHigherDepths was true.

```
7807 \ifthenelse{%
7808    \NOT\equal{#1}{\BooleanTrue}\OR%
7809    \cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}%
7810 }%
7811    {% not starred
7812    \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
7813    }% not starred
7814    {}%
```

Reset to defaults if not a phantomsection:

```
7821%
7822 \LWR@traceinfo{LWR@section: done}%
7823 }
```

64.4 Pre- and post- sectioning names

```
\prebookname Usually null, but is used by uj* and ut* Japanese classes.
   \postbookname
               7824 \providecommand*{\prebookname}{}
               7825 \providecommand*{\postbookname}{}
    \prepartname Usually null, but is used by uj* and ut* Japanese classes.
   \postpartname
               7826 \providecommand*{\prepartname}{}
               7827 \providecommand*{\postpartname}{}
\prechaptername Usually null, but is used by uj* and ut* Japanese classes.
\postchaptername
               7828 \providecommand*{\prechaptername}{}
               7829 \providecommand*{\postchaptername}{}
\presectionname Always null, but provided here for algorithmic simplicity in \LWR@section.
\postsectionname
               7830 \providecommand*{\presectionname}{}
               7831 \let\postsectionname\presectionname
               7833 \let\presubsectionname\presectionname
               7834 \let\postsubsectionname\postsectionname
               7835
               7836 \let\presubsubsectionname\presectionname
               7837 \let\postsubsubsectionname\postsectionname
               7839 \let\preparagraphname\presectionname
               7840 \let\postparagraphname\postsectionname
               7842\ \ \ let\ presubparagraph name\ \ presection name
               7843 \let\postsubparagraphname\postsectionname
```

64.5 \section and friends

For memoir, a second optional argument is allowed.

For hyphmsec, a second optional argument or either parenthesis argument is allowed.

Each of these additional arguments are for headers or PDF bookmarks, and are ignored for HTML output.

```
7846 \DeclareDocumentCommand{\part}{s d() o o d() m}{%
                  \LWR@section{#1}{#3}{#6}{part}%
           7848
           7849
                  \part@preamble% for koma-script
           7850
                  \renewcommand{\part@preamble}{}%
           7851 }
     7852 \let\@printcites\relax% for quotchap package
           7853
           7854 \newcommand{\chapter@preamble}{}% for koma-script
           7856 \@ifundefined{chapter}
           7857 {}
           7858 {%
                  \DeclareDocumentCommand{\chapter}{s d() o o d() m}{%
           7859
                      \LWR@section{#1}{#3}{#6}{chapter}%
           7860
           7861
                      \@printcites% for quotchap package
           7862
           7863
                      \chapter@preamble% for koma-script
           7864
                      \renewcommand{\chapter@preamble}{}%
           7865
           7866
                  }
           7867 }
     \section * (\langle 2:PDF \ name \rangle) [\langle 3:TOC \ name \rangle] [\langle 4:PDF \ name \rangle] (\langle 5:PDF \ name \rangle) {\langle 6:name \rangle}
           7868 \DeclareDocumentCommand{\section}{s d() o o d() m}{%
                  \LWR@section{#1}{#3}{#6}{section}%
           7870 }
  7871 \DeclareDocumentCommand{\subsection}{s d() o o d() m}{%
                  \LWR@section{#1}{#3}{#6}{subsection}%
           7873 }
\subsection * ((2:PDF name)) [(3:TOC name)] [(4:PDF name)] ((5:PDF name)) {(6:name)}
           7874 \DeclareDocumentCommand{\subsubsection}{s d() o o d() m}{%}
           7875
                  \LWR@section{#1}{#3}{#6}{subsubsection}%
           7876 }
   7877 \DeclareDocumentCommand{\paragraph}{s d() o o d() m}{%
           7878
                  \label{lower} $$ \LWR@section{#1}{#3}{\#6}{paragraph}% $
           7879 }
```

```
7880 \DeclareDocumentCommand(\subparagraph){s d() o o d() m}{%
7881 \LWR@section{#1}{#3}{#6}{subparagraph}%
7882 }
7883 \end{warpHTML}
```

65 Starting a new file

```
for HTML & PRINT: 7884 \begin{warpall}
```

\HTMLLanguage Default language for the HTML lang tag.

```
7885 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
7886
7887 \newcommand*{\HTMLLanguage}[1]{%
7888 \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
7889 }
```

\theHTMLTitleSeparator May be used inside \theHTMLTitleSection to separate the website's overall HTML title and the particular page's section name.

```
7890 \ifPDFTeX% pdflatex or dvi latex
7891
       7892
          \newcommand*{\theHTMLTitleSeparator}{ -\ }% EMdash
7893
      }{%
          \newcommand*{\theHTMLTitleSeparator}{ -\ }% hyphen
7894
       }%
7895
7896 \else%
       \ifpTeX
7897
           \newcommand*{\theHTMLTitleSeparator}{ -\ }% hyphen
7898
7899
           \newcommand*{\theHTMLTitleSeparator}{ -\ }% EMdash
7900
7901
       \fi%
7902\fi%
```

\HTMLTitleBeforeSection Sets the HTML page's meta title tag to show the website title before the section name.

```
7903 \newcommand*{\HTMLTitleBeforeSection}{%
7904  \def\theHTMLTitleSection{%
7905  \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
7906  }%
7907 }
```

\HTMLTitleAfterSection Sets the HTML page's meta title tag to show the section name before the website title.

```
7908 \newcommand*{\HTMLTitleAfterSection}{%
7909  \def\theHTMLTitleSection{%
7910  \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
7911  }%
7912 }
```

\theHTMLTitleSection Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```
7913 \HTMLTitleBeforeSection
```

\theHTMLSection The section name is passed to \LWR@filestart, which then sets \theHTMLSection for use inside \theHTMLTitleSection to create an HTML meta title tag.

```
7914 \newcommand*{\theHTMLSection}{}

7915 \end{warpall}

for HTML output: 7916 \begin{warpHTML}

\LWR@filestart [\(\section name\)\] Creates the opening HTML tags.

7917 \newcommand*{\LWR@filestart}[1][]{%
```

7918 \LWR@traceinfo{LWR@filestart !#1!}%

Locally temporarily disable direct-formatting commands:

```
7919 \begingroup%
7920 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
7921 \edef\theHTMLSection{#1}%
```

Remove extra material:

If starts with a dash, remove the leading dash:

Create the page's HTML header:

```
7934 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

NOTE: $\LWR@orig@textquotedbl$ is used here because \textquotedbl is nullified by $\LWR@nullfonts$ while starting the new file.

```
7935 \LWR@htmltag{%
             html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
7937 }\LWR@orignewline
      Start of the meta data:
7938 \LWR@htmltag{head}\LWR@orignewline
      Charset is fixed at UTF-8:
7939 \LWR@htmltag{%
                   meta charset=\LWR@orig@textquotedbl{}UTF-8\LWR@orig@textquotedbl\ /%
7941 }\LWR@orignewline
     Author:
7942 \ifthenelse{\equal{\theHTMLAuthor}{}}%
7943
                   {}%
7944
                   {%
7945
                              \LWR@htmltag{%
                              meta name=\LWR@orig@textquotedbl{}author\LWR@orig@textquotedbl\ % space
7946
                              content = \verb|LWR@orig@textquotedbl| the HTML Author \verb|LWR@orig@textquotedbl| /\% | Author \verb|LWR@orig@textquotedbl| /% | Au
7947
                              }\LWR@orignewline%
7948
                   }%
7949
     lwarp is the generator:
7950 \LWR@htmltag{%
                   meta % space
                   name=\LWR@orig@textquotedbl{}generator\LWR@orig@textquotedbl\ % space
                content=\LWR@orig@textquotedbl{}LaTeX Lwarp package\LWR@orig@textquotedbl\ /%
7954 }\LWR@orignewline%
     If there is a description, add it now:
7955 \ifdefempty{\LWR@currentHTMLDescription}{}{%
                   \LWR@htmltag{%
7956
                      meta name=\LWR@orig@textquotedbl{}description\LWR@orig@textquotedbl\ % space
7957
                      \verb|content=\LWR@orig@textquotedbl\LWR@currentHTMLDescription\LWR@orig@textquotedbl\/\%|
7958
7959
                   }\LWR@orignewline
7960 }%
     If there are keywords, add it now:
7961 \ifdefempty{\LWR@currentHTMLKeywords}{}{%
                   \LWR@htmltag{%
7962
7963
                      meta name=\LWR@orig@textquotedbl{}keywords\LWR@orig@textquotedbl\ % space
7964
                      content=\LWR@orig@textquotedbl\LWR@currentHTMLKeywords\LWR@orig@textquotedbl\/%
                   }\LWR@orignewline
7965
7966 }%
     Mobile-friendly viewport:
```

7967 \LWR@htmltag{%
7968 meta % space
7969 name=\LWR@orig@textquotedbl{}viewport\LWR@orig@textquotedbl\ % space
7970 content=\LWR@orig@textquotedbl{}width=device-width, initial-scale=1.0\LWR@orig@textquotedbl\ /%
7971 }\LWR@orignewline

Custom HTML meta tags:

```
7972 \LWR@HTMLmeta
```

The page's title, if there is one. A section name is also added if given.

```
7973 \ifthenelse{\equal{\theHTMLTitle}{}}%
7974
        {}%
7975
        {%
            \LWR@htmltag{title}%
7976
7977
            \ifdefempty{\theHTMLSection}%
7978
                {\theHTMLTitle}%
                {\theHTMLTitleSection}%
7979
            \LWR@htmltag{/title}\LWR@orignewline%
7980
        }%
7981
```

The page's stylesheet:

```
7982 \LWR@htmltag{%
7983     link % space
7984     rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
7985     type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
7986     href=\LWR@orig@textquotedbl\LWR@currentcss\LWR@orig@textquotedbl\ /%
7987 }%
7988 \LWR@orignewline
```

Optional MathJax support. The html tags must be turned off during the verbatim input, and the paragraph handling which was turned on at the end of verbatim input must be immediately turned off again.

```
7989 \ifbool{mathjax}%
7990 {%
7991
        \begingroup%
7992
        \LWR@restoreoriglists%
7993
        \boolfalse{LWR@verbtags}%
7994
        \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
            \IfFileExists{\LWR@mathjaxfilename}%
7995
                {\verbatiminput{\LWR@mathjaxfilename}}%
7996
                {%
7997
                     \PackageError{lwarp}%
7998
                         {%
7999
                     \protect\MathJaxFilename\space specified the file\MessageBreak
8000
                             \space\space\LWR@mathjaxfilename\MessageBreak
8001
                             which does not exist%
8002
                         }%
8003
                  {Specify an existing file, or remove \protect\MathJaxFilename.}%
8004
                }%
8005
        \endgroup%
8006
        \LWR@stoppars%
8007
8008}% end of mathjax
8009 { }%
```

End of the header:

Start of the body:

```
8011 \LWR@htmltag{body}\LWR@orignewline
8012 \endgroup%
8013 \LWR@traceinfo{LWR@filestart: done}%
8014 }
8015 \end{warpHTML}
```

66 Starting HTML output

```
for HTML output: 8016 \begin{warpHTML}
```

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
8017 \catcode'\$=\active
8018 \newcommand*{\LWR@LwarpStart}
8019 {%
8020 \LWR@traceinfo{LWR@lwarpStart}
```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```
8021 \ifbool{FormatWP}{%
8022    \setcounter{FileDepth}{-5}%
8023    \boolfalse{HTMLDebugComments}%
8024 }{}
```

Expand and detokenize \HomeHTMLFilename and \HTMLFilename:

```
8025 \edef\LWR@strresult{\HomeHTMLFilename}
8026 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
8027 \edef\LWR@strresult{\HTMLFilename}
8028 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}
```

Force one column and empty page style:

```
8029 \LWR@origonecolumn%
8030 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
8031 \overfullrule=0pt
```

Reduce chance of line overflow when HTML tags are added:

```
8032 \verb|\LWR@print@footnotesize%| \\
```

In PDF output, don't allow line breaks to interfere with HTML tags:

```
8033 \LWR@print@raggedright%
8034 \LetLtxMacro{\\}{\LWR@endofline}%
```

```
Spread the lines for pdftotext to read them well:
8035 \linespread{1.3}%
  For pdftotext to reliably identify paragraph splits:
8036 \setlength{\parindent}{0pt}
8037 \setlength{\parskip}{2ex}
  For the lateximage record file:
8038 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
  Removes space around the caption in the HTML:
8039 \setlength{\belowcaptionskip}{0ex}
8040 \setlength{\abovecaptionskip}{0ex}
  Redefine the plain page style to be empty when used by index pages:
8041 \renewcommand{\ps@plain}{}
  Plug in some new actions. This is done just before the document start so that they
  won't be over-written by some other package.
  Float captions:
8042 \let\LWR@origcaption\caption
  Not yet started any paragraph handling:
8043 \global\booltrue{LWR@doingparhooks}
8044 \global\boolfalse{LWR@doingapar}
8045 \global\boolfalse{LWR@doingstartpars}
  \color@endgroup's \endgraf was conflicting with lwarp's paragraph handling.
8046 \let\color@endgroup\endgroup
  Document and page settings:
8047 \mainmatter
8048 \LWR@origpagenumbering{arabic}
  Start a new HTML file and a header:
8049 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
8050 \LWR@filestart%
  Tell lwarpmk that the lwarp package is in use. This allows lwarpmk to warn if
  usepackage{lwarp} was somehow disabled.
8051 \begingroup%
8052 \LWR@nullfonts%
```

8053 \LWR@htmlblockcomment{%

8055 \LWR@htmlsectionfilename{\LWR@thisfilename}|%

8054 |Using lwarp|%

```
8056 }
8057 \endgroup%
8058 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}
8059 \ifdefempty{\LWR@firstpagetop}{}{%
        \LWR@htmltag{header}\LWR@orignewline
8060
        \LWR@startpars
8061
8062
        \LWR@firstpagetop
        \LWR@stoppars
8063
8064
        \LWR@htmltag{/header}\LWR@orignewline
8065 }%
8066 \verb|\LWR@htmlelementclass{div}{bodywithoutsidetoc}|
8067 \LWR@htmlelementclass{main}{bodycontainer}
8068 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
8069 \LWR@htmlelementclass{section}{textbody}
  Create a label for previous/next links, and remember it has been done:
8070 \booltrue{LWR@setsegfilelabel}%
8071 \label{\BaseJobname-autofile-\arabic{LWR@htmlseqfilenumber}}
  Patch the itemize, enumerate, and description environments and \item. This
  works with the native LATEX environments, as well as those provided by enumitem,
  enumerate, and paralist.
8072 \LWR@patchlists
  Ensure that math mode is active to call lwarp's patches:
8073 \catcode '\$=\active
  Required for \nameref to work with svg math:
8074 \immediate\write\@mainaux{\catcode'\string$\active}%
8075 \LetLtxMacro\LWR@syntaxhighlightone$% balance for editor syntax highlighting
  Allow HTML paragraphs to begin:
8076 \LWR@startpars
  If using MathJax, disable \ensuremath by printing a nullified definition at the
  start of each file, and add further customizations:
8077 \ifbool{mathjax}{
8078
       \typeout{---}
8079
       \typeout{Package lwarp:}
       \typeout{Processing MathJax customizations for the first HTML page.}
8080
       \typeout{Later HTML pages will take the same amount of time.}
8081
      \typeout{If this takes too long, see the Lwarp manual regarding customizing MathJax.}
8082
8083 }{}
8084
8085 \LWR@customizeMathJax
8087 \ifbool{mathjax}{
8088
       \typeout{Done.}
```

8089

8090 }{}

\typeout{---}

First autopage label in case a figure occurs early before the first section: A new autopage label may be generated for LWR@currentautosecpage for the start of the section, and also for the current page if it is different due to an svg image in the section name. Also, the final page after the section has been created is updated in LWR@currentautosecfloatpage.

```
8091 \setcounter{LWR@currentautosecfloatpage}{\value{page}}%
8092 \LWR@newautopagelabel{LWR@currentautosecpage}%
8093 \LWR@traceinfo{LWR@lwarpStart: done}
8094 }
8095 \catcode'\$=3% math shift until lwarp starts
8096 \end{warpHTML}
```

67 Ending HTML output

```
for HTML output: 8097 \begin{warpHTML}
  \LWR@requesttoc \{\langle boolean \rangle\} \{\langle suffix \rangle\} Requests that a TOC, LOF, or LOTbe generated.
                8098 \newcommand*{\LWR@requesttoc}[2]{%
                8099 \ifbool{#1}
                8100 {
                8101
                        \expandafter\newwrite\@nameuse{tf@#2}
                8102
                        8103 }{}
                8104 }
    \LWR@LwarpEnd Final stop of all HTML output:
                8105 \newcommand*{\LWR@LwarpEnd}
                8106 {
                8107 \LWR@stoppars
                8108 \LWR@closeprevious{finished}
                  At the bottom of the ending file:
                  Print any pending footnotes:
                8109 \LWR@printpendingfootnotes
                  Close the textbody.
                  (The \LWR@orignobreakspace is in case no autopage is required for the label,
                  which would not print anything, and something must be printed before the new-
                  line.)
                {\tt 8110 \label{\BaseJobname-autofile-last}\LWR@orignobreakspace\LWR@orignewline} \\
                8111 \LWR@htmlelementclassend{section}{textbody}
                8112 \LWR@htmlelementclassend{main}{bodycontainer}
```

8113 \LWR@htmlelementclassend{div}{bodyandsidetoc}

Create the footer if not EPUB

```
8114 \ifbool{FormatEPUB}{}{\LWR@createfooter}
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```
8115 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
8116
         {}
8117
         {
              \label{localize} $$ \inf(\mathbb{L}\mathbb{C}\mathbb{C})^{\c}(\mathbb{L}\mathbb{C}\mathbb{C})^{\c} = \mathbb{C}^{\c}. $$
8118
        }
8119
8120 \LWR@stoppars% final stop of all paragraphs
  Finish the HTML file:
8121 \LWR@htmltag{/body}\LWR@orignewline
8122 \LWR@htmltag{/html}\LWR@orignewline
  Seems to be required sometimes:
8123 \LWR@maybe@orignewpage
8124 }
```

enddocument/info (Hook) Used to close the *-images.txt file. [LaTeX]

\enddocument If labels have not changed, mark successful completion of the lateximages.txt file. Executed as everything is being shut down.

For the newer kernel hooks, see texdoc lthooks-doc and texdoc ltshipout-doc.

```
8125 \ifdef{\AddToHook}{% newer kernel
8126 \AddToHook{enddocument/info}{%
8127 \if@filesw
8128 \ifx \@multiplelabels \relax
8129 \if@tempswa
```

This is where warnings of duplicate labels would appear.

```
8130 \else
```

No duplicate labels, so safe to create images.

```
\immediate\write\LWR@lateximagesfile{%
8131
                      |end|end|end|%
8132
8133
                 }%
              \fi
8134
            \fi\fi
8135
8136
8137 }% newer kernel
8138 {% older kernel
        \xpatchcmd{\enddocument}
8139
            {%
8140
```

```
8141
                \if@tempswa
                \@latex@warning@no@line{Label(s) may have changed.
8142
                Rerun to get cross-references right}%
8143
8144
8145
            }
8146
            {%
                \if@tempswa
8147
                     \@latex@warning@no@line{Label(s) may have changed.
8148
                     Rerun to get cross-references right}%
8149
                \else
8150
```

No duplicate labels, so safe to create images.

```
\immediate\write\LWR@lateximagesfile{%
8151
                          |end|end|end|%
8152
8153
                     }%
                 \fi
8154
8155
            }
            {}
8156
8157
                 \AtEndDocument{
8158
                     \PackageWarningNoLine{lwarp}
8159
                     {%
8160
                         Could not patch \protect\enddocument.\MessageBreak
8161
                   If labels have changed, be sure to recompile before\MessageBreak
8162
8163
                         creating lateximages with\MessageBreak
                         \space\space lwarpmk limages, \MessageBreak
8165
                         or the images may be corrupt%
8166
                     }
                 }
8167
8168
            }
8169}% older kernel
```

68 Nullifying foreground/background hooks

See texdoc lthooks-doc and textdoc ltshipout-doc.

```
shipoout/background (Hook)
                             Nullified.
                     [LaTeX]
                             Nullified.
shipoout/foreground (Hook)
                     [LaTeX]
                           8170 \ifdef{\RemoveFromHook}{
                           8171
                                   \AfterEndPreamble{
                                       \IfHookEmptyTF{shipout/background}{}{
                           8172
                                           \PackageInfo{lwarp}{Removing background hook}
                           8173
                                           \RemoveFromHook{shipout/background}[*]
                           8174
                           8175
                                       \IfHookEmptyTF{shipout/foreground}{}{
                           8176
                                           \PackageInfo{lwarp}{Removing foreground hook}
                           8178
                                           \RemoveFromHook{shipout/foreground}[*]
                           8179
                           8180
                           8181 }{}
                           8182 \end{warpHTML}
```

69 Title page

package support

load order

lwarp supports the native LATEX titling commands, and also supports the packages authblk and titling. If both are used, authblk should be loaded before titling.

\published and \subtitle

If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubtitlePublished in the preamble. See section 69.8.

affiliation

lwarp provides for the \author macro an additional \affiliation macro to provide an affiliation and other additional information for each author in the title page. The affiliation information is removed when using titlingpage's \theauthor in the main text.

reusing titlepage information

The titling package maintains the definitions of \thetitle, \theauthor, etc., after the title has been typeset. These commands are to be used to refer to the document's title and author, etc., in the main text. These definitions have the \thanks and \affiliation removed, and for \author the \and is replaced to generate a simple inline list of authors separated by commas. Note: \theauthor does not work well with authblk unless the traditional LATEX syntax is used.

\theauthor, authblk

\printtitle, \printauthor, etc., are provided for use inside a custom titlepage or titlingpage environment, and these retain the \thanks and \affiliation.

\printthanks

custom titlepages

\printthanks has been added to force the printing of thanks inside a titlingpage environment when \maketitle is not used.

Inside a $\titlepage\ or\ \titlingpage\ environment,\ use\ \thanks\ instead\ of\ \footnote\ for\ acknowledgements,\ etc.$

69.1 Setting the title, etc.

The following provide setting commands for both HTML and print outputs.

\author \and $\{\langle author \rangle\}$ While using \maketitle and print mode, the author is treated as a single-column tabular and the \and feature finishes the current tabular then starts a new one for the next author. Each author thus is placed into its own tabular, and an affiliation may be placed on its own line such as

\author{Name \\ Affiliation \and Second Name \\ Second Affiliation}

For HTML, the entire author block is placed inside a <div> of class author, and each individual author is inside a <div> of class oneauthor.

\@title \@author \@date \@title, \@author, and \@date store the values as originally assigned, including any \thanks, \and, or \affiliation. These are low-level macros intended to be used by other macros only inside a titlepage or titlingpage, and are used by \maketitle. The author is printed inside a single-column tabular, which becomes multiple single-column tabulars if multiples authors are included. For HTML, these tabulars become side-by-side <div>s of class oneauthor, all of which are combined into one <div> of class author.

\printtitle \printauthor \printdate \printtitle, etc. are user-level macros intended to be used in custom titlepage or titlingpage environments in cases where \maketitle is not desired. These commands preserve the \thanks, etc., and should not be used in the main text.

\thetitle \theauthor \thedate \HTMLPageBottom \thetitle, \theauthor, and \thedate are available if titling has been loaded, and are sanitized user-level versions from which have been removed the \thanks and \affiliation, and \and is changed for inline text usage. The author is printed inline without \affiliation or \thanks, with \and placing commas between multiple authors. Thus, these commands are to be used in the main text whenever the user wishes to refer to the document's title and such. One practical use for this is to place the authors at the bottom of each HTML page, such as:

```
\HTMLPageBottom{
  \begin{center}\textcopyright~20xx \theauthor\end{center}
}
```

\theauthor, authblk \theauthor does not work well if authblk is used. If \theauthor is important, it is recommended to use the standard LATEX syntax for \author, optionally with lwarp's \affiliation macro as well.

affiliations

After \maketitle has completed, \theauthor retains the definition of the author, but \and is changed to become a comma and a space, intending to print the authors names separated by spaces. This fails when affiliations are included on their own table rows.

\affiliation

A solution, provide here, is to define a macro \affiliation which, during \maketitle, starts a new row and adds the affiliation, but after \maketitle is finished \affiliation is re-defined to discard its argument, thus printing only the author names when \author is later used inline.

69.2 \if@titlepage

```
for HTML & PRINT: 8183 \begin{warpall}
```

\if@titlepage Some classes do not provide \if@titlepage. In this case, provide it and force it

```
8184 \ifcsvoid{@titlepagefalse}{
8185
        \newif\if@titlepage
8186
        \@titlepagefalse
8187 }{}
8188 \end{warpall}
```

69.3 Changes for \affiliation

```
\affiliation \{\langle text \rangle\}
```

Adds the affiliation to the author for use in \maketitle.

Inside titlepage, this macro prints its argument. Outside, it is null.

```
for HTML & PRINT: 8189 \begin{warpall}
                  8190 \providerobustcmd{\affiliation}[1]{}
                  8191 \end{warpall}
 for PRINT output: 8192 \begin{warpprint}
```

```
8193 \AtBeginEnvironment{titlepage}{
               8194 \renewrobustcmd{\affiliation}[1]{\\ \textsc{\small#1}}
               8196
               8197 \AtBeginDocument{
               8198 \IfPackageLoadedTF{titling}{
               8199 \AtBeginEnvironment{titlingpage}{
               8200 \renewrobustcmd{\affiliation}[1]{\\ \textsc{\small#1}}
               8201 }
               8202 }{}% titling loaded
               8203}% AtBeginDocument
               8204 \end{warpprint}
for HTML output: 8205 \begin{warpHTML}
  titlepage (env.) Sets up a <div> of class titlepage. Provided even for memoir class, since it is
                 used by \maketitle.
               8206 \DeclareDocumentEnvironment{titlepage}{}
                      8208
               8209
                      \LWR@printpendingfootnotes
               8210
                      \LWR@forcenewpage
               8211
                      \BlockClass{titlepage}
               8212 }
               8213 {
                      \endBlockClass
               8214
               8215
                      \LWR@printpendingfootnotes
               8216 }
               8217 \end{warpHTML}
```

69.4 Printing the thanks

\printthanks Forces the \thanks to be printed. This is necessary in a titlingpage environment when \maketitle was not used.

69.5 Printing the title, etc. in HTML

The following are for printing the title, etc. in a titlepage or a titlingpage in HTML:

```
for HTML output: 8224 \begin{warpHTML}
```

```
\printtitle
                 8225 \newcommand*{\printtitle}
                 8226 {%
                         \LWR@stoppars%
                 8227
                 8228
                         \LWR@htmltag{\LWR@tagtitle}%
                 8229
                         \@title%
                 8230
                         \LWR@htmltag{\LWR@tagtitleend}%
                         \LWR@startpars%
                 8231
                 8232 }
\LWR@printthetitle A private version which prints the title without footnotes, used to title each HTML
                    page.
                 8233 \newcommand*{\LWR@printthetitle}
                 8234 {%
                         \LWR@stoppars%
                 8235
                         \LWR@htmltag{\LWR@tagtitle}%
                 8236
                         \thetitle%
                 8237
                         \LWR@htmltag{\LWR@tagtitleend}%
                 8238
                         \LWR@startpars%
                 8239
                 8240 }
      \printauthor HTML version.
                 8241 \newcommand*{\printauthor}{
                    The entire author block is contained in a <div> named author:
                 8242 \begin{BlockClass}{author}
                    \and finishes one author and starts the next:
                 8243 \renewcommand{\and}{%
                 8244 \end{BlockClass}
                 8245 \begin{BlockClass}{oneauthor}
                 8246 }
                    Individual authors are contained in a <div> named oneauthor:
                 8247 \begin{BlockClass}{oneauthor}
                 8248 \@author
                 8249 \end{BlockClass}
                 8250 \end{BlockClass}
                 8251 }
        \printdate
                 8252 \newcommand*{\printdate}{%
                 8253 \begin{BlockClass}{titledate}
                 8254 \@date
                 8255 \end{BlockClass}
                 8256 }
```

8257 \end{warpHTML}

69.6 Printing the title, etc. in print form

The following are for printing the title, etc. in a titlepage or a titlingpage in print form:

69.7 \maketitle for HTML output

An HTML <div> of class titlepage is used.

\thanks are a form of footnotes used in the title page. See section 60 for other kinds of footnotes.

See \t series, below, to set the style of the footnote marks.

```
for HTML output: 8264 \begin{warpHTML}
                8265 \IfClassLoadedTF{memoir}
                8267 \newcommand{\LWR@setfootnoteseries}{%
                8268
                        \renewcommand\thefootnote{\@arabic\c@footnote}%
                8269 }
                8270 }{% not memoir
                8271 \if@titlepage
                8272 \newcommand{\LWR@setfootnoteseries}{%
                         \renewcommand\thefootnote{\@arabic\c@footnote}%
                8273
                8274 }
                8275 \else
                8276 \newcommand{\LWR@setfootnoteseries}{%
                         \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
                8277
                8278 }
                8279 \fi
```

\LWR@maketitlesetup Patches \thanks macros.

8280 }% not memoir

```
8281 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

Redefine the footnote text:

```
8286 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
8287 \textsuperscript{\@thefnmark}~%
```

```
\label{eq:makethanksmark} $$ \ark \Rightarrow \ark \Rightarrow
```

Print the text:

```
8288 {##1}%
8289 }%
8290 }
\@fnsymbol {\langle counter\range \range }
```

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used \| which was not being seen by *pdftotext*.

```
8291 \def\LWR@HTML@@fnsymbol#1{%
8292
       \ifcase#1\or *\or
8293
        \HTMLentity{dagger}\or
8294
        \HTMLentity{Dagger}\or
8295
        \HTMLentity{sect}\or
8296
        \HTMLentity{para}\or
8297
        \HTMLunicode{2016}\or
8298
        **\or
        \HTMLentity{dagger}\HTMLentity{dagger} \or
8299
        \HTMLentity{Dagger}\HTMLentity{Dagger} \else
8300
8301
        \@ctrerr\fi%
8302 }
8303 \LWR@formatted{@fnsymbol}
```

\maketitle HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

The name $\LWR@maketitle$ is used to preserve its definition in case a later package overwrites $\LWR@maketitle$.

```
8304 \newcommand*{\LWR@maketitle}{%
```

```
An HTML titlepage <div> is used for all classes.
```

```
8305 \begin{titlepage}
```

Set up special patches:

8306 \LWR@maketitlesetup

Typeset the title, etc:

8307 \@maketitle

Immediately generate any \thanks footnotes:

8308 \LWR@stoppars\@thanks\LWR@startpars

Close the HTML titlepage div and cleanup:

```
8309 \end{titlepage}
8310 \setcounter{footnote}{0}%
8311 \global\let\thanks\relax
8312 \left| \text{global} \right|
8313 \global\let\@maketitle\relax
8314 \global\let\@thanks\@empty
8315 \global\let\@author\@empty
8316 \global\let\@date\@empty
8317 \global\let\@title\@empty
8318 \global\let\title\relax
8319 \global\let\author\relax
8320 \global\let\date\relax
8321 \left| d\right| = 1
8322 }
8323
8324 \LetLtxMacro\maketitle\LWR@maketitle
```

\@maketitle HTML mode. Typesets the title, etc.:

```
8325 \providecommand*{\@maketitle}{}
8326 \renewrobustcmd{\@maketitle}{%
8327  \LWR@stoppars%
8328  \LWR@htmltag{\LWR@tagtitle}%
8329  \@title%
8330  \LWR@htmltag{\LWR@tagtitleend}%
8331  \LWR@startpars%
8332  \begin{BlockClass}{author}%
```

For IEEEtran class:

```
8333 \renewcommand*{\cr}{}%
8334 \renewcommand*{\crc}{}%
8335 \renewcommand*{\noalign}{}%

8336 \renewcommand{\and}{%
8337 \end{BlockClass}%
8338 \begin{BlockClass}{oneauthor}%
8339 }%
8340 \begin{BlockClass}{oneauthor}%
```

```
8341 \@author%
8342 \end{BlockClass}%
8343 \end{BlockClass}%
8344 \begin{BlockClass}{titledate}%
8345 \@date%
8346 \end{BlockClass}%
8347 }
```

\LWR@titlingmaketitle \maketitle for use inside an HTML titlingpage environment.

```
8348 \newcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
8349 \LWR@stoppars\@thanks\LWR@startpars
```

Set up special patches:

8350 \LWR@maketitlesetup

Typeset the title, etc:

8351 \@maketitle

Immediately generate any \thanks footnotes:

```
8352 \LWR@stoppars\@thanks\LWR@startpars
8353 }
```

8354 \end{warpHTML}

69.8 \published and \subtitle

\subtitle and \published

To add \subtitle and \published to the titlepage, load the titling package and use \AddSubtitlePublished in the preamble.

The default lwarp.css has definitions for the published and subtitle classes.

If titling is loaded, \AddSubtitlePublished creates a number of additional macros, and also assigns some of the titling hooks. If titling is not loaded, \AddSubtitlePublished creates null macros.

★ titling hooks

Do not use \AddSubtitlePublished if the user has patched the titling hooks for some other reason. Portions are marked \warpprintonly to reduce extra tags in HTML. Similarly, BlockClass has no effect in print mode. Thus, the following may be marked warpall.

```
for HTML & PRINT: 8355 \begin{warpall}
```

\AddSubtitlePublished Adds \published and \subtitle, and related.

```
8356 \newcommand*{\AddSubtitlePublished}{%
8357 \IfPackageLoadedTF{titling}{% yes titling package
8358 \newcommand{\@published}{}%
8359 \newcommand{\published}[1]{\gdef\@published{##1}}%
```

```
8360
      \renewcommand*{\maketitlehooka}{\printpublished}%
      \newcommand*{\printpublished}{%
8361
          \warpprintonly{\begin{center}\unskip}%
8362
8363
          \begin{BlockClass}{published}%
8364
          \warpprintonly{\large\itshape}%
          \@published%
8365
          \end{BlockClass}%
8366
          \warpprintonly{\end{center}}%
8367
      }%
8368
      \newcommand{\@subtitle}{}%
8369
8370
      8371
      \renewcommand*{\maketitlehookb}{\printsubtitle}%
8372
      \newcommand*{\printsubtitle}{%
8373
          \warpprintonly{\begin{center}\unskip}%
8374
          \begin{BlockClass}{subtitle}%
8375
          \warpprintonly{\Large\itshape}%
          \@subtitle%
8376
          \end{BlockClass}%
8377
          \warpprintonly{\end{center}}%
8378
      }%
8379
8380}% yes titling package
8381 {% no titling package
8382
      \def\@published{}%
8383
      8384
      \DeclareDocumentCommand{\printpublished}{}{}%
8385
      \def\@subtitle{}%
      8386
8387
      \DeclareDocumentCommand{\printsubtitle}{}{}%
8388}% no titling package
8389 }% \AddSubtitlePublished
8390 \end{warpall}
```

70 Abstract

The following code replaces the LATEX default, and will itself be replaced later if the abstract package is loaded.

Some classes allow an optional name, so it is allowed here.

```
abstract (env.)

8393 \DeclareDocumentEnvironment{abstract}{O{\abstractname}}

8394 {

8395 \LWR@forcenewpage
```

```
8396 \BlockClass{abstract}
8397 \BlockClassSingle{abstracttitle}{#1}
8398 }
8399 {
8400 \endBlockClass
8401 }
8402 \end{warpHTML}
```

71 Quote and verse

71.1 Attributions

```
\attribution \{\langle name \rangle\}
                     For use with quote, quotation, verse:
                     Ex: "A quotation." \attribution{\textsc{Author Name}\\\textsl{Book Title}}
for HTML & PRINT: 8403 \begin{warpall}
                  8404 \newcommand{\attribution}[1]{
                          \begin{flushright}
                  8405
                  8406
                          \unskip
                  8407
                          \end{flushright}%
                  8408
                  8409 }
                  8410 \end{warpall}
 for HTML output: 8411 \begin{warpHTML}
                  8412 \newcommand{\LWR@HTML@attribution}[1]{%
                  8413
                          \LWR@stoppars%
                  8414
                          \begin{BlockClass}{attribution}
                  8415
                          \end{BlockClass}
                  8416
                          \LWR@startpars%
                  8417
                  8418 }
                  8419 \LWR@formatted{attribution}
                  8420 \end{warpHTML}
```

71.2 Quotes, quotations

```
for HTML output: 8421 \begin{warpHTML}

quote (env.)

8422 \newenvironment*{LWR@HTML@quote}
8423 {
8424 \LWR@forcenewpage
8425 \LWR@htmlblocktag{blockquote}
8426 }
8427 {\LWR@htmlblocktag{/blockquote}}
8428
8429 \LWR@formattedenv{quote}
```

```
quotation (env.)
```

```
8430 \newenvironment*{LWR@HTML@quotation}
8431 {
8432 \LWR@forcenewpage
8433 \LWR@htmlblocktag{blockquote}
8434 }
8435 {\LWR@htmlblocktag{/blockquote}}
8436
8437 \LWR@formattedenv{quotation}

8438 \end{warpHTML}
```

71.3 Verse

When using verse or memoir, always place a \\ after each line.

attrib

The documentation for the verse and memoir packages suggest defining an \attrib command, which may already exist in current documents, but it will only work for print output. lwarp provides \attribution, which works for both print and HTML output. To combine the two so that \attrib is used for print and \attribution is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

\vleftmargini (Len)
\HTMLvleftskip (Len)
\HTMLleftmargini (Len)

These lengths are used by verse and memoir to control the left margin, and they may already be set by the user for print output. New lengths \HTMLvleftskip and \HTMLleftmargini are provided to control the margins in HTML output. These new lengths may be set by the user before any verse environment, and persist until they are manually changed again. One reason to change \HTMLleftmargini is if there is a wide \flagverse in use, such as the word "Chorus", in which case the value of \HTMLleftmargini should be set to a wide enough length to contain "Chorus". The default is wide enough for a stanza number.

Horizontal spacing relies on *pdftotext*'s ability to discern the layout (-layout option) of the text in the HTML-tagged PDF output. For some settings of \HTMLleftmargini or \HTMLleftskip the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

71.3.1 LATEX core verse environment

```
8446 \advance\leftmargin 1.5em}%
8447 \item\relax}
8448 {\endlist}
8449
8450 \LWR@formattedenv{verse}

8451 \end{warpHTML}

for HTML & PRINT: 8452 \begin{warpall}
```

71.3.2 verse and memoir

The following lengths are used by verse and memoir. They may be set in either print or HTML output, but are only used in HTML. This allows the user to set \vleftskip and \leftmargini for print output, and optionally select different values for HTML.

\HTMLvleftskip (*Len*) Sets \vleftskip inside a verse environment in HTML.

```
8453 \newlength{\HTMLvleftskip}
8454 \setlength{\HTMLvleftskip}{1em}

\HTMLleftmargini (Len) Sets \leftmargini inside a verse environment in HTML.

8455 \newlength{\HTMLleftmargini}
8456 \setlength{\HTMLleftmargini}{4.5em}
```

72 Verbatim and tabbing

```
for HTML & PRINT: 8458 \begin{warpall}
```

\VerbatimHTMLWidth (*Len*) Width to use in HTML Verbatim environment.

8457 \end{warpall}

This width is used when placing line numbers to the right. Ignored during print output.

```
8459 \newlength{\VerbatimHTMLWidth}
8460 \setlength{\VerbatimHTMLWidth}{4in}
8461 \end{warpall}

for HTML output: 8462 \begin{warpHTML}
```

\@setupverbvisiblespace For X\(\frac{1}{2}\)TEX or LuaT\(\frac{1}{2}\)X, the default visible space was drawn in PDF, but not a text character which could be copied to HTML.

```
8463 \ifxetexorluatex
8464
8465 \newcommand*{\LWR@HTML@@setupverbvisiblespace}{\let\@xobeysp\textvisiblespace}
8466
8467 \LWR@formatted{@setupverbvisiblespace}
8468
8469 \fi
```

LWR@verbtags (bool) Used to temporarily turn off verbatim tags while doing \verbatiminput in the HTML head, or during MATHJAX. Verbatim tags are also disabled separately inside an HTML span.

```
8470 \newbool{LWR@verbtags}
8471 \booltrue{LWR@verbtags}
```

\verb Patched to encapsulate the verbatim text inside span with a class of verb.

```
8472 \LetLtxMacro\LWR@orig@verb@egroup\verb@egroup
8473
8474 \def\LWR@verb@egroup@endspan{%
        \LWR@orig@verb@egroup%
8475
        \ifbool{LWR@verbtags}%
8476
8477
            {\LWR@htmltag{/span}}%
8478
            {}%
        \endgroup%
8479
8480 }
8481 \xpretocmd{\verb}
8482
       {%
            \begingroup%
8483
8484
            \ifbool{LWR@verbtags}%
8485
                {\LWR@htmltag{span class=\textquotedbl{}\verb\textquotedbl}}%
8486
            \let\verb@egroup\LWR@verb@egroup@endspan%
8487
       }
8488
8489
       {}
        {\LWR@patcherror{LaTeX}{verb}}
8490
```

\LWR@atbeginverbatim $[\langle 1: style \rangle] \{\langle 2: class \rangle\}$

Encloses a verbatim environment with the given css class.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
8491 \newcommand*{\LWR@atbeginverbatim}[2][] 8492 {%
```

Stop generating HTML paragraph tags:

```
8493 \LWR@stoppars%
```

Avoid excessive space between lines:

```
8494 \setlength{\parskip}{0ex}%
8495 \setlength{\topsep}{0pt}%
8496 \setlength{\partopsep}{0pt}%
```

Inside the verbatim, temporarily prevent underfull \hbox warnings.

```
8497 \hbadness=10000\relax%
```

Create a new pre of the given class. The tags may temporarily be turned off for internal use, such as loading the MATHJAX script, or inside a .

```
8498 \ifbool{LWR@verbtags}%
8499 {%
8500
        \ifnumcomp{\value{LWR@spandepth}}{=}{0}{%}
8501
            \LWR@htmltag{pre class=\textquotedbl#2\textquotedbl%
8502
               \left\{ \frac{\#1}{}\right\}  style=\textquotedbl#1\textquotedbl}%
            }%
8503
8504
            \par%
       }%
8505
       {% in a span
8506
            \LWR@spanwarnformat{verbatim}%
8507
8508
        }%
8509 }{}%
```

Use a mono-spaced font to preserve horizontal positioning. If horizontal alignment is important for the user, use a mono-spaced font in the css for the verse class.

```
8510 \begingroup%
8511 \LWR@print@normalfont%
8512 \LWR@origttfamily%
```

If not inside a lateximage, use a small font to avoid line overflow.

Since inside a , restore the original list processing:

```
8516 \LWR@restoreoriglists%
```

Turn off babel-french extra space before punctuation:

```
8517 \LWR@hook@processingtags%
```

Do not produce HTML tags for \hspace inside a verse par. Restore plain LATEX \hspace functionality:

```
8518 \let\hspace\LWR@print@hspace%
```

Do not produce HTML tags for \nbsp.

```
8519 \boolfalse{LWR@HTMLsanitize@nobreakspace}%
8520 }
```

\LWR@afterendverbatim Finishes enclosing a verbatim environment.

```
8521 \newcommand*{\LWR@afterendverbatim}{%
8522 \endgroup%
8523 \par%
```

At the end of the environment, close the pre:

```
8524\ifboolexpr{
8525 bool{LWR@verbtags} and
8526 test {\ifnumcomp{\value{LWR@spandepth}}{=}{0}}
8527}%
```

```
8528 {%
                                     8529
                                                           \noindent\LWR@htmltag{/pre}\par% pre
                                     8530 }{}%
                                           Resume regular paragraph handling:
                                     8531 \LWR@startpars%
                                     8532 }
\verbatiminput {\langle filename \rangle}
                                           Patch \verbatiminput to add HTML tags:
                                     8533 \newcommand{\LWR@HTML@verbatim@input}[2]{%
                                                           \label{lwre} $$ \ifbool{LWReverbtags}{\LWReforcenewpage}{} % $$ \end{time} $$ \align{ \label{lwref} } $$ \align{ \label{lwref} } \align{ \labell{lwr
                                                           \LWR@atbeginverbatim{Verbatim}%
                                     8535
                                                           \LWR@print@verbatim@input{#1}{#2}%
                                     8536
                                                           \LWR@afterendverbatim%
                                     8537
                                     8538 }
                                     8539
                                     8540 \LWR@formatted{verbatim@input}
  verbatim (env.)
                                     8541 \AfterEndPreamble{
                                     8542 \LWR@traceinfo{Patching verbatim.}
                                     8543 \AtBeginEnvironment{verbatim}{%
                                                           \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
                                     8545
                                                                      {}%
                                     8546
                                                                      {%
                                                                                   \LWR@forcenewpage%
                                     8547
                                                                                  \LWR@atbeginverbatim{verbatim}%
                                     8548
                                                                      }%
                                     8549
                                     8550 }
                                     8551 \AfterEndEnvironment{verbatim}{%
                                                           \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
                                     8552
                                                                      {}%
                                     8553
                                     8554
                                                                      {%
                                                                                  \LWR@afterendverbatim%
                                     8555
                                                                      }%
                                     8556
                                     8557 }
                                     8558 %
                                     8559 \AtBeginEnvironment{verbatim*}{%
                                                           \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
                                     8560
                                                                      {}%
                                     8561
                                                                      {%
                                     8562
                                                                                  \LWR@forcenewpage%
                                     8563
                                                                                  \LWR@atbeginverbatim{verbatim}%
                                     8564
                                     8565
                                     8566 }
                                     8567 \AfterEndEnvironment{verbatim*}{%
                                                           \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
                                     8568
                                     8569
                                                                      {}%
                                                                      {%
                                     8570
                                                                                  \LWR@afterendverbatim%
                                     8571
                                                                      }%
                                     8572
                                     8573 }
                                     8574 }
```

tabbing (*env*.) The tabbing environment works, except that svg math and lateximages do not yet work inside the environment.

math in tabbing If math is used inside tabbing, place tabbing inside a lateximage environment, which will render the entire environment as a single svg image.

```
8575 \newenvironment*{LWR@HTML@tabbing}
8576 {%
8577
        \LWR@forcenewpage%
8578
        \LWR@atbeginverbatim{tabbing}%
8579
        \let\enskip\LWR@print@enskip%
        \let\quad\LWR@print@quad%
8580
        \let\qquad\LWR@print@qquad%
8581
        \LetLtxMacro~\LWR@origtilde%
8582
        \LetLtxMacro\nobreakspace\LWR@orignobreakspace%
8583
        \let\,\LWR@origcomma%
8584
        \let\thinspace\LWR@print@thinspace%
8585
        \let\negthinspace\LWR@print@negthinspace%
8586
        \LWR@print@tabbing%
8587
8588 }
8589 {%
        \endLWR@print@tabbing%
8590
        \LWR@afterendverbatim%
8591
8592 }
8593
8594 \LWR@formattedenv{tabbing}
8595 \end{warpHTML}
```

73 Theorems

```
\label{eq:counter} $$ \operatorname{dext} \ [\langle counter \rangle] - or - [\langle oldname \rangle] \ \{\langle text \rangle\}$ $$
```

A few minor changes are made to supply HTML tags.

- The entire theorem is placed into a <div> of class theoremcontents.
- The label for each theorem is placed inside a of class theoremlabel.
- The contents are placed inside a <div> of class theoremcontents.

```
\label{lem:for HTML output:} \begin{warpHTML} & $8596 \searrow {name} & {\langle name \rangle} & {\langle number \rangle} & $8597 \searrow {number} & $8598 \searrow {number} & $8598 \searrow {number} & $8598 \searrow {number} & $8599 \searrow {number} & {number}
```

```
\ensuremath{\mbox{\tt Qopargbegintheorem }} \{\langle name \rangle\} \{\langle number \rangle\} \{\langle oparg \rangle\}
```

LATEX defines this, but amsthm \relaxes it, so it will not be defined if amsthm is loaded before lwarp.

```
8604 \ifundef{\@opargbegintheorem}{}{
          8605
                  \renewcommand{\@opargbegintheorem}[3]{%
          8606
                      \LWR@forcenewpage
                      \BlockClass{theoremcontents}
          8607
                      \trivlist
          8608
                      \left[\left| \frac{43}{1} \right| \right]
          8609
                  }
          8610
          8611 }
\@endtheorem
          8612 \renewcommand*{\@endtheorem}{%
          8613 \endtrivlist
                  \LWR@printpendingfootnotes%
          8614
                                                                 lwarp
          8615 \endBlockClass% theoremcontents
          8616 }
          8617 \end{warpHTML}
```

74 Lists

The environments itemize, enumerate, and description are patched when lwarp is started. These patches support the standard LATEX environments, as well as those of enumerate, enumitem, and paralist, and at least the French version of babel. Additional patches are done on a package-specific basis.

The \LaTeX source for itemize and enumerate are found in source2e, but the source for description is found in article.cls, etc.

empty item

To have an empty item, use \mbox{} or a trailing backslash. This forces a new line in print output, matching the new line which will appear in HTML output. Ex:

```
begin{itemize}
item \mbox{}
   \begin{itemize}
...
   \end{itemize}
item \
   \begin{itemize}
...
   \end{itemize}
```

74.1 List environment

\LWR@printcloselist May be locally redefined by enumerate or description.

```
8619 \newcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
```

\LWR@printopenlist May be locally redefined by itemize, enumerate, description, or hanginglist from package hang.

```
8620 \newcommand*{\LWR@printopenlist}{%
8621    ul % space
8622    class=\textquotedbl{}list\textquotedbl{} % space
8623    style=\textquotedbl\LWR@print@mbox{list-style-type:none}\textquotedbl{}%
8624 }
```

\makelabel While inside a list environment, lwarp nullifies a number of TEX horizontal skip and fill commands, allowing the user to define \makelabel for print mode while HTML mode ignores those commands.

\@mklab Removes PDF spacing.

```
8625 \AtBeginDocument{
8626 \def\@mklab#1{%
8627 % \hfil %
8628 #1}
8629 \let\makelabel\@mklab
8630 }
```

\@donoparitem Modified for HTML output by replacing TEX boxes with plain text. Also removes PDF spacing.

```
8631 \def\@donoparitem{%
8632 \@noparitemfalse
8633 % \global\setbox\@labels\hbox{\hskip -\leftmargin
                                      \unhbox\@labels
8634 %
8635 %
                                       \hskip \leftmargin}%
8636% \if@minipage\else
8637 %
         \@tempskipa\lastskip
         \vskip -\lastskip
8638 %
8639 %
         \advance\@tempskipa\@outerparskip
8640 %
         \advance\@tempskipa -\parskip
8641 %
         \vskip\@tempskipa
       \fi
8642 %
8643 }
```

\LWR@makelabeltag Used to add <dt> for descriptions. Empty for other list types.

```
8644 \newcommand*{\LWR@makelabeltag}{}
```

\@item Modified for HTML output by replacing TEX boxes with plain text. Also removes PDF spacing.

```
8645 \def\LWR@HTML@item[#1]{%
8646 \LWR@traceinfo{@item}%
```

```
\if@noparitem
8647
8648
        \@donoparitem
8649
          \if@inlabel
8650~\%
            \indent
8651 %
          \fi
8652~\%
        \ifhmode
8653
             \unskip\unskip
8654 %
        \fi
8655
8656
        \if@newlist
8657
          \if@nobreak
8658
            \@nbitem
8659
           \else
8660 %
               \addpenalty\@beginparpenalty
8661 %
               \addvspace\@topsep
               \addvspace{-\parskip}%
8662~\%
          \fi
8663
        \else
8664
             \addpenalty\@itempenalty
8665 %
             \addvspace\itemsep
8666 %
        \fi
8667
        \global\@inlabeltrue
8668
8669
      \fi
8670 %
        \everypar{%
8671
        \@minipagefalse
8672
        \global\@newlistfalse
          \if@inlabel
8673 %
            \global\@inlabelfalse
8674 %
             {\setbox\z@\lastbox
8675~\%
              \ifvoid\z@
8676 %
8677 %
                \kern-\itemindent
8678 %
              fi}%
             \box\@labels
8679 %
8680 %
             \penalty\z@
8681 %
          \fi
8682 %
          \if@nobreak
             \@nobreakfalse
8683 %
8684~\%
             \clubpenalty \@M
           \else
8685 %
             \clubpenalty \@clubpenalty
8686 %
8687 %
             \everypar{}%
8688 %
          fi}%
      \if@noitemarg
8689
        \@noitemargfalse
8690
        \if@nmbrlist
8691
8692
          \refstepcounter\@listctr
8693
        \fi
8694
      \fi
```

If not empty, print the label with the class listmarker:

```
8695 \ifboolexpr{
```

```
8696
                                                                                                                                          test {\ifblank{#1}} or
                                                                     8697
                                                                                                                                                                 test {\left\{ \right\}} and
                                                                     8698
                                                                     8699
                                                                                                                                                                 test {\ifdefempty{\@itemlabel}}
                                                                     8700
                                                                                                                 }%
                                                                     8701
                                                                                                                                          {}%
                                                                     8702
                                                                     8703
                                                                                                                                          {%
                                                                                                                                                   \label{locality} $$ \left( LWR@makelabeltag \right)_{\label{locality}} $$ $$ if defempty_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LWR@makelabeltag}_{\LW
                                                                     8704
                                                                                                                                                                 \InlineClass{listmarker}{\makelabel{#1}}%
                                                                     8705
                                                                     8706
                                                                                                                                          \label{locality} $$ \left( LWR@makelabeltag \right) { \LWR@makelabeltag } % extra space $$ \left( LWR@makelabeltag \right) $$ (LWR@makelabeltag) $$ 
                                                                     8707
                                                                     8708 %
                                                                                                                 \sbox\@tempboxa{\makelabel{#1}%
                                                                     8709~\%
                                                                                                                  \global\setbox\@labels\hbox{%
                                                                     8710~\%
                                                                                                                              \unhbox\@labels
                                                                                                                              \hskip \itemindent
                                                                     8711~\%
                                                                                                                              \hskip -\labelwidth
                                                                     8712 %
                                                                                                                              \hskip -\labelsep
                                                                     8713 %
                                                                                                                             \ifdim \wd\@tempboxa >\labelwidth
                                                                     8714 %
                                                                     8715 %
                                                                                                                                         \box\@tempboxa
                                                                     8716 %
                                                                                                                              \else
                                                                     8717 %
                                                                                                                                         \hbox to\labelwidth {\unhbox\@tempboxa}%
                                                                     8718 %
                                                                     8719 %
                                                                                                                              \hskip \labelsep}%
                                                                     8720 \ignorespaces%
                                                                     8721 }
                             \@nbitem
                                                                     8722 \def\@nbitem{%
                                                                     8723 % \@tempskipa\@outerparskip
                                                                     8724 %
                                                                                                                \advance\@tempskipa -\parskip
                                                                                                                \addvspace\@tempskipa
                                                                     8725 %
                                                                     8726 }
\LWR@listitem [\langle label \rangle]
```

Handles \item inside a list, itemize, or enumerate.

See \LWR@openparagraph where extra \hspace is used to leave room for the label while inside a list during paragraph construction.

```
8727 \newcommand*{\LWR@listitem}{%
       \LWR@stoppars%
8728
8729
        \LWR@startnewdepth{listitem}%
        \LWR@htmltag{li}%
8730
       \LWR@orignewline%
8731
       \LWR@startpars%
8732
8733
       \LWR@ensuredoingapar%
8734
        \LWR@origitem%
8735 }
```

\LWR@nulllistfills Nullifies various TEX fill commands, in case they are used inside \makelabel. Problems are caused when these are nullified all the time.

```
\renewcommand*{\hss}{}%
                           8737
                           8738
                                                    \renewcommand*{\llap}[1]{##1}%
                           8739
                                                    \renewcommand*{\rlap}[1]{##1}%
                           8740
                                                    \renewcommand*{\hfil}{}%
                           8741
                                                    \renewcommand*{\hfilneg}{}%
                                                    \renewcommand*{\hfill}{}%
                           8742
                           8743 }
list (env.) \{\langle label \rangle\} \{\langle commands \rangle\}
                           8744 \newcommand*{\LWR@liststart}{%
                                                    \LWR@traceinfo{LWR@liststart}%
                           8745
                                                    \LWR@stoppars%
                           8746
                           8747
                                                    \LWR@pushoneclose{list}%
                                                    \LWR@htmltag{\LWR@printopenlist}\LWR@orignewline%
                           8748
                                                    \LWR@startpars%
                           8749
                                                    \setlength{\topsep}{0pt}%
                           8750
                           8751
                                                    \setlength{\partopsep}{0pt}%
                           8752
                                                    \setlength{\itemsep}{0pt}%
                           8753
                                                    8754
                                                    \setlength{\leftmargin}{0pt}%
                                                    \verb|\eff| $$ \space{2mm} \spac
                           8755
                                                    \setlength{\listparindent}{0pt}%
                           8756
                           8757
                                                    \setlength{\itemindent}{0pt}%
                                                    \setlength{\labelsep}{1em}%
                           8758
                                                    \LWR@nulllistfills%
                           8759
                           8760 }
                           8761 \newcommand*{\LWR@listend}{%
                                                    \LWR@traceinfo{LWR@listend}%
                           8763
                                                    \LWR@stoppars%
                           8764
                                                    \LWR@closeprevious{list}%
                                                    \LWR@startpars%
                           8765
                           8766 }
```

74.2 Itemize

\LWR@itemizeitem $[\langle label \rangle]$

Handles \item inside an itemize or enumerate.

The optional argument is passed to \LWR@origitem.

See \LWR@openparagraph where extra \hspace is used to leave room for the label while inside a list during paragraph construction.

```
8767 \newcommand*{\LWR@itemizeitem}{%
8768
        \LWR@stoppars%
        \LWR@startnewdepth{listitem}%
8769
        \LWR@htmltag{li}%
8770
        \LWR@orignewline%
8771
        \LWR@startpars%
8772
8773
        \LWR@ensuredoingapar%
        \LWR@origitem%
8774
8775 }
```

itemize (env.) $[\langle options \rangle]$

```
8776 \newcommand*{\LWR@itemizestart}{%
       \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}%
8778
       \renewcommand*{\LWR@printopenlist}{%
8779
           ul % space
           class=\textquotedbl{}itemize\textquotedbl{} % space
8780
         style=\textquotedbl\LWR@print@mbox{list-style-type:none}\textquotedbl{}%
8781
8782
       \LetLtxMacro\item\LWR@itemizeitem%
8783
8784
       \LWR@nulllistfills%
8785 }
```

74.3 Enumerate

An HTML unordered list is used with customized LATEX-generated labels.

enumerate (env.) [$\langle options \rangle$]

```
8786 \newcommand*{\LWR@enumeratestart}{%
       \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}%
8787
       \renewcommand*{\LWR@printopenlist}{%
8788
           ul % space
8789
           class=\textquotedbl{}enumerate\textquotedbl{} % space
8790
         style=\textquotedbl\LWR@print@mbox{list-style-type:none}\textquotedbl{}%
8791
8792
        \LetLtxMacro\item\LWR@itemizeitem%
8793
       \LWR@nulllistfills%
8794
8795 }
```

74.4 Description

\LWR@descitem $[\langle label \rangle]$ Handles an \item inside a description.

```
8796 \newcommand*{\LWR@descitem}[1][]{%
8797 \LWR@stoppars%
8798 \LWR@setlatestname{#1}%
8799 \LWR@startnewdepth{descitem}%
```

While creating the label, encase it inside tags and disable \hspace, which is used by the standard classes to add space to the labels.

```
8800 \begingroup%
8801 \renewcommand*{\LWR@makelabeltag}{dt}%
8802 \RenewDocumentCommand{\hspace}{s m}{}%
8803 \LWR@origitem[#1]%
8804 \endgroup%
```

Allow \item without an argument:

```
8806 \LWR@orignewline%
8807 \LWR@htmltag{dd}%
8808 \LWR@startpars%
8809 }
```

description (env.) $[\langle options \rangle]$

Footnotes are modified to correctly parse optional arguments.

74.5 Patching the lists

\LWR@patchlists Patches list environments.

\LWR@patchlists remembers \item as defined by whatever packages have been loaded, then patches the itemize, enumerate, and description environments and \item. This works with the native LATEX environments, as well as those provided by enumitem, enumerate, and paralist.

```
8819 \newcommand*{\LWR@patchlists}{%
8820
        \LetLtxMacro\item\LWR@listitem%
8821
        \LetLtxMacro\@item\LWR@HTML@item%
        \renewcommand*{\@trivlist}{%
8822
            \LWR@traceinfo{@trivlist start}%
8823
8824
            \LWR@liststart%
8825
            \LWR@orig@trivlist%
            \LWR@traceinfo{@trivlist done}%
8826
8827
        }%
        \renewcommand*{\trivlist}{%
8828
            \LWR@traceinfo{trivlist}%
8829
            \LWR@origtrivlist%
8830
        }%
8831
8832
        \renewcommand*{\endtrivlist}{%
8833
            \LWR@traceinfo{endtrivlist start}%
8834
            \LWR@origendtrivlist\LWR@listend%
8835
            \LWR@traceinfo{endtrivlist done}%
8836
        }%
8837
        \renewcommand*{\itemize}{%
            \LWR@itemizestart\LWR@origitemize%
8838
8839
        }%
        \renewcommand*{\enumerate}{%
8840
8841
            \LWR@enumeratestart\LWR@origenumerate%
8842
        }%
        \renewcommand*{\description}{%
8843
8844
            \LWR@descriptionstart\LWR@origdescription%
8845
8846 }
```

\LWR@restoreoriglists Restores the original trivlist environment.

```
8847 \newcommand*{\LWR@restoreoriglists}{%
8848 \LWR@traceinfo{LWR@restoreoriglists}%
8849 \LetLtxMacro\item\LWR@origitem%
```

```
8850
       \LetLtxMacro\@item\LWR@orig@item%
       \let\@trivlist\LWR@orig@trivlist%
8851
       \let\trivlist\LWR@origtrivlist%
8852
8853
       \let\endtrivlist\LWR@origendtrivlist%
8854
       \LetLtxMacro\itemize\LWR@origitemize%
8855
       \LetLtxMacro\enditemize\LWR@endorigitemize%
       \LetLtxMacro\enumerate\LWR@origenumerate%
8856
       \LetLtxMacro\endenumerate\LWR@endorigenumerate%
8857
       \LetLtxMacro\description\LWR@origdescription%
8858
        \LetLtxMacro\enddescription\LWR@endorigdescription%
8859
       \let\@mklab\LWR@orig@mklab%
8860
8861
        \let\makelabel\LWR@origmakelabel%
8862
        \let\@donoparitem\LWR@orig@donoparitem%
8863
        \let\@nbitem\LWR@orig@nbitem%
8864 }
8865 \end{warpHTML}
```

Tabular 75

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the LATEX core and the various tabular-related packages.

75.1 Limitations

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

Defining macros and environments:

 When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are are ignored in print mode.

```
\StartDefiningTabulars
```

<define macros or environments using tabular and &</pre>

\StopDefiningTabulars

This includes before and after defining any macro which used \ttabbox from floatrow.

 When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabular as follows. This is ignored in print mode.

Misplaced alignment tab character &

floatrow

tabular inside another environment

```
\StartDefiningTabulars
                                (&
                                    is
                                         used
                                                in
definition)
\newenvironment{outerenvironment}
  \tabular{cc}
  left & right \\
}
{
  \TabularMacro\ResumeTabular
  left & right \\
  \endtabular
}
\StopDefiningTabulars
```

For developers:

• To automate the use of \StartDefiningTabulars and \EndDefiningTabulars, these macros may be embedded inside an HTML environment definition to automatically change the catcode of & before absorbing the arguments. Another environment may be embedded as well.

```
% Does the work after the catcode has been changed:
\newcommand*{\LWR@HTML@subsomename}[2]{%
  \otherenvironmentname [<args>] {<args>} %
example
}
% Change catcode before absorbing arguments:
\newcommand*{\LWR@HTML@somename{%
  \StartDefiningTabulars
  \LWR@HTML@subsomename
}
% Change catcode again at the end:
\newcommand*{\LWR@HTML@endsomename}{%
  \endotherenvironmentname
                             % for example
  \StopDefiningTabulars
}
% Combine with the existing print definition:
\LWR@formattedenv{somename}
```

Cell contents:

 \triangle macro in a table

• Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use \TabularMacro just before the macro. This is ignored in print mode.

\TabularMacro\somemacro & more row contents \\

Column specifiers:

∆ math

• Due to the way math is gathered for processing, column specifiers such as >{\$}c<{\$} do not work with lwarp. Instead, each cell must specify math mode individually.

@ and!

• Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

In \multirow cells, the print version may have extra instances of <, >,
 @, and ! cells on the second and later rows in the \multirow which do not appear in the HTML version.

• If \newcolumntype does not work for HTML, add a simplified column type using \HTMLnewcolumntype.

font and alignment

• lwarp detects each of the following, and sets HTML css appropriately:

```
>{\centering\arraybackslash}
```

- >{\raggedright\arraybackslash}
- >{\raggedleft\arraybackslash}
- >{\itshape}
- >{\bfseries}
- >{\bfseries\itshape}

These may be used with \newcolumntype, such as:

\newcolumntype{P}[1]{>{\centering\arraybackslash}p{#1}}

Rules:

vertical rules

• Doubled \hlines, \midrules, and vertical rules are supported.

width and trim

combined rules

\warpprintonly

Misplaced \noalign

longtable headings

- Vertical rules next to either side of an @ or! column are displayed on both sides of the column.
- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or! columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.
- If you wish to use \cmidrule followed by \bottomrule, it may be necessary to use:

\bottomrule

The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.

• For \toprule and \bottomrule, when combined with a warpprint or warpHTML environment, if a "Misplaced \noalign" error occurs, change

This & That \endhead

to

\warpprintonly{This & That \endhead}

and likewise with the other \end headings. Keep the \endfirsthead row unchanged, as it is still relevent to HTML output.

Other:

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.
- For longtable, place headings and footings which do not apply to HTML inside \warpprintonly{}.
- For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside { } braces, including commands such as \multirow. While producing HTML output, though, anything placed inside braces is not seen by lwarp's tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3
\\}
      \warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}
```

a may not be inside a . If this situation is detected,

tabular inside a

• In LATEX, a tabular may be placed inside a minipage, but in HTML a warning is printed instructing the user to isolate the using \warpprintonly or the warpprint environment.

for HTML output: 8866 \begin{warpHTML}

75.2 Temporary package-related macros

These macros are temporary placeholders for macros defined by various packages. If the relevent package is not loaded, these placeholders are used instead.

75.2.1 arydshln

Emualated by the original LATEX non-dashed versions.

```
8867 \LetLtxMacro\hdashline\hline
8868 \LetLtxMacro\cdashline\cline
8869 \LetLtxMacro\firsthdashline\hline
8870 \LetLtxMacro\lasthdashline\hline
```

75.3 Token lookahead

Used by \LWR@futurenonspacelet to look at the next token.

\LWR@mynexttoken

8871 \newcommand\LWR@mynexttoken\relax

\LWR@futurenonspacelet \futurelet copies the next token then executes a function to analyze it.

 $\verb|\LWR@future nonspace| et does the same, but ignores intervening spaces and paragraphs.$

Based on the booktabs style:

```
8872 \def\LWR@futurenonspacelet#1{\def\LWR@cs{#1}%
8873 \afterassignment\LWR@fnslone\let\nexttoken= }
8874
8876
8877 \def\LWR@fnsltwo{%
      \expandafter\ifx\LWR@cs\@sptoken%
8878
          \let\next=\LWR@fnslthree%
8879
8880
      \else%
          \expandafter\ifx\LWR@cs\par%
8881
              \let\next=\LWR@fnslthree%
8882
          \else%
8883
8884
              \let\next=\nexttoken%
          \fi%
8885
8886
      fi\next
8888 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }
```

\LWR@getmynexttoken Looks ahead and copies the next token into \LWR@mynexttoken.

```
8889 \newcommand*{\LWR@getmynexttoken}{%
8890 \LWR@traceinfo{LWR@getmynexttoken}%
```

 \triangle

Nothing must follow this next line:

8891 \LWR@futurenonspacelet\LWR@mynexttoken\LWR@tabledatacolumntag
8892 }

75.4 Tabular variables

In order to support nested tabulars, each of these is used locally. For local counters, etoolbox's \defcounter and lwarp's new \defaddtocounter are used.

 $LWR@startedrow\ (bool)$ True if should print a row tag before this column.

```
8893 \newbool{LWR@startedrow}
8894 \boolfalse{LWR@startedrow}
```

LWR@tabularcelladded (bool) True if have added a data cell for this position.

```
8895 \newbool{LWR@tabularcelladded}
8896 \boolfalse{LWR@tabularcelladded}
```

LWR@hlines (Ctr) Number of \hlines or \midrules above the next row.

```
8897 \newcounter{LWR@hlines}
```

LWR@hdashedlines (Ctr) Number of arydshln dashed lines above the next row.

```
8898 \newcounter{LWR@hdashedlines}
```

LWR@doingtbrule (bool) True if the next row will have a top/bottom rule above it.

```
8899 \newbool{LWR@doingtbrule}
8900 \boolfalse{LWR@doingtbrule}
```

LWR@doingcmidrule (bool) True if the next row will have a cmidrule above it.

This is used by \LWR@tabularfinishrow to force a final empty row to create the border for the \cmidrule.

```
8901 \newbool{LWR@doingcmidrule} 8902 \boolfalse{LWR@doingcmidrule}
```

LWR@tableparcell (*bool*) True if are handling a paragraph inside a table cell, so must close the paragraph tag before moving on.

```
8903 \newbool{LWR@tableparcell}
```

LWR@skippingmrowcell (bool) True if are doing an empty \multirow cell, and thus there is no data tag to close.

```
8904 \newbool{LWR@skippingmrowcell}
```

LWR@skippingmcolrowcell True if are doing an empty \multicolumnrow cell, and thus there is no data tag to (bool) close, and do not print @ and ! columns.

```
8905 \newbool{LWR@skippingmcolrowcell}
```

 $\begin{tabular}{ll} LWR@used multirow (bool) & Used to error if used \verb|\multirow or \verb|\multirow without using \verb|\multirow or \verb|\multirow without using \verb|\multirow or \multirow or \multirow$

8906 \newbool{LWR@usedmultirow}

LWR@foundmrowcell (bool) Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

8907 \newbool{LWR@foundmrowcell}

LWR@skipatbang (bool) True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.

8908 \newbool{LWR@skipatbang}

LWR@emptyatbang (bool) True if finishing a row and should print empty @ or! column table data cells.

8909 \newbool{LWR@emptyatbang}

LWR@intabularmetadata (bool) True if are in a tabular but not in a data cell. Used to prevent extra HTML breaks if not inside table data.

8910 \newbool{LWR@intabularmetadata}
8911 \boolfalse{LWR@intabularmetadata}

LWR@exitingtabular (bool) When \end is found, turns off the next opening data tag.

8912 \newbool{LWR@exitingtabular}

LWR@tabularmutemods (bool) Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

8913 $\newbool{LWR@tabularmutemods}$

LWR@tabularfinalrow (bool) Used to set aria-hidden if adding a final row for the purpose of adding the bottom border

 $8914 \verb|\newbool{LWR@tabularfinalrow}|$

LWR@validtablecol (bool) True if found a valid table column type.

8915 \newbool{LWR@validtablecol}

LWR@opttablecol (bool) True if found a table column optional argument.

8916 \newbool{LWR@opttablecol}

Used to add a style to a table data cell:

8917 \newbool{LWR@tdhavecellstyle}

LWR@tabularDepth (Ctr) Tracks whether & is being used inside a tabular.

8918 \newcounter{LWR@tabulardepth}
8919 \setcounter{LWR@tabulardepth}{0}

LWR@tabularpardepth(Ctr)

Tracks whether should look ahead at the next token when encountering a \par while processing tabular contents.

When LWR@tabularpardepth is deeper than LWR@tabulardepth then lwarp has started looking at the contents of the tabular, and thus any \pars encountered must be followed by another token lookahead.

```
8920 \newcounter{LWR@tabularpardepth}
8921 \setcounter{LWR@tabularpardepth}{0}
8922 \newcommand*{\LWR@colsresult}{}%temp storage for column format results
8923 \newcommand*{\LWR@pposition}{}
8924 \newcommand*{\LWR@pleft}{}
8925 \newcommand*{\LWR@pright}{}
```

LWR@tablecolspec Holds the parsed column specification, of total width LWR@tabletotalLaTeXcols, not counting @ and! columns.

> Will contain a string such as llrrccpc, exactly one letter per IATEX table column, without @, !, >, <, or the vertical bar.

\LWR@strresult Holds the result of Str functions.

```
8926 \providecommand*{\LWR@strresult}{}
8927 \providecommand*{\LWR@strresulttwo}{}
```

\LWR@origcolspec Holds the original column specs given to tabular.

```
8928 \newcommand*{\LWR@origcolspec}{}
```

LWR@tablecolspecwidth (Ctr) Holds the number of tokens in the table columns specification.

This is includes one for each @, !, <, > column, and also one for each of the parameters of p, @, !, <, > columns, and three for each D column.

(This is not the total # of LATEX columns in the table.)

8929 \newcounter{LWR@tablecolspecwidth}

LWR@tablecolspecindex (Ctr) While parsing the LATEX table column specification, starts at 1 and is incremented per token of the specification.

```
8930 \newcounter{LWR@tablecolspecindex}
```

LWR@tableLaTeXcolindex (Ctr) While producing the table, resets to 1 at the start of the table and also at each end of line, and is incremented by 1 by each ampersand.

```
8931 \newcounter{LWR@tableLaTeXcolindex}
```

LWR@tabletotalLaTeXcols (Ctr) While parsing a table column specification, begins at 0 and increments by 1 per LATEX table column. Eventually holds the final number of LATEX table columns in each row, not counting @ and ! columns. (In HTML, @ and ! cells become their own columns, but are not included in LWR@tabletotalLaTeXcols.)

```
8932 \newcounter{LWR@tabletotalLaTeXcols}
```

LWR@tabletotalLaTeXcolsnext Holds the next LATEX table column index while parsing, equal to one more than (Ctr) LWR@tabletotalLaTeXcols.

8933 \newcounter{LWR@tabletotalLaTeXcolsnext}

LWR@colatspec A data array of specifications for @ columns. The leftmost's index is leftedge, the

others are counter values. See section 42.

LWR@colbangspec A data array of specifications for ! columns. The leftmost's index is leftedge, the

others are counter values. See section 42.

LWR@colbeforespec A data array of specifications for > columns.

LWR@colafterspec A data array of specifications for < columns.

LWR@colbarspec A data array of specifications for vertical rules.

LWR@coladdclass A data array of extra css class, as set by >.

LWR@cellcolordepth (Ctr) Counts how many cell color <div>s were added to the current tabular data cell.

8934 \newcounter{LWR@cellcolordepth}

75.4.1 Multicolumn variables

8935 \newcounter{LWR@tablemulticolswidth}

Indexes into the multicolumn specification:

8936 \newcounter{LWR@tablemulticolspos}

Remembers multicolumn vertical rules if found in the column spec.

8937 \newcounter{LWR@mcolvertbarsl}
8938 \newcounter{LWR@mcolvertbarsr}
8939 \newcounter{LWR@mcolvertbarsldash}
8940 \newcounter{LWR@mcolvertbarsrdash}
8941 \newbool{LWR@mcolvertbaronleft}

75.4.2 Longtable variables

LWR@starredlongtable (bool) Per the caption package, step the counter if longtable*.

8942 \newbool{LWR@starredlongtable}
8943 \boolfalse{LWR@starredlongtable}

75.4.3 Midrule variables

LWR@midrulecounter (Ctr) Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

 $8944 \verb|\newcounter{LWR@midrulecounter}|$

75.5 Handling &, @, !, and bar

For technical discussion regarding problems redefining \&, See: http://tex.stackexchange.com/questions/11638/ where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860

\LWR@instertatbangcols

\LWR@closetabledatacell If LWR@skippingmrowcell or LWR@skippingmcolrowcell then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

```
8953 \newcommand*{\LWR@closetabledatacell}{%
        \booltrue{LWR@intabularmetadata}%
8954
        \ifbool{LWR@exitingtabular}%
8955
8956
8957
            \LWR@stoppars%
8958
        }%
        {% not exiting tabular
8959
         \ifboolexpr{bool{LWR@skippingmrowcell}} or bool{LWR@skippingmcolrowcell}}%
8960
            {%
8961
                \LWR@stoppars%
8962
```

If not skipping a \multicolumnrow cell, insert the @ and ! columns after this non-existant column.

```
8963 \ifbool{LWR@skippingmcolrowcell}%
8964 \{}%
8965 \{\LWR@insertatbangcols}%
8966 \}%
8967 \{% not skippingmrowcell
```

Insert any < then any @ and ! column contents, unless muted for the \bottomrule or a \multicolumn:

```
\unskip%
8968
                 \ifboolexpr{%
8969
                     bool{LWR@tabularmutemods} or
8970
                     bool{LWR@skipatbang} or
8971
                     bool{LWR@emptyatbang}
8972
                 }%
8973
                     {}%
8975
                     {%
                         \LWR@getexparray{LWR@colafterspec}%
8976
                              {\arabic{LWR@tableLaTeXcolindex}}%
8977
                     }%
8978
```

Close paragraphs:

```
8979 \LWR@stoppars%
8980 \boolfalse{LWR@tableparcell}%
```

Close the table data cell.

Close any color <div>s.

```
8981 \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{%
8982 \LWR@htmltag{\div}\LWR@orignewline%
8983 \defaddtocounter{LWR@cellcolordepth}{-1}%
8984 }%
```

Skip the @ and! cells if are closing a multicolumn cell.

```
\leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
8985
                \global\booltrue{LWR@tabularcelladded}%
8986
                \LWR@insertatbangcols%
8987
            }% not skipping mrowcell
8988
       }% not exiting tabular
8989
        \boolfalse{LWR@skippingmrowcell}%
8990
       \boolfalse{LWR@skippingmcolrowcell}%
8991
8992
        \boolfalse{LWR@skipatbang}%
```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```
8993 \def\LWR@cellHTMLcolor{}%
8994 \def\LWR@columnHTMLcolor{}%
8995 \defcounter{LWR@cellcolordepth}{0}%
8996}
```

When not used inside a tabular, & performs its original function as recorded here (with catcode 4).

```
8997 \let\LWR@origampmacro&
8998 \end{warpHTML}
```

75.5.1 Handling &

for HTML output: 8999 \begin{warpHTML}

& Will behave depending on whether it is being used inside tabular.

& is redefined to test whether it is inside a tabular environment, in which case it performs special processing for HTML conversion. If not, it behaves normally.

```
9000 \newcommand*{\LWR@tabularampersand}{%
9001 \LWR@traceinfo{LWR@tabularampersand}%
9002 \ifnumcomp{\value{LWR@tabulardepth}}{>}{0}%
9003 {%
```

If not skipping a multirow cell, close the current data cell.

```
9004 \unskip%
9005 \LWR@closetabledatacell%
```

Move to the next column.

```
9006 \defaddtocounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
9007 \global\boolfalse{LWR@tabularcelladded}%
```

Look at the next token to decide multi or single column data tag.

```
9008 \LWR@getmynexttoken% 9009 }%
```

If not inside a tabular, performs the original action:

```
9010 {%

9011 \LWR@origampmacro%

9012 }%

9013 }
```

& is left with its original catcode for now.

tikz package seems to require & be left alone until after tikz has been loaded. Also, cleveref uses the ampersand in one of its options.

& is made active inside a tabular.

& is left alone when in math alignments.

75.6 Filling an unfinished row

\LWR@tabularfinishrow Adds empty table cells if necessary to finish the row.

At the end of the table, if any bottom rules are requested then an empty row must be generated to form the borders which show the rules.

```
9014 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
\ifboolexpr{%
9015
            not bool {LWR@exitingtabular} or%
9016
            bool{LWR@doingtbrule} or%
9017
            bool{LWR@doingcmidrule} or%
9018
            test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
9019
            test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
9020
            bool{LWR@startedrow}%
9021
9022
       }{%
```

Temporarily turn off LWR@exitingtabular so that table data tags will still be generated.

If generating a final row for the \bottomrule borders, turn off the @, !, <, and > column output:

```
9023 \ifbool{LWR@exitingtabular}{%
9024 \booltrue{LWR@tabularmutemods}%
9025 }{%
9026 \boolfalse{LWR@tabularmutemods}%
9027 }%
```

Locally reenable the table data tags until finished with the final row:

```
9028 \boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```
\whileboolexpr{%
9029
9030
            test {
9031
                 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
9032
                     {\value{LWR@tabletotalLaTeXcols}}
            } or %
9033
9034
            (%
                bool{LWR@intabularmetadata} and%
9035
                not bool{LWR@tabularcelladded} and%
9036
                test {
9037
                     \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}
9038
                         {\value{LWR@tabletotalLaTeXcols}}
9039
            )%
9041
9042
        }%
9043
        {%
            \LWR@tabledatasinglecolumntag%
9044
```

The following is essentially \LWR@tabularampersand with LWR@emptyatbang added to empty the following cells:

```
9045 \LWR@closetabledatacell%
9046 \defaddtocounter{LWR@tableLaTeXcolindex}{1}%
9047 \global\boolfalse{LWR@tabularcelladded}%
9048 \booltrue{LWR@emptyatbang}%
```

Starts the next cell:

Reenable the original LWR@exitingtabular to close the entire table:

```
9054 \ifbool{LWR@tabularmutemods}{%
9055 \booltrue{LWR@exitingtabular}%
9056 }{%
9057 \boolfalse{LWR@exitingtabular}%
9058 }%
9059 \boolfalse{LWR@tabularmutemods}%

9060 \boolfalse{LWR@emptyatbang}%
```

```
9061 }{}% ifboolexpr
9062}
```

75.7 Handling \\

Inside tabular, \\ is redefined to \LWR@tabularendofline

Throws away options \\[dim] or *

\LWR@tabularendofline

```
9063 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%
```

Finish the row:

xcolor row color support:

```
9069 \@rowc@lors%
```

No longer inside a data cell:

```
9070 \booltrue{LWR@intabularmetadata}%
```

Not yet started a table row:

```
9071 \boolfalse{LWR@startedrow}%
```

Additional setup:

```
9072 \defcounter{LWR@hlines}{0}%
9073 \defcounter{LWR@hdashedlines}{0}%
9074 \boolfalse{LWR@doingtbrule}%
9075 \boolfalse{LWR@doingcmidrule}%
9076 \LWR@clearmidrules%
```

9077 \def\LWR@rowHTMLcolor{}%

Start at first column:

```
9078 \defcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
9079 \global\boolfalse{LWR@tabularcelladded}%
```

Allow TEX to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```
9080 \LWR@stoppars%
9081 \LWR@forceemptyline%
```

Look at the next token to decide between single column data tag or a special case:

```
9082 \LWR@getmynexttoken% 9083 }
```

75.8 Looking ahead in the column specifications

\LWR@columnspeclookahead $\{\langle offset \rangle\}$

Looks offset tokens ahead in the column specification, setting $\LWR@strresulttwo$.

The w column alignment will be seen as a single unit such as {c}.

```
9084 \newcommand*{\LWR@columnspeclookahead}[1]{%
9085   \setcounter{LWR@tempcountone}{\value{LWR@tablecolspecindex}}%
9086   \addtocounter{LWR@tempcountone}{#1}%
9087   \fullexpandarg%
9088   \StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}[\LWR@strresulttwo]%
```

Get the contents of the first group in \LWR@strresulttwo:

```
9089 \exploregroups%
9090 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
9091 \noexploregroups%
9092}
```

75.9 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
9093 \newcommand*{\LWR@colparameter}{}
```

\LWR@parseatcolumn $\{\langle this\ column\ type \rangle\}$

Handles @{text} columns.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```
9094 \newcommand*{\LWR@parseatcolumn}[1]{%
```

Move to the next token after the '@':

```
9095 \LWR@traceinfo{at column}%
9096 \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into \LWR@colparameter, expanding once:

```
9097 \LWR@traceinfo{about to read the next token:}%
9098 \expandarg%
9099 \StrChar{\LWR@origcolspec}%
9100 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
9101 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```
9102
       \LWR@traceinfo{have now read the next token}%
       \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
9103
9104
       {% left edge of the table:
            \LWR@traceinfo{at the left edge}%
9105
            \LWR@setexparray{LWR@colatspec}%
9106
9107
                {leftedge}%
                {\expandafter\@firstofone\LWR@colparameter}%
9108
9109
            \LWR@traceinfo{at the left edge: %
                \LWR@getexparray{LWR@colatspec}{leftedge}}%
9110
9111
       }%
       {% not at the left edge:
9112
            \LWR@traceinfo{not at the left edge}%
9113
            \LWR@setexparray{LWR@colatspec}%
9114
9115
                {\arabic{LWR@tabletotalLaTeXcols}}%
9116
                {\expandafter\@firstofone\LWR@colparameter}%
9117
            \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}%
9118
            \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
9119
9120
       }%
        \let\LWR@colparameter\relax%
9121
        \booltrue{LWR@validtablecol}%
9122
9123 }
```

\LWR@parsebangcolumn {\langle this column type \rangle} Handles !\{text\} columns.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

9124 \newcommand*{\LWR@parsebangcolumn}[1]{%

Move to the next token after the '!':

```
9125 \LWR@traceinfo{bang column}%
9126 \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into \LWR@colparameter, expanding once:

```
9127 \LWR@traceinfo{about to read the next token:}%
9128 \expandarg%
9129 \StrChar{\LWR@origcolspec}%
9130 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
9131 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```
\LWR@traceinfo{have now read the next token}%
9132
       \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
9133
       {% left edge of the table:
9134
            \LWR@traceinfo{at the left edge}%
9135
            \LWR@setexparray{LWR@colbangspec}%
9136
                {leftedge}%
9137
9138
                {\expandafter\@firstofone\LWR@colparameter}%
9139
        {% not at the left edge:
9140
            \LWR@traceinfo{not at the left edge}%
9141
            \LWR@setexparray{LWR@colbangspec}%
9142
                {\arabic{LWR@tabletotalLaTeXcols}}%
9143
```

```
{\expandafter\@firstofone\LWR@colparameter}%
                         9144
                                   \LWR@traceinfo{bang \arabic{LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
                         9145
                         9146
                         9147
                                  \let\LWR@colparameter\relax%
                         9148
                                  \booltrue{LWR@validtablecol}%
                         9149 }
\LWR@checkbeforeaddclass \{\langle compared \ csname \rangle\} \{\langle css \ class \ to \ add \rangle\}
                         9150 \newcommand*{\LWR@checkbeforeaddclass}[2]{%
                                  \ifcsstrequal{LWR@tempone}{#1}%
                         9151
                                      {%
                         9152
                                           \LWR@setexparray{LWR@coladdclass}%
                         9153
                                                {\arabic{LWR@tabletotalLaTeXcolsnext}}%
                         9154
                                                { #2}% space is intentional
                         9155
                         9156
                                      }{}%
                         9157 }
```

\LWR@checkmathcolpar Error if using math in column parameters.

```
9158 \newcommand*{\LWR@checkmathcolpar}{%
9159
        \IfSubStr{\detokenize\expandafter{\LWR@colparameter}}{\LWRdollar}%
9160
9161
                \PackageError{lwarp}%
9162
                    {%
                    Lwarp does not support '$' in column specifiers.\MessageBreak
9163
                       Specify '$' math for each cell in the column.\MessageBreak
9164
                         Enter 'h' for more info%
9165
                    }%
9166
9167
                    {%
                  For example, replace '>{$}c<{$}' with 'c', and then\MessageBreak
9168
                         use '$cell contents$' for each cell in the column.%
9169
9170
                    }%
9171
            }{}%
9172 }
```

\LWR@parsebeforecolumn $\{\langle this\ column\ type \rangle\}$

Handles > { text } columns.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

9173 \newcommand*{\LWR@parsebeforecolumn}[1]{%

Move to the next token after the '>':

9174 \defaddtocounter{LWR@tablecolspecindex}{1}%

Read the next token, expanding once into \LWR@colparameter:

```
9175 \expandarg%
9176 \StrChar{\LWR@origcolspec}%
9177 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
9178 \fullexpandarg%
```

Error if using >{\$}, which is not supported by lwarp.

```
9179 \LWR@checkmathcolpar%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```
9180 \LWR@setexparray{LWR@colbeforespec}%
9181 {\arabic{LWR@tabletotalLaTeXcolsnext}}%
9182 {\expandafter\@firstofone\LWR@colparameter}%
9183 %
9184 \edef\LWR@tempone{\expandafter\@firstofone\LWR@colparameter}%
```

If detect >{\centering\arraybackslash} or related, add a css class.

```
9185
        \LWR@checkbeforeaddclass{LWR@detect@centeringarraybackslash}{tdcenter}
9186
        \LWR@checkbeforeaddclass{LWR@detect@raggedrightarraybackslash}{tdleft}
        \LWR@checkbeforeaddclass{LWR@detect@raggedleftarraybackslash}{tdright}
9187
        \LWR@checkbeforeaddclass{LWR@detect@itshape}{tditshape}
9188
       \LWR@checkbeforeaddclass{LWR@detect@bfseries}{tdbfseries}
9189
       \LWR@checkbeforeaddclass{LWR@detect@bfit}{tdbfit}
9190
       \let\LWR@colparameter\relax%
9191
9192
        \booltrue{LWR@validtablecol}%
9193 }
```

\LWR@parseaftercolumn $\{\langle this\ column\ type \rangle\}$

Handles <{ text } columns.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

9194 \newcommand*{\LWR@parseaftercolumn}[1]{%

Move to the next token after the '<':

```
9195 \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into \LWR@colparameter:

```
9196 \expandarg%
9197 \StrChar{\LWR@origcolspec}%
9198 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
9199 \fullexpandarg%
```

Error if using >{\$}, which is not supported by lwarp.

```
9200 \LWR@checkmathcolpar%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```
9201 \LWR@setexparray{LWR@colafterspec}%
9202 {\arabic{LWR@tabletotalLaTeXcols}}%
9203 {\expandafter\@firstofone\LWR@colparameter}%
9204 \let\LWR@colparameter\relax%
9205 \booltrue{LWR@validtablecol}%
9206}
```

\LWR@parsebarcolumn $\{\langle this\ column\ type \rangle\}$

Handles vertical rules.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```
9207 \newcommand*{\LWR@parsebarcolumn}[1]{%
9208 \LWR@traceinfo{LWR@parsebarcolumn}%
```

Remember the bar at this position:

```
\ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
9209
       {% left edge of the table:
9210
            \label{localized} $$ \edge{LWR@getexparray}_LWR@colbarspec}_{leftedge}} $$
9211
            \ifdefstring{\LWR@tempone}{tvertbarl}%
9212
           {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldouble}}%
9213
           {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarl}}%
9214
9215
       }%
       {% not at the left edge:
9216
           \edef\LWR@tempone{%
9217
9218
            \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
9219
           }%
           9220
           {%
9221
                \LWR@setexparray{LWR@colbarspec}%
9222
                    {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdouble}%
9223
           }%
9224
           {%
9225
               \LWR@setexparray{LWR@colbarspec}%
9226
                    {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarr}%
9227
           }%
9229
       }%
       \booltrue{LWR@validtablecol}%
9230
9231 }
```

\LWR@parsecoloncolumn $\{\langle this\ column\ type \rangle\}$

Handles vertical rules.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```
9232 \newcommand*{\LWR@parsecoloncolumn}[1]{%
9233 \LWR@traceinfo{LWR@parsecoloncolumn}%
```

Remember the bar at this position:

```
\ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
9234
        {% left edge of the table:
9235
            \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
9236
            \ifdefstring{\LWR@tempone}{tvertbarldash}%
9237
            {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
9238
            {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldash}}%
9239
9240
        {% not at the left edge:
9241
            \edef\LWR@tempone{%
9242
            \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
9243
            \ifdefstring{\LWR@tempone}{tvertbarrdash}%
9245
            {\LWR@setexparray{LWR@colbarspec}%
9246
                {\tt \{\arabic\{LWR@tabletotalLaTeXcols\}\}\{tvertbarrdoubledash\}\}\%}
9247
            {\LWR@setexparray{LWR@colbarspec}%
9248
                {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
9249
```

```
9250 }%
9251 \booltrue{LWR@validtablecol}%
9252}
```

\LWR@parsesemicoloncolumn $\{\langle this\ column\ type \rangle\}$

Handles vertical rules.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

The arguments to the column type are absorbed by \LWR@columntype@<char>, defined by \LWR@modifycolumntype.

9253 \newcommand*{\LWR@parsesemicoloncolumn}[1]{%
 Treat ; as a : column:
9254 \LWR@parsecoloncolumn{}%

75.10 Parsing common column types

\LWR@parsenormalcolumn $\{\langle this\ column\ type \rangle\}$

9255 }

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

\newcolumntype definitons use \LWR@parsenormalcolumn, so an HTML and print version are given so that they may work inside a lateximage.

The arguments to the column type are absorbed by \LWR@columntype@<char>, defined by \LWR@modifycolumntype.

```
9256 \newcommand*{\LWR@HTML@LWR@parsenormalcolumn}[1]{%
9257
       \defaddtocounter{LWR@tabletotalLaTeXcols}{1}%
       \defaddtocounter{LWR@tabletotalLaTeXcolsnext}{1}%
9258
      \LWR@setexparray{LWR@tablecolspec}{\arabic{LWR@tabletotalLaTeXcols}}{#1}%
9259
       \LWR@traceinfo{normal column \arabic{LWR@tabletotalLaTeXcols}: #1}%
9260
       \LWR@setexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
9261
9262
      \LWR@setexparray{LWR@colbangspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
9263
      \LWR@setexparray{LWR@colbeforespec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
      \LWR@setexparray{LWR@colafterspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}}
9264
      \LWR@setexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
9265
9266
      \LWR@setexparray{LWR@coladdclass}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
       \booltrue{LWR@validtablecol}%
9267
9268 }
9269
9270 \newcommand*{\LWR@print@LWR@parsenormalcolumn}[1]{}
9272 \LWR@formatted{LWR@parsenormalcolumn}
```

75.11 Parsing 'w' columns

W and w columns are handled via array with \HTMLnewcolumntype.

Table 13: Tabular baseline

1	p	m	b	r
1	par par par	mid mid mid	bot bot bot	_ r

75.12 Parsing '*' columns

\LWR@parsestarcolumn $\{\langle this\ column\ type \rangle\}$ Star columns should already have been expanded, so this should never be used.

The arguments to the column type are absorbed by \LWR@columntype@<char>, defined by \LWR@modifycolumntype.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

9273 \newcommand*{\LWR@parsestarcolumn}[1]{}

75.13 Expanding the star column specifications

\LWR@expandpreamble $\{\langle tabular\ preamble \rangle\}$

From array \@mkpream.

The resulting expanded preamble is stored in \the\@temptokena. Assign as:

\edef\destination{\the\@temptokena}

```
9274 \newcommand*{\LWR@expandpreamble}[1]{%
9275     \edef\@tempa{\@temptokena={#1}}%
9276     \@tempa%
9277     \@tempswatrue%
9278     \@whilesw\if@tempswa\fi{%
9279     \@tempswafalse\the\NC@list%
9280     }%
9281 }
```

75.14 Parsing the column specifications

∆ tabular baselines

HTML CSS cannot exactly match the LATEX concept of a baseline for a table row. Table 13 shows the LATEX results for various vertical-alignment choices, with the baseline of the first column drawn across all the columns for comparison. See the p column specification in table 14 for details.

Table 14 describes how each kind of column is converted to HTML.

Table 15 shows the various internal macros generated for each column type.

Table 14: Tabular HTML column conversions

Each cell is given a css class of td<columntype>.

l, r, c: Converted to table cells without paragraph tags. Uses css vertical-align:middle so that top or bottom-aligned cells may go above or below this cell.

p: Converted to table cells with paragraph tags. Ref: Table 13, LATEX places the top line of a parbox aligned with the rest of the text line, so css vertical-align:bottom is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the css may be desired, changing td.tdp, td.tdp, td.tdprule, and td.tdPrule to vertical-align: middle. Another possibility is to change L,R,C, and P to vertical-align: top and not worry about the alignment of B and M cells or trying to approximate LATEX baselines.

m: With paragraph tags, css vertical-align:middle.

b: With paragraph tags, css vertical-align: top so that the bottom of the text is closest to the middle of the text line.

w and W: Converted to l, c, or r. No paragraph tags.

P, M, B: Horizontally-centered versions.

S: Treated as 'c'. Ignores optional argument. From the siunitx package.

D: Treated as 'c'. From the dcolumn package.

@, !, >, <: One each, in that order.

: Vertical rule.

Unknown: Converted to 'l'.

\newcolumntype: Expands to its replacement text.

\HTMLnewcolumntype: Provides simplified replacement text for HTML.

Table 15: HTML column type internal macros

<coltype>: The single-letter column type, such as c or X.

Created by \LWR@modifycolumntype: Used by lwarp to add HTML functionality to each built-in column type.

\LWR@columntype@<coltype>: Handles tabular columns depending on the type. Calls \LWR@parsenormalcolumn or related, then advances \LWR@tablecolspecindex.

\LWR@columntype@mctype@<coltype>: Generates the \multicolumn HTML cell css class. Calls \LWR@printmccoltype@normal or related.

\LWR@columntype@mcdata@<coltype>: Generates the \multicolumn HTML cell data. Calls \LWR@printmccoldata@normal or related.

Created by \newcolumntype: From array.

\NC@find@<coltype>: Internally used to parse the column specifier. \NC@rewrite@<coltype>: Stores the print-mode replacement text.

Created by \HTMLnewcolumntype: From lwarp.

\LWR@print@NC@rewrite@<coltype>: Copied from \NC@rewrite@<type>.

\LWR@HTML@NC@rewrite@<coltype>: Stores the HTML-mode replacement text.

\NC@rewrite@<coltype>: Redefined to use the print or HTML version.

\LWR@modifycolumntype $\{\langle 1: column \ type \ letter \rangle\}\ \{\langle 2: number \ args \ to \ ignore \rangle\}\ \{\langle 3: \ csname \ of \ the \ cell \ action \rangle\}\ \{\langle 4: \ csname \ of \ the \ multicolumn \ print \ type \ action \rangle\}\ \{\langle 5: \ csname \ of \ the \ multicolumn \ print \ data \ action \rangle\}$

Add HTML functionality to an existing print version column type.

```
9282 \newcommand*{\LWR@modifycolumntype}[5]{%
9283
        \LWR@traceinfo{LWR@modifycolumntype !#1!#2!#3!#4!#5!}%
9284
                \LWR@traceinfo{LWR@modifycolumntype #1}%
9285
                \edef\@tempa{%
9286
                     \noexpand\csdef{LWR@columntype@#1}{%
                         \noexpand\@nameuse{#3}{#1}%
9287
                         \noexpand\defaddtocounter{LWR@tablecolspecindex}{#2}%
9288
9289
                     }%
                     \noexpand\csdef{LWR@columntype@mctype@#1}{%
9290
                         \noexpand\@nameuse{#4}{#1}%
9291
                     }%
9292
                     \noexpand\csdef{LWR@columntype@mcdata@#1}{%
9293
9294
                         \noexpand\@nameuse{#5}{#2}%
9295
                     }%
9296
                }%
9297
                \@tempa%
9298
        \LWR@traceinfo{LWR@modifycolumntype done}%
9299 }
9300 \LWR@modifycolumntype{l}{0}{LWR@parsenormalcolumn}
        {\tt \{LWR@printmccoltype@normal\}\{LWR@printmccoldata@normal\}}
9301
9302
```

```
9303 \LWR@modifycolumntype{c}{0}{LWR@parsenormalcolumn}
                        {LWR@printmccoltype@normal}{LWR@printmccoldata@normal}
                9306 \ LWR@modifycolumntype\{r\}\{0\}\{LWR@parsenormalcolumn\}\}
                        {LWR@printmccoltype@normal}{LWR@printmccoldata@normal}
                9308 \LWR@modifycolumntype{@}{0}{LWR@parseatcolumn}
                        {LWR@printmccoltype@ignore}{LWR@printmccoldata@other}
                9310
                9311 \LWR@modifycolumntype{!}{0}{LWR@parsebangcolumn}
                        {LWR@printmccoltype@ignore}{LWR@printmccoldata@other}
                9312
                9313
                9314 \LWR@modifycolumntype{>}{0}{LWR@parsebeforecolumn}
                        {LWR@printmccoltype@ignore}{LWR@printmccoldata@other}
                9315
                9316
                9317 \LWR@modifycolumntype{<}{0}{LWR@parseaftercolumn}
                        {LWR@printmccoltype@ignore}{LWR@printmccoldata@other}
                9318
                9319
                9320 \LWR@modifycolumntype{|}{0}{LWR@parsebarcolumn}
                        {LWR@printmccoltype@vertbar}{LWR@printmccoldata@skip}
                9321
                9322
                9323 \LWR@modifycolumntype{:}{0}{LWR@parsecoloncolumn}
                        {LWR@printmccoltype@colon}{LWR@printmccoldata@skip}
                9324
                9325
                9326 \LWR@modifycolumntype{;}{1}{LWR@parsesemicoloncolumn}
                        {LWR@printmccoltype@semicolon}{LWR@printmccoldata@skip}
                9328 \LWR@modifycolumntype{p}{1}{LWR@parsenormalcolumn}
                        {LWR@printmccoltype@normal}{LWR@printmccoldata@paragraph}
                9329
                9330
                {\tt 9331 \ LWR@modifycolumntype\{m\}\{1\}\{LWR@parsenormalcolumn\}}
                        {LWR@printmccoltype@normal}{LWR@printmccoldata@paragraph}
                9332
                9333
                9334 \verb|\LWR@modifycolumntype{b}{1}{LWR@parsenormalcolumn}|
                        {LWR@printmccoltype@normal}{LWR@printmccoldata@paragraph}
                9335
                   A star column:
                9336 \LWR@modifycolumntype{*}{2}{LWR@parsestarcolumn}
                        {LWR@printmccoltype@ignore}{LWR@printmccoldata@skip}
                9337
A user-level macro to creates an HTML version of the replacement text for the
                   column type.
                   This is the equivalent to:
                       \newcommand*{\LWR@HTML@NC@rewrite@<columntype>}[<num args>]
                              {\NC@find <replacement text>}
                       \LWR@formatted{NC@rewrite@<columntype>}
                9338 \NewDocumentCommand{\HTMLnewcolumntype}{m O{0} o m}{\%}
                9339
                        \IfValueTF{#3}
                9340
                            \expandafter\newcommand\expandafter*%
                9341
                                \csname LWR@HTML@NC@rewrite@#1\endcsname[#2][#3]{\NC@find #4}%
                9342
```

```
\LWR@formatted{NC@rewrite@#1}%
                    9343
                    9344
                            }
                    9345
                             {
                                 \expandafter\newcommand\expandafter*%
                    9346
                                      \csname LWR@HTML@NC@rewrite@#1\endcsname[#2]{\NC@find #4}%
                    9347
                                 \verb|\LWR@formatted{NC@rewrite@#1}|| % \\
                    9348
                             }
                    9349
                    9350 }
                    9351 \end{warpHTML}
  for PRINT output: 9352 \begin{warpprint}
                    9353 \NewDocumentCommand{\HTMLnewcolumntype}{m O{0} o m}{}
                    9354 \end{warpprint}
  for HTML output: 9355 \begin{warpHTML}
\LWR@parsetablecols \{\langle colspecs \rangle\}
```

Scans the column specification left to right.

Builds \LWR@tablecolspec with the final specification, one LATEX column per entry. The final number of LATEX columns in each row is stored in LWR@tabletotalLaTeXcols, which is the number of & and $\$ in each line, but which does not include @, !, <, > specifications in the count.

```
9356 \newcommand*{\LWR@parsetablecols}[1]{%
9357 \LWR@traceinfo{LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
9358 \renewcommand*{\LWR@origcolspec}{#1}%
```

Remove spaces:

```
9359 \expandarg%
9360 \StrSubstitute{\LWR@origcolspec}{ }{}[\LWR@origcolspec]%
```

Expand any star columns:

```
9361 \LWR@expandpreamble{\LWR@origcolspec}%
9362 \edef\LWR@origcolspec{\the\@temptokena}%
```

The parsed column spec data array, LWR@tablecolspec, will be overwritten with new values.

Total number of columns found so far. Also pre-initialize the first several columns of specs:

```
9363 \defcounter{LWR@tabletotalLaTeXcols}{0}%
9364 \defcounter{LWR@tabletotalLaTeXcolsnext}{1}%
9365 \LWR@setexparray{LWR@colatspec}{1eftedge}{}%
9366 \LWR@setexparray{LWR@colatspec}{1}{}%
9367 \LWR@setexparray{LWR@colatspec}{2}{}%
```

```
9368
       \LWR@setexparray{LWR@colatspec}{3}{}%
        \LWR@setexparray{LWR@colbangspec}{leftedge}{}%
9369
       \LWR@setexparray{LWR@colbangspec}{1}{}%
9370
9371
       \LWR@setexparray{LWR@colbangspec}{2}{}%
9372
       \LWR@setexparray{LWR@colbangspec}{3}{}%
9373
       \LWR@setexparray{LWR@colbeforespec}{1}{}}
       \LWR@setexparray{LWR@colbeforespec}{2}{}%
9374
       \LWR@setexparray{LWR@colbeforespec}{3}{}}
9375
       \LWR@setexparray{LWR@colafterspec}{1}{}%
9376
       \LWR@setexparray{LWR@colafterspec}{2}{}%
9377
        \LWR@setexparray{LWR@colafterspec}{3}{}%
9378
9379
        \LWR@setexparray{LWR@colbarspec}{leftedge}{}%
9380
        \LWR@setexparray{LWR@colbarspec}{1}{}%
9381
        \LWR@setexparray{LWR@colbarspec}{2}{}%
9382
        \LWR@setexparray{LWR@colbarspec}{3}{}%
9383
        \LWR@setexparray{LWR@coladdclass}{1}{}}
        \LWR@setexparray{LWR@coladdclass}{2}{}%
9384
        \LWR@setexparray{LWR@coladdclass}{3}{}}
9385
```

Starting at the first column specification:

```
9386 \defcounter{LWR@tablecolspecindex}{1}%
```

Place the colspecs string length into \LWR@strresult, and remember the number of characters in the column specification:

```
9387 \expandarg%
9388 \StrLen{\LWR@origcolspec}[\LWR@strresult]%
9389 \fullexpandarg%
9390 \LWR@traceinfo{original column spec length: \LWR@strresult}%
9391 \defcounter{LWR@tablecolspecwidth}{\LWR@strresult}%
```

Haven't seen any optional arguments so far

```
9392 \boolfalse{LWR@opttablecol}%
```

Scan through the column specifications:

Place the next single-character column type into \LWR@strresult:

```
9400 \expandarg%
9401 \StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[\LWR@strresult]%
9402 \LWR@traceinfo{position \arabic{LWR@tablecolspecindex}: \LWR@strresult}%
9403 \fullexpandarg%
```

Not yet found a valid column type:

```
9404 \boolfalse{LWR@validtablecol}%
```

Skip over any optional arguments, such as siunitx S column:

```
9405 \IfStrEq{\LWR@strresult}{[]}{\booltrue{LWR@opttablecol}}{}%
```

Throw away anything found inside the optional argument:

```
9406 \ifbool{LWR@opttablecol}%
9407 {}% inside an optional argument
9408 {% not an optional tabular argument
```

Not inside an optional argument, so consider the column type:

```
9409 \ifcsdef{LWR@columntype@\LWR@strresult}%
9410 {\csuse{LWR@columntype@\LWR@strresult}}%
9411 {}%
```

If an unknown column type, use 1:

```
9412 \ifbool{LWR@validtablecol}{}{%
9413 \LWR@traceinfo{invalid column type: \LWR@strresult}%
9414 \LWR@parsenormalcolumn{{}%
9415 }%
9416 }% not an optional column argument
```

If read the closing bracket, no longer inside the optional argument:

Move to the next character:

```
9418 \defaddtocounter{LWR@tablecolspecindex}{1}%
9419 }% whiledo
9420}%
```

75.15 colortbl and xcolor tabular color support

These macros provide a minimal emulation of some colortbl macros which might appear between table cells. If colortbl is loaded, these macros will be replaced with functional versions.

For each of the HTML colors below, the text for the HTML color is set if requested, but the macro is empty if none has been set.

\rownum Reserve a counter register.

```
9421 \@ifundefined{rownum}{\newcount\rownum}{}
```

\@rowcolors Emulated in case xcolor is not used.

```
9422 \newcommand*{\@rowcolors}{}
```

\@rowc@lors Emulated in case xcolor is not used.

```
9423 \newcommand*{\@rowc@lors}{}
```

```
\LWR@xcolorrowHTMLcolor Emulated xcolor row color.
                                                                           9424 \newcommand*{\LWR@xcolorrowHTMLcolor}{}
                      \LWR@columnHTMLcolor HTMLstyle code for the column color.
                                                                           9425 \def\LWR@columnHTMLcolor{}
                              \LWR@rowHTMLcolor HTMLstyle code for the row color.
                                                                           9426 \def\LWR@rowHTMLcolor{}
                            \LWR@cellHTMLcolor HTMLstyle code for the cell color.
                                                                           9427 \def\LWR@cellHTMLcolor{}
                            \LWR@ruleHTMLcolor HTMLstyle code for the rule color.
                                                                           9428 \newcommand*{\LWR@ruleHTMLcolor}{}
                                                     \rowcolor [\langle model \rangle] {\langle color \rangle} [\langle right overhang \rangle] Print version. The
                                                                                  HTML version is in lwarp-colortbl. Used before starting a tabular data cell, thus
                                                                                 \LWR@getmynexttoken.
                                                                           9429 \newcommand*{\rowcolor}{\LWR@getmynexttoken}%
                                    \arrayrulecolor [\langle model \rangle] \{\langle color \rangle\}
           \arrayrulecolornexttoken [\langle model \rangle] \{\langle color \rangle\}
                                                                                  Print versions for use outside and inside a tabular:
                                                                           9430 \newcommand{\arrayrulecolor}[2][named]{}
                                                                           9431 \newcommand \arrayrulecolornext token \[2] [named] \LWR@getmynext token \]
                         \doublerulesepcolor [\langle model \rangle] \{\langle color \rangle\}
\doublerulesepcolornexttoken [\langle model \rangle] \{\langle color \rangle\}
                                                                                 Print versions for use inside and outside a tabular:
                                                                           9432 \newcommand{\doublerulesepcolor}[2][named]{}
                                                                           9433 \end{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{
```

75.16 Starting a new row

\LWR@maybenewtablerow If have not yet started a new table row, begin one now. Creates a new row tag, adding a class for hline or tbrule if necessary.

```
9434 \newcommand*{\LWR@maybenewtablerow} 9435 {%
```

```
9436 \ifbool{LWR@startedrow}%
9437 {}% started the row
9438 {% not started the row
```

Pre-compute the aria-hidden attribute, used to hide from screen readers the final row if it is only used to create the bottom border:

```
\ifbool{LWR@tabularfinalrow}%
9439
9440
                 {%
                     \renewcommand*{\LWR@tempone}%
9441
                         { aria-hidden=\textquotedbl{}true\textquotedbl}%
9442
                 }%
9443
                 {%
9444
                     \renewcommand*{\LWR@tempone}{}%
9445
                 }%
9446
```

Start a new row if doing \hline:

```
9447
            \ifboolexpr{%
9448
                 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} \ or \%
9449
                 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}}%
9450
            }%
            {%
9451
                 \LWR@htmltag{%
9452
9453
                     tr %
                     class=\textquotedbl{}hline\textquotedbl%
9454
                     \LWR@tempone% aria-hidden
9455
                 }%
9456
                 \LWR@orignewline%
9457
```

Remember that now have started the row, and create the row tag, with a class if necessary.

If not doing \hline, start a row if doing a top or bottom rule:

```
{% not doing hline
9461
              \ifbool{LWR@doingtbrule}%
9462
9463
              {%
                  \ifdefvoid{\LWR@ruleHTMLcolor}{%
9464
                      \LWR@htmltag{%
9465
                          tr %
9466
                          class=\textquotedbl{}tbrule\textquotedbl%
9467
                          \LWR@tempone% aria-hidden
9468
                      }%
9469
9470
                  }{%
9471
                      \LWR@htmltag{%
                          9472
9473
                          style=\textquotedbl{}border-top: 1px solid % space
                            \LWR@origpound\LWR@ruleHTMLcolor \textquotedbl{}%
9474
                          \LWR@tempone% aria-hidden
9475
                      }%
9476
                  }%
9477
                  \LWR@orignewline%
9478
```

Remember that now have started the row, and create the row tag, with a class if necessary.

```
9479 \booltrue{LWR@startedrow}%
9480 \booltrue{LWR@intabularmetadata}%
9481 }%
9482 {%
```

If not the final row, start a new row:

```
      9483
      \ifbool{LWR@tabularfinalrow}%

      9484
      {}%

      9485
      {%

      9486
      \LWR@htmltag{tr}\LWR@orignewline%
```

Remember that now have started the row, and create the row tag, with a class if necessary.

```
9487 \booltrue{LWR@startedrow}%
9488 \booltrue{LWR@intabularmetadata}%
9489 }%
9490 }%
9491 }% end of not doing hline
9492 }% end of not started the row
9493}
```

75.17 Printing vertical bar tags

```
\LWR@printbartag \{\langle index \rangle\}
```

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```
9494 \newcommand*{\LWR@printbartag}[1]{%
9495
       \LWR@traceinfo{LWR@printbartag !#1!}%
9496
       \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
9497
       {}% muting or empty
9498
       {% not muting
            \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{#1}}%
9499
            \ifdefempty{\LWR@tempone}{}{ \LWR@tempone}%
9500
       }% not muting
9501
        \LWR@traceinfo{LWR@printbartag done}%
9502
9503 }
```

75.18 Printing @ or! tags

```
\LWR@printatbang \{\langle at-or-bang\rangle\} \{\langle index\rangle\} $\quad 9504 \newcommand*\\LWR@printatbang\[2]\{\pi}
```

Fetch the column at or bang spec:

```
9505 \xdef\LWR@atbangspec{\LWR@getexparray{LWR@col#1spec}{#2}}%
9506 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%
```

Only generate if is not empty;

```
\ifdefempty{\LWR@atbangspec}%
9507
9508
        {}%
        {% not empty
9509
            \LWR@htmltag{%
9510
                td class=\textquotedbl{}td#1%
9511
9512
                 \LWR@subaddcmidruletrim{}{}%
                 \verb|\LWR@printbartag{#2}||
9513
                 \textquotedbl{}%
9514
                 \LWR@tdstartstyles%
9515
                 \LWR@addcmidrulewidth%
9516
                 \LWR@addcdashline%
9517
                 \LWR@addtabularrulecolors%
9518
9519
                 \LWR@tdendstyles%
9520
            }%
```

Create an empty cell if muting for the \bottomrule:

```
9521 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
9522 {}%
9523 {\LWR@atbangspec}%
9524 %
9525 \LWR@htmltag{/td}\LWR@orignewline%
9526 \global\booltrue{LWR@tabularcelladded}%
9527 }% not empty
9528 }%
```

\LWR@addleftmostbartag

```
9529 \newcommand*{\LWR@addleftmostbartag}{%
9530 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}{%
9531 \LWR@printbartag{leftedge}%
9532 }{}%
```

\LWR@tabularleftedge

```
9534 \newcommand*{\LWR@tabularleftedge}{%
9535   \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}%
9536   {%
9537   \LWR@printatbang{at}{leftedge}%
9538   \LWR@printatbang{bang}{leftedge}%
9539   }% left edge
9540   {}% not left edge
9541}
```

75.19 Cell opening tag

\LWR@thiscolspec Temporary storage.

```
9542 \newcommand*{\LWR@thiscolspec}{}
```

\LWR@tabledatasinglecolumntag Print a table data opening tag with style for alignment and color.

```
9543 \newcommand*{\LWR@tabledatasinglecolumntag}%
9544 {%
9545 \LWR@traceinfo{LWR@tabledatasinglecolumntag}%
9546 \LWR@maybenewtablerow%
```

Don't start a new paragraph tag if have already started one, or have found the end of the tabular, or if are inside a \multirow:

```
9547 \ifboolexpr{
9548 bool{LWR@intabularmetadata}
9549 and not bool{LWR@exitingtabular}
9550 and not bool {LWR@in@multirow@par}
9551 }%
9552 {% making a tabular data cell
```

Print the @ and! contents before first column:

```
9553 \LWR@tabularleftedge%
```

Fetch the current column's alignment character into \LWR@strresult:

Print the start of a new table data cell:

```
9557 \LWR@traceinfo{LWR@tabledatasinglecolumntag: about to print td tag}%

9558 \LWR@htmltag{%

9559 td class=\textquotedbl{}td%
```

Append this column's spec:

```
9560 \LWR@strresult%
```

If this column has a cmidrule, add "rule" to the end of the HTML class tag. Also add vertical bar tags.

Add any tabular > column text alignment or font control css:

Close the class description:

```
9566 \textquotedbl{}%
```

Add styles for rules, alignment:

```
9567 \LWR@tdstartstyles%
9568 \LWR@addcmidrulewidth%
9569 \LWR@addcdashline%
```

Add styles for cell and rule colors:

```
9575 \LWR@addtabularrowcolor%
9576 \LWR@addtabularrulecolors%

9577 \LWR@tdendstyles%
9578 }% HTML td
9579 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done printing td tag}%
```

If this is a p, m, b, or X column, allow paragraphs:

```
\ifboolexpr{%
9580
                    test{ \ifdefstring{\LWR@strresult}{p} } or
9581
                    test{ \ifdefstring{\LWR@strresult}{m} } or
9582
                    test{ \ifdefstring{\LWR@strresult}{b} }
9583
                }%
9584
                {% allow pars
9585
               \LWR@traceinfo{LWR@tabledatasinglecolumntag: about to LWR@startpars}%
9586
9587
                    \booltrue{LWR@tableparcell}%
9588
                    \LWR@startpars%
               \LWR@traceinfo{LWR@tabledatasinglecolumntag: done with LWR@startpars}%
9589
9590
                }% allow pars
                {}% no pars
9591
```

Print the > contents unless muted for the \bottomrule:

```
\verb|\ifboolexpr{bool{LWR@tabularmutemods}| or bool{LWR@emptyatbang}}| % if boolexpr{bool{LWR@tabularmutemods}| or bool{LWR@emptyatbang}| % if boolexpr{bool{LWR@tabularmutemods}| or bool{LWR@emptyatbang}| % if boolexpr{bool{LWR@tabularmutemods}| % if boolexpr{bool{LWR@tabularmutemods
9592
                                                                                                              {}%
9593
                                                                                                              {%
9594
                                                                                                        \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
9595
9596
                                                                                                               \boolfalse{LWR@intabularmetadata}%
9598
                                                     }% making a tabular data cell
9599
                                                     {}% not making a tabular data cell
                                                     \LWR@traceinfo{LWR@tabledatasinglecolumntag: done}%
9600
9601 }%
```

75.20 Midrules

LWR@midrules LWR@midrules is a data array (section 42) of columns each containing a non-zero width if a midrule should be created for this column.

LWR@trimlrules LWR@trimlrules is a data array (section 42) of columns containing l if a midrule should be left trimmed for each column.

LWR@trimrrules LWR@trimrrules is a data array (section 42) of columns containing r if a midrule should be right trimmed for each column.

LWR@cdashlines LWR@cdashlines is a data array (section 42) of columns each containing a Y if an arydshln package "cdashed line" should be created for this column.

\LWR@heavyrulewidth (Len) The default width of the rule.

```
9602 \newlength{\LWR@heavyrulewidth} 9603 \setlength{\LWR@heavyrulewidth}{.08em}
```

\LWR@lightrulewidth (*Len*) The default width of the rule.

```
9604 \newlength{\LWR@lightrulewidth} 9605 \setlength{\LWR@lightrulewidth}{.05em}
```

\LWR@cmidrulewidth (*Len*) The default width of the rule.

```
9606 \newlength{\LWR@cmidrulewidth} 9607 \setlength{\LWR@cmidrulewidth}{.03em}
```

\LWR@thiscmidrulewidth (Len) The width of the next rule, defaulting to \LWR@cmidrulewidth.

If not \LWR@cmidrulewidth, a style will be used to generate the custom width.

Assigned from the LWR@midrules array.

```
9608 \newlength{\LWR@thiscmidrulewidth} 9609 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}
```

\LWR@clearmidrules Start new midrules. Called at beginning of tabular and also at \\.

Clears all LWR@midrules and LWR@trimrules markers for this line.

```
9610 \newcommand*{\LWR@clearmidrules}
9611 { %
        \defcounter{LWR@midrulecounter}{1}%
9612
        \whileboolexpr{%
9613
            not test{%
9614
9615
                \ifnumcomp{\value{LWR@midrulecounter}}{>}%
9616
                    {\value{LWR@tabletotalLaTeXcols}}%
9617
            }%
9618
       }%
9619
       {%
            \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
9620
            \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
9621
            \LWR@setexparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{}%
9622
            \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
9623
            \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
9624
9625
            \defaddtocounter{LWR@midrulecounter}{1}%
       }%
9626
9627 }
```

```
\LWR@subcmidrule \{\langle width \rangle\} \{\langle trim \rangle\} \{\langle leftcolumn \rangle\} \{\langle rightcolumn \rangle\}
```

Marks LWR@midrules data array elements to be non-zero widths from left to right columns. Also marks trimming for the L and/or R columns.

LWR@doingcmidrule is set to force an empty row at the end of the tabular to create the rule.

```
9628 \newcommand*{\LWR@subcmidrule}[4]{%
9629 \defcounter{LWR@midrulecounter}{#3}%
9630 \whileboolexpr{%
```

```
9631
                                                                         not test {%
                                                                                                   \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
9632
                                                                         }%
9633
9634
                                              }%
9635
                                                {%
                                                                         \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
9636
                                                                          \defaddtocounter{LWR@midrulecounter}{1}%
9637
                                                }% whiledo
9638
                                                \label{local-continuity} $$ \ LWR@setexparray\{LWR@trimlrules\}{\#3}{l}}{}% $$ \ LWR@setexparray\{LWR@trimlrules\}{\#4}{l}}{}% $$ \ LWR@setexparray\{LWR@trimlrules\}{\#4}{l}{}% $$ \ LWR@trimlrules}{}% $$ \
9639
                                                9640
                                                 \booltrue{LWR@doingcmidrule}%
9641
9642 }
```

\LWR@docmidrule $[\langle width \rangle]$ ($\langle trim \rangle$) { $\langle leftcolumn-rightcolumn \rangle$ }

Marks LWR@midrules array elements to be a non-zero width from left to right columns. Also marks trimming for the L and/or R columns.

```
9643 \NewDocumentCommand{\LWR@docmidrule}
9644 {O{\LWR@cmidrulewidth} D(){} >{\SplitArgument{1}{-}}m}
9645 {\LWR@subcmidrule{#1}{#2}#3}
```

\LWR@subcdashline $\{\langle leftcolumn \rangle\} \{\langle rightcolumn \rangle\}$

Marks LWR@cdashlines data array elements to be Y from left to right columns.

LWR@doingcmidrule is set to force an empty row at the end of the tabular to create the rule.

```
9646 \newcommand*{\LWR@subcdashline}[2]{%
        \defcounter{LWR@midrulecounter}{#1}%
9647
        \whileboolexpr{%
9648
9649
            not test {%
                 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}%
9650
            }%
9651
       }%
9652
9653
        {%
            \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{Y}%
9654
            \defaddtocounter{LWR@midrulecounter}{1}%
9655
        }% whiledo
9656
        \booltrue{LWR@doingcmidrule}%
9657
9658 }
```

\LWR@docdashline $\{\langle leftcolumn-rightcolumn\rangle\}$

Marks LWR@cdashlines data array elements to be Y from left to right columns.

```
9659 \NewDocumentCommand{\LWR@docdashline}{>{\SplitArgument{1}{-}}m}%
9660 {%
9661 \LWR@subcdashline#1%
9662 }
```

\LWR@tdstartstyles Begins possibly adding a table data cell style.

\LWR@tdaddstyle Starts adding a table data cell style.

\LWR@tdendstyles Finishes possibly adding a table data cell style. Prints the closing quote.

\LWR@subaddcmidruletrim $\{\langle lefttrim \rangle\} \{\langle righttrim \rangle\} \}$ Adds a \cmidrule with optional trim.

```
9677 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
9678 \setlength{\LWR@templengthone}{%
9679 \LWR@getexparray{LWR@midrules}{\arabic{LWR@tableLaTeXcolindex}}%
9680 }%
9681 \ifdimcomp{\LWR@templengthone}{>}{0pt}%
9682 {%
```

Print the class with left and right trim letters appended:

```
9683 \space tdrule#1#2%
```

Remember the width of the rule:

```
9684 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
9685 }%
9686 {%
9687 \setlength{\LWR@thiscmidrulewidth}{0pt}%
9688 }%
9689 }
```

\LWR@addcmidruletrim Adds left or right trim to a \cmidrule.

```
9690 \newcommand*{\LWR@addcmidruletrim}{%
9691 \LWR@subaddcmidruletrim%
9692 {\LWR@getexparray{LWR@trimlrules}{\arabic{LWR@tableLaTeXcolindex}}}%
9693 {\LWR@getexparray{LWR@trimrrules}{\arabic{LWR@tableLaTeXcolindex}}}%
9694 }
```

\LWR@addrulewidth $\{\langle thiswidth \rangle\} \{\langle defaultwidth \rangle\}$

If not default width, add a custom style with width and color depending on this width.

Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

```
9695 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if this width is different than the default width, or if a color is being used:

```
\ifboolexpr{%
9696
            test{\ifdimcomp{#1}{=}{0pt}} or
9697
9698
                ( test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP} )
9699
9700
                and ( test {\ifdefvoid{\LWR@ruleHTMLcolor}} )
9701
        }%
9702
        {}% default width and color
9703
9704
        {% custom width and/or color
```

Ensure that the width is wide enough to display in the browser:

```
9705 \LWR@forceminwidth{#1}%
```

Begin adding another style:

```
9706 \LWR@tdaddstyle%
```

The style itself:

```
9707 border-top:\LWR@printlength{\LWR@atleastonept} solid % space
```

If default gray, the darkness of the color depends on the thickness of the rule:

```
\ifdefvoid{\LWR@ruleHTMLcolor}{%
9708
                \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
9709
9710
                {\LWR@origpound{}A0A0A0}%
9711
                {% lightrule or heaver
9712
                     \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
9713
                     {\LWR@origpound{}808080}%
9714
                     {black}%
                }% lightrule or heavier
9715
            }{%
9716
                \LWR@origpound\LWR@ruleHTMLcolor%
9717
            }%
9718
        }% custom width and/or color
9719
9720 }
```

\LWR@addcmidrulewidth Adds a style for the rule width.

Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

```
9721 \newcommand{\LWR@addcmidrulewidth}{%
9722 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
9723 }
```

\LWR@addcdashline Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

```
9730
                         border-top: 1pt dashed %
                         \ifdefvoid{\LWR@ruleHTMLcolor}%
           9731
                             {black}%
           9732
                             {\LWR@origpound\LWR@ruleHTMLcolor}%
           9733
           9734
                    }{}%
           9735 }
\LWR@WPcell \{\langle text-align \rangle\} \{\langle vertical-align \rangle\}
           9736 \newcommand*{\LWR@WPcell}[2]{%
           9737
                    \LWR@tdaddstyle%
           9738
                    \LWR@print@mbox{text-align:#1}; \LWR@print@mbox{vertical-align:#2}%
           9739 }
```

\LWR@addformatwpalignment $\{\langle colspec \rangle\}$

If FormatWP, adds a style for the alignment.

Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

```
9740 \newcommand*{\LWR@addformatwpalignment}[1]{%
9741
       \ifbool{FormatWP}{%
           \IfSubStr{#1}{\LWR@WPcell{left}{middle}}{}%
9742
           \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{}%
9743
           \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{}%
9744
           \footnote{$1${p}{\LWR@WPcell{left}{bottom}}{}}
9745
9746
           \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{}%
            \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{}%
9747
       }{}%
9748
9749 }
```

75.21 Cell colors

\LWR@addtabularrowcolor Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```
9750 \newcommand*{\LWR@addtabularrowcolor}{%
9751
        \ifbool{LWR@tabularmutemods}{}{%
            \ifdefvoid{\LWR@rowHTMLcolor}{%
9752
                 \ifdefvoid{\LWR@xcolorrowHTMLcolor}{}%
9753
9754
                 {% xcolor row color
9755
                     \LWR@tdaddstyle%
                     background: \verb|\LWR@origpound| LWR@xcolorrowHTMLcolor|| \\
9756
                 }%
9757
            }%
9758
            {% explicit row color
9759
                 \LWR@tdaddstyle%
9760
9761
                 background:\LWR@origpound\LWR@rowHTMLcolor%
9762
            }%
9763
        }%
9764 }
```

\LWR@addtabularhrulecolor Adds a cell's horizontal rule color style, if needed.

If either form of horizontal rule is requested:

```
9766 \ifboolexpr{%
9767 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
9768 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
9769 bool{LWR@doingtbrule}%
9770 }{%
```

If there is a no custom color:

```
9771
            \ifdefvoid{\LWR@ruleHTMLcolor}%
9772
                \ifnumcomp{\value{LWR@hlines}}{>}{1}%
9773
9774
                {%
                     \LWR@tdaddstyle%
9775
                    border-top: 4px double%
9777
                }{% else
9778
                \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
9779
                {%
                     \LWR@tdaddstyle%
9780
                     border-top: 2px dashed%
9781
                }{% else
9782
                \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
9783
                {%
9784
9785
                     \LWR@tdaddstyle%
                     border-top: 1px dashed%
9787
                }{}}}%
```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```
9788 }%
```

If there is a custom color:

```
9789
            {%
                \ifnumcomp{\value{LWR@hlines}}{>}{1}%
9790
9791
                {%
                     \LWR@tdaddstyle%
9792
                    border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
9793
9794
                }{% else
                \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
9795
9796
                {%
                     \LWR@tdaddstyle%
9797
                     border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
9798
                }{% else
9799
                \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
9800
9801
                {%
                     \LWR@tdaddstyle%
9802
                     border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
                }{% else
9805
                     \LWR@tdaddstyle%
                     border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
9806
                }}}%
9807
            }%
9808
       }{}%
9809
9810 }
```

No color is added for the final row of empty cells which finishes each tabular.

```
9811 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizonal rule color:

```
9812 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
9813 \ifbool{LWR@tabularmutemods}{}{%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
9814 \ifnumequal{\value{LWR@tableLaTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
9815 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```
9816
                       \LWR@tdaddstyle%
9817
                       border-left: 1px solid % space
9818
                           \LWR@vertruleHTMLcolor%
9819
               }{}%
9820
               \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
9821
                       \LWR@tdaddstyle%
9822
9823
                       border-left: 4px double % space
                           \LWR@vertruleHTMLcolor%
9824
9825
               }{}%
               \footnote{MR@tempone}{tvertbarldash}{%}
9826
                       \LWR@tdaddstyle%
9827
                       border-left: 1px dashed % space
9828
                           \LWR@vertruleHTMLcolor%
9829
               }{}%
9830
               \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
9831
                       \LWR@tdaddstyle%
9832
                       border-left: 2px dashed % space
9833
9834
                           \LWR@vertruleHTMLcolor%
9835
               }{}%
           }{}%
9836
```

Possibly add a right vertical rule for this cell:

```
9837 \edef\LWR@tempone{%
9838 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tableLaTeXcolindex}}%
9839 }%
9840 \ifdefstring{\LWR@tempone}{tvertbarr}{%
```

Add a custom style if a vertical bar was requested:

```
9841 \LWR@tdaddstyle%
9842 border-right: 1px solid \LWR@vertruleHTMLcolor%
9843 }{}%
9844 \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
9845 \LWR@tdaddstyle%
```

```
border-right: 4px double \LWR@vertruleHTMLcolor%
9846
            }{}%
9847
            \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
9848
9849
                    \LWR@tdaddstyle%
                    border-right: 1px dashed \LWR@vertruleHTMLcolor%
9850
            }{}%
9851
            \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
9852
                    \LWR@tdaddstyle%
9853
                    border-right: 2px dashed \LWR@vertruleHTMLcolor%
9854
            }{}%
9855
        }%
9856
9857 }
```

\LWR@subaddtabularcellcolor $\{\langle html\ color \rangle\}$

\LWR@addtabularcellcolor Adds a cell color style, if needed.

```
9866 \newcommand*{\LWR@addtabularcellcolor}{%
        \ifdefvoid{\LWR@cellHTMLcolor}%
9867
9868
        {%
            \ifdefvoid{\LWR@rowHTMLcolor}%
9869
9870
9871
                \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
9872
                {%
                    \ifdefvoid{\LWR@columnHTMLcolor}%
9873
9874
                    {}%
                    {\LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}}%
9875
9876
                {\LWR@subaddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
9877
9878
            {\LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}}%
9879
9880
        }%
9881
        {\LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}}%
9882 }
```

75.22 Multicolumns

75.22.1 Parsing multicolumns

\LWR@printmccoltype@normal $\{\langle col \ type \rangle\}$

Prints the column type, and remembers that any vertical bars are no longer on the left edge.

```
9883 \newcommand*{\LWR@printmccoltype@normal}[1]{%
9884 #1%
9885 \boolfalse{LWR@mcolvertbaronleft}%
9886 }
```

```
\LWR@printmccoltype@ignore \{\langle col\ type\rangle\}
                                This type does not print a multi-column data cell.
                              9887 \newcommand*{\LWR@printmccoltype@ignore}[1]{}%
  \LWR@printmccoltype@vertbar \{\langle col \ type \rangle\}
                                Adds a left or right vertical bar.
                              9888 \newcommand*{\LWR@printmccoltype@vertbar}[1]{%
                                      \ifbool{LWR@mcolvertbaronleft}%
                              9889
                                           {\defaddtocounter{LWR@mcolvertbarsl}{1}}% left edge
                              9890
                                           {\defaddtocounter{LWR@mcolvertbarsr}{1}}% not left edge
                              9891
                              9892 }
    \LWR@printmccoltype@colon \{\langle col \ type \rangle\}
                                Adds a left or right vertical bar.
                              9893 \newcommand*{\LWR@printmccoltype@colon}[1]{%
                                      \ifbool{LWR@mcolvertbaronleft}%
                              9894
                              9895
                                           {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
                              9896
                                           {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
                              9897 }
\LWR@printmccoltype@semicolon \{\langle col\ type\rangle\}
                                Adds a left or right vertical bar.
                              9898 \let\LWR@printmccoltype@semicolon\LWR@printmccoltype@colon
          \LWR@printmccoltype \{\langle colspec \rangle\} Print any valid column type found. Does not print @, !, >, or < columns
                                or their associated tokens.
                                This is printed as part of the table data tag's class.
                                \LWR@columntype@mctype@<type> is defined by \LWR@modifycolumntype.
                              9899 \newcommand*{\LWR@printmccoltype}[1]{%
                              9900
                                      \LWR@traceinfo{lwr@printmccoltype -#1-}%
                                Get one token of the column spec:
                                      \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
                              9901
                                Detokenize to avoid problems with special characters:
                                      \edef\LWR@strresult{\detokenize\expandafter{\LWR@strresult}}%
                              9902
                                Add to the HTML tag depending on which column type is found:
                                      \ifcsdef{LWR@columntype@mctype@\LWR@strresult}%
                              9903
                                           {\csuse{LWR@columntype@mctype@\LWR@strresult}}%
                              9904
                                           {\boolfalse{LWR@mcolvertbaronleft}}%
                              9905
                                      \LWR@traceinfo{lwr@printmccoltype done}%
                              9906
                              9907 }
```

```
lwarp 478
```

```
\LWR@printmccoldata@other \{\langle num \ args \ to \ skip \rangle\} \ \{\langle entire \ colspec \rangle\}
                                  For @, !, >, <, print the next token without paragraph tags:
                                9908 \newcommand*{\LWR@printmccoldata@other}[2]{%
                                         \defaddtocounter{LWR@tablemulticolspos}{1}%
                                         \StrChar{#2}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
                                9910
                                         \LWR@strresult%
                                9911
                                  A valid column data type was found:
                                         \booltrue{LWR@validtablecol}%
                                9913 }
     \LWR@printmccoldata@skip \{\langle num \ args \ to \ skip \rangle\} \{\langle entire \ colspec \rangle\}
                                  Nothing to print for this column type.
                                9914 \newcommand*{\LWR@printmccoldata@skip}[2]{%
                                         \defaddtocounter{LWR@tablemulticolspos}{#1}%
                                  A valid column data type was found:
                                         \booltrue{LWR@validtablecol}%
                                9916
                                9917 }
                                  For \LWR@printmccoldata@...>, \{\langle num\ args\ to\ skip\rangle\} is provided by \LWR@columntype@mcdata@<coltype>
                                  when it was defined by \LWR@modifycolumntype. \entire colspec is provided by
                                  \LWR@printmccoldata when it uses \LWR@columntype@mcdata@<coltype>.
   \LWR@printmccoldata@normal \{\langle num \ args \ to \ skip \rangle\} \{\langle entire \ colspec \rangle\}
                                9918 \newcommand*{\LWR@printmccoldata@normal}[2]{%
                                         \LWR@multicoltext%
                                9919
                                         \defaddtocounter{LWR@tablemulticolspos}{#1}%
                                9920
                                9921 }
\LWR@printmccoldata@paragraph \{\langle num \ args \ to \ skip \rangle\} \ \{\langle entire \ colspec \rangle\}
                                9922 \newcommand*{\LWR@printmccoldata@paragraph}[2]{%
                                         \LWR@startpars%
                                9923
                                         \LWR@multicoltext%
                                9924
                                         \defaddtocounter{LWR@tablemulticolspos}{#1}%
                                9925
                                         \LWR@stoppars%
                                9926
                                9927 }
           \LWR@printmccoldata {\langle entire colspec \rangle}
                                  Print the data for any valid column type found.
                                9928 \newcommand*{\LWR@printmccoldata}[1]{%
                                9929
                                         \LWR@traceinfo{lwr@printmccoldata -#1}%
                                  Not yet found a valid column type:
```

\boolfalse{LWR@validtablecol}%

9930

Get one token of the column spec, into a local copy in case nested.

```
9931 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
9932 \edef\LWR@printmccoldatatoken{\LWR@strresult}%
```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```
9933 \ifcsdef{LWR@columntype@mcdata@\LWR@printmccoldatatoken}%
9934 {\csuse{LWR@columntype@mcdata@\LWR@printmccoldatatoken}{#1}}%
9935 {}%
```

If an unknown column type, print the text:

```
9936 \ifbool{LWR@validtablecol}{}{\LWR@multicoltext{}}%
```

Tracing:

```
9937 \LWR@traceinfo{lwr@printmccoldata done}%
9938 }
```

\parsemulticolumnalignment $\{\langle 1: colspec \rangle\} \{\langle 2: printresults \ csname \rangle\}$

Scan the multicolumn specification and execute the printfunction for each entry.

Note that the spec for a p{spec} column, or @, >, <, is a token list which will NOT match l, c, r, or p.

```
9939 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
9940 \defcounter{LWR@tablemulticolspos}{1}%
9941 \StrLen{#1}[\LWR@strresult]%
9942 \defcounter{LWR@tablemulticolswidth}{\LWR@strresult}%
```

Scan across the tokens in the column spec:

Execute the assigned print function for each token in the column spec:

```
9950 \csuse{#2}{#1}%
```

Move to the next token in the column spec:

```
9951 \defaddtocounter{LWR@tablemulticolspos}{1}%
9952 }%
9953 }
```

75.22.2 Multicolumn factored code

9954 \newcommand*{\LWR@addmulticolvertrulecolor}{%

No vertical rules if finishing the tabular with a row of empty cells:

```
9955 \ifbool{LWR@tabularmutemods}{}{%
```

Left side:

```
9956
            \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{%}
9957
                \LWR@tdaddstyle%
                border-left: 1px solid \LWR@vertruleHTMLcolor%
9958
9959
            }{}%
            \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{%
9960
                \LWR@tdaddstyle%
9961
                border-left: 4px double \LWR@vertruleHTMLcolor%
9962
9963
            \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{%
9964
                \LWR@tdaddstyle%
9965
                border-left: 1px dashed \LWR@vertruleHTMLcolor%
9966
            }{}%
            \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{%
9968
9969
                \LWR@tdaddstyle%
                border-left: 2px dashed \LWR@vertruleHTMLcolor%
9970
            }{}%
9971
```

Right side:

```
\ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{%
9972
                \LWR@tdaddstyle%
9973
                border-right: 1px solid \LWR@vertruleHTMLcolor%
9974
9975
            }{}%
9976
            \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{{%
                \LWR@tdaddstyle%
                border-right: 4px double \LWR@vertruleHTMLcolor%
9978
            }{}%
9979
            \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{%
9980
                \LWR@tdaddstyle%
9981
                border-right: 1px dashed \LWR@vertruleHTMLcolor%
9982
            }{}%
9983
            \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{%
9984
                \LWR@tdaddstyle%
9985
                border-right: 2px dashed \LWR@vertruleHTMLcolor%
9986
9987
            }{}%
        }%
9988
9989 }
```

9990 \newcommand{\LWR@multicoltext}{}

To find multicolumn right trim:

```
9991 \newcounter{LWR@lastmulticolumn}
```

Remember the text to be inserted, and when used remember that a valid column type was found:

```
9994 \renewcommand{\LWR@multicoltext}{%
9995 #6%
9996 \booltrue{LWR@validtablecol}%
9997 }%
```

Expand the preamble and save it.

```
9998 \LWR@expandpreamble{#5}%
9999 \edef\LWR@origmccolspec{\the\@temptokena}%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
10000 \defcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
10001 \defaddtocounter{LWR@lastmulticolumn}{#3}%
10002 \defaddtocounter{LWR@lastmulticolumn}{-1}%
```

Row processing:

```
10003 \LWR@maybenewtablerow%
```

Begin the opening table data tag:

Print the column type and vertical bars:

If this column has a cmidrule, add "rule" to the end of the HTML class tag.

If this position had a "Y" then add "rule" for a horizontal rule:

```
\LWR@subaddcmidruletrim%
10016
10017
                 {%
                      \LWR@getexparray{LWR@trimlrules}%
10018
                          {\arabic{LWR@tableLaTeXcolindex}}%
10019
                 }%
10020
10021
                 {%
                      \LWR@getexparray{LWR@trimrrules}%
10022
                          {\arabic{LWR@lastmulticolumn}}%
10023
10024
                 }%
```

Also add vertical bar class.

```
10025
            \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}%
10026
            \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}%
            \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}%
10027
            \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}%
10028
            \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}%
10029
10030
            \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}%
10031
                 { tvertbarldoubledash}{}%
            \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}%
10032
            \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}%
10033
                 { tvertbarrdoubledash}{}%
10034
```

Close the class tag's opening quote:

```
10035 \textquotedbl{}%
10036 \LWR@tdstartstyles%
```

Style for vertical position:

```
10037
             \IfValueT{#1}{% vpos?
10038
                  \ifstrequal{#1}{b}%
10039
                      {%
                           \LWR@tdaddstyle%
10040
                          \LWR@print@mbox{vertical-align:bottom}%
10041
                      }{}%
10042
                  \ifstrequal{#1}{t}%
10043
                      {%
10044
                           \LWR@tdaddstyle%
10045
                           \LWR@print@mbox{vertical-align:top}%
10046
                      }{}%
10047
10048
             }% vpos?
```

Style for row colors:

10049 \LWR@addtabularrowcolor%

Other styles:

```
10050
                                                                                   \LWR@addcmidrulewidth%
                                                                                   \LWR@addcdashline%
 10051
                                                                                   \LWR@addtabularhrulecolor%
 10052
 10053
                                                                                   \LWR@addmulticolvertrulecolor%
10054
                                                                                   \LWR@addformatwpalignment{\LWR@origmccolspec}%
10055
                                                                                  \LWR@tdendstyles%
                                                       }% end of the opening table data tag
10056
                                                        \boolfalse{LWR@intabularmetadata}%
10057
                                                       \label{localization} $$ LWR@printmccoldata $$ LWR@printmccoldata
10058
10059 }
```

75.22.3 Multicolumn

```
 \label{localization} $$ \C (numcols) $ {\alignment} $ {\text} $$ $$ 10060 \NewDocumentCommand{\LWR@htmlmulticolumn}_{m m +m}% $$ 10061 f%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
10062 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}%
```

Create the multicolumn tag:

```
10063 \LWR@domulticolumn{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#3}%
```

Move to the next LATEX column:

```
10064 \defaddtocounter{LWR@tableLaTeXcolindex}{#1}%
10065 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or! columns for this cell:

```
10066 \booltrue{LWR@skipatbang}%
10067 }
```

75.22.4 Longtable captions

longtable captions use \multicolumn.

Per the caption package. User-redefinable float type.

```
10068 \providecommand*{\LTcaptype}{table}
```

```
\LWR@longtabledatacaptiontag * [\langle toc\ entry \rangle] \{\langle caption \rangle\}
```

```
10069 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m} 10070 {%
```

Remember the latest name for \nameref:

```
10071 \IfValueTF{#2}{% optional given?}
10072 \ifblank{#2}% optional empty?
10073 {\LWR@setlatestname{#3}}% empty
10074 {\LWR@setlatestname{#2}}% given and non-empty
10075 }% optional given
10076 {\LWR@setlatestname{#3}}% no optional
```

Create a multicolumn across all the columns:

Figure out how many extra \mbox{HTML} columns to add for @ and ! columns found between the first and the last column:

```
10077 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}%
```

Create the multicolumn tag. The caption will be centered by the css caption class.

Star version, show a caption but do not make a LOT entry:

```
10083
         {% yes star
10084
             \LWR@figcaption%
10085
             \LWR@isolate{#3}%
             \endLWR@figcaption%
10086
         }%
10087
10088
        {% No star:
   Not the star version:
   Don't step the counter if \caption[]{A caption.}
             \ifbool{LWR@starredlongtable}%
10089
10090
             {%
                 \ifblank{#2}% TOC entry
10091
                 {}%
10092
                 {%
10093
                      \refstepcounter{\LTcaptype}%
10094
10095
                      \protected@edef\@currentlabel{%
                          \@nameuse{p@\LTcaptype}\@nameuse{the\LTcaptype}%
10096
                      }%
10097
                 }%
10098
             }{}%
10099
   Create an HTML caption. Afterwards, maybe make a LOT entry.
10100
             \LWR@figcaption%
             \LWR@isolate{\@nameuse{fnum@\LTcaptype}}%
10101
10102
             \CaptionSeparator%
10103
             \LWR@isolate{#3}%
10104
             \endLWR@figcaption%
   See if an optional caption was given:
             \ifblank{#2}% TOC entry empty
10105
   if the optional caption was given, but empty, do not form a ToC entry
10106
             {}%
   If the optional caption was given, but might only be []:
             {% TOC entry not empty
10107
                 \IfNoValueTF{#2}% No TOC entry?
10108
   The optional caption is []:
                 {% No TOC entry
10109
                      \addcontentsline%
10110
```

```
{\@nameuse{ext@\LTcaptype}}%
10111
10112
                {\LTcaptype}%
10113
                {%
                   \protect\numberline%
10114
              10115
                   {\ignorespaces \LWR@isolate{#3}\protect\relax}%
10116
10117
10118
             }% end of No TOC entry
```

The optional caption has text enclosed:

```
10119
                 {% yes TOC entry
10120
                      \addcontentsline%
10121
                      {\@nameuse{ext@\LTcaptype}}%
10122
                      {\LTcaptype}%
10123
                      {%
                          \protect\numberline%
10124
10125
                   {\LWR@isolate{\@nameuse{p@\LTcaptype}}\@nameuse{the\LTcaptype}}}%
                          {\ignorespaces \LWR@isolate{#2}\protect\relax}%
10126
                     }%
10127
                 }% end of yes TOC entry
10128
             }% end of TOC entry not empty
10129
         }% end of no star
10130
```

Skip any trailing @ or! columns for this cell:

```
10131 \booltrue{LWR@skipatbang}%
10132 }% end of \LWR@domulticolumn
10133 \defaddtocounter{LWR@tableLaTeXcolindex}{\value{LWR@tabletotalLaTeXcols}}%
10134 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}
10135
10136}
```

75.22.5 Counting HTML tabular columns

The LATEX specification for a table includes a number of columns separated by the & character. These columns differ in content from line to line. Additional virtual columns may be specified by the special @ and ! columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, @ and ! columns are placed into their own tabular columns. Thus, a LATEX \multicolumn command may span several additional @ and ! columns in HTML output. These additional columns must be added to the total number of columns spanned by an HTML multi-column data cell.

```
10137 \newcounter{LWR@tabhtmlcolindex}
10138 \newcounter{LWR@tabhtmlcolend}
10139 \newcounter{LWR@tabhtmlcoltotal}
```

\LWR@subtabularhtmlcolumns $\{\langle index \rangle\}$

Factored from \LWr@tabularhtmlcolumns, which follows.

```
10140 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the @ specification for this column:

```
\label{localize} $$10141 \qquad \edef\LWR@atbangspec{\LWR@getexparray{LWR@colatspec}{\#1}}\%$
```

If the @ specification is not empty, add to the count:

```
10142 \ifdefempty{\LWR@atbangspec}%
10143 {}%
10144 {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the! columns:

```
10145 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colbangspec}{#1}}%
10146 \ifdefempty{\LWR@atbangspec}%
10147 {}%
10148 {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
10149}
```

\LWR@tabularhtmlcolumns $\{\langle starting L^ATEX column \rangle\} \{\langle number L^ATEX columns \rangle\}$

Compute the total number of HTML columns being spanned, considering the starting LATEX table column and the number of LATEX tabular columns being spanned. Any @ and ! columns within this span are included in the total count. The resulting number of HTML columns is returned in the counter LWR@tabhtmlcoltotal.

```
10150 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the LATEX span, to which additional @ and ! columns may be added:

```
10151 \defcounter{LWR@tabhtmlcolindex}{#1}%
10152 \defcounter{LWR@tabhtmlcoltotal}{#2}%
10153 \defcounter{LWR@tabhtmlcolend}{#1}%
10154 \defaddtocounter{LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
10155 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{=}{1}{%
10156 \LWR@subtabularhtmlcolumns{leftedge}%
10157 }{}%
```

Walk across the LATEX columns looking for @ and ! columns:

```
\whileboolexpr{%
10158
10159
             test {%
             \ifnumcomp{\value{LWR@tabhtmlcolindex}}{<\\value{LWR@tabhtmlcolend}}%
10160
             }%
10161
        }%
10162
10163
             \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
10164
10165
             \defaddtocounter{LWR@tabhtmlcolindex}{1}%
10166
        }% whiledo
10167 }
```

10168 \end{warpHTML}

75.23 Multirow if not loaded

A default defintion in case multirow is not loaded. This is used during table parsing.

```
10169 \begin{warpHTML}
10170 \newcommand{\multirow}[2][c]{}
10171 \end{warpHTML}
```

75.24 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a lateximage.

See section 433 for the HTML versions.

```
for HTML & PRINT: 10172 \begin{warpall}
```

```
 \begin{tabular}{ll} $$ \mathbf{(1:cols)} {\langle 2:halign\rangle} [\langle 3:vpos\rangle] {\langle 4:numrows\rangle} [\langle 5:bigstruts\rangle] {\langle 6:width\rangle} [\langle 7:fixup\rangle] {\langle 8:text\rangle} $$ \end{tabular}
```

For discussion of the use of \DeclareExpandableDocumentCommand, see: https://tex.stackexchange.com/questions/168434/problem-with-abbreviation-of-multirow-and-multicolumn-latex

\AtBeginDocument to adjust after the user may have loaded multirow, which requires several tests to determine which version is loaded and thus which options are available.

```
10173 \AtBeginDocument{
```

\@ifundefined{@xmultirow} determines if multirow was never loaded.

Null action if not loaded:

\IfPackageLoadedTF{multirow} determines if v2.0 or later of multirow was used, which included the \ProvidesPackage macro.

The print version:

```
10181 \IfPackageLoadedTF{multirow}{% v2.0 or newer
10182 \IfPackageAtLeastTF{multirow}{2016/09/01}% 2016/09/27 for v2.0
10183 {% v2.0+:
10184 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
        \{+m +m +O\{c\} +m +O\{0\} +m +O\{0pt\} +m\}\%
10185
        {\multicolumn{#1}{#2}{\multirow[#3]{#4}[#5]{#6}[#7]{#8}}}
10186
10187 }
10188 {% loaded but older, probably not executed:
10189 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
        \{+m + m + O\{c\} + m + O\{0\} + m + O\{0pt\} + m\}\%
        {\multicolumn{#1}{#2}{\multirow{#4}[#5]{#6}[#7]{#8}}}%
10191
10192 }
10193 }% packageloaded{multirow}
```

If not \IfPackageLoadedTF{multirow} but \@xmultirow is defined, then this must be v1.6 or earlier, which did not \ProvidesPackage{multirow}, and did not have the vposn option.

```
10194 {% v1.6 or older did not \ProvidePackage
```

```
10195 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
         \{+m + m + 0\{c\} + m + 0\{0\} + m + 0\{0pt\} + m\}\%
10197
         {\multicolumn{#1}{#2}{\multirow{#4}[#5]{#6}[#7]{#8}}}%
10198 }
10199
10200 }% \@ifundefined{@xmultirow}
10202 \providecommand*{\multicolumnrow}{\LWR@print@multicolumnrow}
10203
10204}% AtBeginDocument
10205 \end{warpall}
```

Utility macros inside a table

```
for HTML output: 10206 \begin{warpHTML}
```

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
10207 \newcommand*{\LWR@donothing}{}
```

In case array is not loaded:

```
10208 \let\firsthline\relax
10209 \let\lasthline\relax
10210 \newcommand*{\firsthline}{}
10211 \newcommand*{\lasthline}{}
```

In case bigdelim is not loaded:

```
10212 \newcommand*{\ldelim}{}
10213 \newcommand*{\rdelim}{}
10214 \end{warpHTML}
```

Special-case tabular markers

```
for HTML & PRINT: 10215 \begin{warpall}
```

\TabularMacro Place this just before inserting a custom macro in a table data cell. Doing so tells lwarp not to automatcally start a new HTML table data cell yet. See section 8.10.1.

```
10216 \newcommand*{\TabularMacro}{}
10217 \end{warpall}
```

\ResumeTabular Used to resume tabular entries after resuming an environment.

environment

tabular inside another When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing enviroment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabular as follows. This is ignored in print mode.

```
\StartDefiningTabulars % (& is used in a definition)
                     \newenvironment{outerenvironment}
                     {
                       \tabular{cc}
                       left & right \\
                     }
                     {
                        \TabularMacro\ResumeTabular
                       left & right \\
                       \endtabular
                     }
                     \StopDefiningTabulars
for HTML output: 10218 \begin{warpHTML}
              10219 \newcommand*{\ResumeTabular}{%
                      \boolfalse{LWR@exitingtabular}%
              10221
                      \boolfalse{LWR@tabularmutemods}%
                      10222
              10223
                      \LWR@getmynexttoken%
              10224 }
              10225 \end{warpHTML}
for PRINT output: 10226 \begin{warpprint}
              10227 \newcommand*{\ResumeTabular}{}
              10228 \end{warpprint}
```

75.27 Checking for a new table cell

for HTML output: 10229 \begin{warpHTML}

\LWR@tabledatacolumntag Open a new HTML table cell unless the next token is for a macro which does not create data, such as \hline, \toprule, etc:

```
10230 \newcommand*{\LWR@tabledatacolumntag}%
10231 {%
10232 \LWR@traceinfo{LWR@tabledatacolumntag}%
```

\show\LWR@mynexttoken to see what tokens to look for

If not any of the below, start a new table cell:

```
10233 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumntag%
```

If find \end, exit the tabular:

longtable can have a caption in a cell

```
10239 \ifdefequal{\LWR@mynexttoken}{\caption}%
10240 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

Look for other things which would not start a table cell:

```
\ifdefequal{\LWR@mynexttoken}{\multicolumn}%
10241
10242
           {\global\let\LWR@mynextaction\LWR@donothing}{}%
10243
       \ifdefequal{\LWR@mynexttoken}{\multirow}%
           10244
       \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
10245
           {\cline{Converse} \{\cline{Converse} \} \} % }
10246
       \ifdefequal{\LWR@mynexttoken}{\noalign}%
10247
           {\global\let\LWR@mynextaction\LWR@donothing}{}%
10248
```

If an \mrowcell, this is a cell to be skipped over:

```
10249 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
10250 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

If an \mcolrowcell, this is a cell to be skipped over:

10251 10252	\ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
10253 10254	\ifdefequal{\LWR@mynexttoken}{\TabularMacro}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10255 10256	\ifdefequal{\LWR@mynexttoken}{\hline}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10257 10258	\ifdefequal{\LWR@mynexttoken}{\firsthline}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10259 10260	\ifdefequal{\LWR@mynexttoken}{\lasthline}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10261 10262	\ifdefequal{\LWR@mynexttoken}{\toprule}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10263 10264	\ifdefequal{\LWR@mynexttoken}{\midrule}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10265 10266	\ifdefequal{\LWR@mynexttoken}{\cmidrule}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10267 10268	\ifdefequal{\LWR@mynexttoken}{\morecmidrules}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10269 10270	\ifdefequal{\LWR@mynexttoken}{\specialrule}% {\global\let\LWR@mynextaction\LWR@donothing}{}%
10271 10272	\ifdefequal{\LWR@mynexttoken}{\cline}% {\global\let\LWR@mynextaction\LWR@donothing}{}%

```
10273
      \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
          {\global\let\LWR@mynextaction\LWR@donothing}{}%
10274
      \ifdefequal{\LWR@mynexttoken}{\hhline}%
10275
          {\global\let\LWR@mynextaction\LWR@donothing}{}%
10276
10277
      \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
10278
          {\global\let\LWR@mynextaction\LWR@donothing}{}%
      \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
10279
          {\global\let\LWR@mynextaction\LWR@donothing}{}%
10280
      10281
          10282
      \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
10283
10284
          \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
10285
          {\global\let\LWR@mynextaction\LWR@donothing}{}%
10286
      \ifdefequal{\LWR@mynexttoken}{\ldelim}%
10287
          10288
10289
      \ifdefequal{\LWR@mynexttoken}{\rdelim}%
10290
          {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

For arydshln:

```
\ifdefequal{\LWR@mynexttoken}{\hdashline}%
10291
      10292
    \ifdefequal{\LWR@mynexttoken}{\cdashline}%
10293
10294
      \ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
10295
      10296
    \ifdefequal{\LWR@mynexttoken}{\lasthdashline}%
10297
      10298
```

Ignore an empty line between rows:

```
10299 \ifdefequal{\LWR@mynexttoken}{\par}%
10300 {%
10301 \global\let\LWR@mynextaction\LWR@donothing%
10302 }{}%
```

No action for an \end token.

Add similar to the above for any other non-data tokens which might appear in the table.

Start the new table cell if was not any of the above:

```
10303 \LWR@traceinfo{LWR@tabledatacolumntag: done, about to do LWR@mynextaction}%
10304 \LWR@mynextaction%
10305 }
```

10306 \end{warpHTML}

75.28 \mrowcell

```
for HTML & PRINT: 10307 \begin{warpall}
```

\mrowcell The user must insert \mrowcell into any \multirow cells which must be skipped.

\text{\text{multirow cells}} This command has no action during print output.

```
10308 \newcommand*{\mrowcell}{}
10309 \end{warpall}
```

75.29 \mcolrowcell

```
for HTML & PRINT: 10310 \begin{warpall}
```

\mcolrowcell The user must insert \mcolrowcell into any \multicolumnrow cells which must multirow cells be skipped. This command has no action during print output.

```
10311 \newcommand*{\mcolrowcell}{}
10312 \end{warpall}
```

75.30 HTML tabular environment

for HTML output: 10313 \begin{warpHTML}

These are default defininitions in case booktabs is not loaded, and are not expected to used, but must exist as placeholders. memoir may have already loaded booktabs.

```
10314 \providecommand*{\toprule}[1][]{\hline}
10315 \providecommand*{\midrule}[1][]{\hline}
10316 \providecommand*{\cmidrule}{\cline}
10317 \providecommand*{\bottomrule}[1][]{\hline}
10318 \providecommand*{\addlinespace}[1][]{}
10319 \providecommand*{\morecmidrules}{}
10320 \providecommand*{\specialrule}[3]{\hline}
```

\noalign $\{\langle text \rangle\}$ Redefined for use inside tabular.

```
10321 \LetLtxMacro\LWR@orignoalign\noalign
10322
10323 \newcommand{\LWR@tabularnoalign}[1]{%
10324
        \advance\rownum\m@ne%
        \LetLtxMacro\LWR@save@xcolorrowHTMLcolor\LWR@xcolorrowHTMLcolor%
10325
        \renewcommand*{\LWR@xcolorrowHTMLcolor}{}%
10326
10327
        \multicolumn{\value{LWR@tabletotalLaTeXcols}}{l}{#1} \\
        \LetLtxMacro\LWR@xcolorrowHTMLcolor\LWR@save@xcolorrowHTMLcolor%
10328
        % \@rowc@lors%
10329
        \LWR@getmynexttoken%
10330
10331 }
```

\LWR@HTMLhline The definition of \hline depends on whether tabls has been loaded. If so, optional space below the line may be specified, but will be ignored.

```
10332 \AtBeginDocument{
             10333
             10334 \IfPackageLoadedTF{lwarp-tabls}
             10335 {
                      \newcommand*{\LWR@HTMLhline}[1][]{%
             10336
             10337
                           \ifbool{FormatWP}%
                               {\LWR@docmidrule{1-\arabic{LWR@tabletotalLaTeXcols}}}%
             10338
                               {\defaddtocounter{LWR@hlines}{1}}%
             10339
                           \LWR@getmynexttoken}%
             10340
             10341 }
             10342 {
                      \newcommand*{\LWR@HTMLhline}{%
             10343
                           \ifbool{FormatWP}%
             10344
                               {\LWR@docmidrule{1-\arabic{LWR@tabletotalLaTeXcols}}}%
             10345
                               {\defaddtocounter{LWR@hlines}{1}}%
             10346
             10347
                           \LWR@getmynexttoken}%
             10348 }
             10349
             10350 }% AtBeginDocument
\LWR@HTMLcline \{\langle columns \rangle\}
             10351 \NewDocumentCommand{\LWR@HTMLcline}{m}%
             10352 {%
             10353
                      \LWR@docmidrule{#1}%
             10354
                      \LWR@mavbenewtablerow%
             10355
                      \LWR@getmynexttoken%
             10356 }%
```

\LWR@tabular@warpprintonly $\{\langle contents \rangle\}$

Only process the contents if producing printed output. Modified inside a tabular to grab the next token.

```
10357 \newcommand{\LWR@tabular@warpprintonly}[1]{%
10358 \ifbool{warpingprint}{#1}{}%
10359 \LWR@getmynexttoken%
10360 }
```

\LWR@nullifyNoAutoSpacing For babel-french, turn off auto spacing at the start of the tabular, then nullify the autospacing commands inside the tabular, since they were not compatible with the tabular parsing code for each cell, which uses xstring.

```
10361 \AtBeginDocument{
10362 \@ifundefined{NoAutoSpacing}%
10363 {% no babel-french
        \newcommand*{\LWR@nullifyNoAutoSpacing}{}
10365 }% no babel-french
10366 {% yes babel-french
        \newcommand*{\LWR@nullifyNoAutoSpacing}{%
10367
             \NoAutoSpacing%
10368
10369
             \renewcommand*{\NoAutoSpacing}{}%
             \renewcommand*{\LWR@FBcancel}{}%
10370
10371
        }
```

```
10372 }% yes babel-french
10373 }% AtBeginDocument
```

tabular (env.) <direction> [<vertposition>] {<colspecs>}

The <direction> is from plext for Japanese documents, and is ignored.

```
10374 \StartDefiningTabulars
10375
10376 \NewDocumentCommand{\LWR@HTML@@tabular}{d<> o m}
10377 {%
10378 \LWR@traceinfo{LWR@HTML@@tabular started}%
```

In LATEX, a tabular may be placed inside a minipage, but in HTML a may not be inside a . Since there may be several nested s, with an unknown number of other objects between, it is hard to undo all these s before the then redo them after. The broswer probably compensates for this situation, but formatting may be lost inside the because several things are neutralized inside a . Furthermore, in the HTML output, the entire is placed on a single line of HTML code, since the line breaking commands are neutralized inside a . Since this is such a sloppy situation, a warning is issued here instructing the user to please isolate the to print-only.

```
10379 \LWR@spanwarnformat{tabular}%
10380 \addtocounter{LWR@tabulardepth}{1}%
```

Not yet started a table row:

```
10381 \boolfalse{LWR@startedrow}%
```

Not yet doing any rules:

```
10382 \defcounter{LWR@hlines}{0}%
10383 \defcounter{LWR@hdashedlines}{0}%
10384 \boolfalse{LWR@doingtbrule}%
10385 \boolfalse{LWR@doingcmidrule}%
```

For babel-french, turn off auto spacing one time, then nullify the autospacing commands since were not compatible with the tabular parsing code.

```
10386 \LWR@nullifyNoAutoSpacing%
```

Have not yet found the end of tabular command. Unmute the @ and ! columns.

```
10387 \boolfalse{LWR@exitingtabular}%
10388 \boolfalse{LWR@tabularmutemods}%
```

Not adding final row for the lower border:

```
10389 \boolfalse{LWR@tabularfinalrow}%
```

Error if failed to use \mrowcell or \mcolrowcell when needed.

```
10390 \boolfalse{LWR@usedmultirow}%
10391 \boolfalse{LWR@foundmrowcell}%
```

In case of nesting:

```
10392 \renewcommand*{\LWR@multicoltext}{}%
10393 \booltrue{LWR@intabularmetadata}%
```

New PDF page, unless in a \multirow:

```
10394 \ifbool{LWR@in@multirow@par}%
10395 {\leavevmode\LWR@orignewline}%
10396 {\LWR@forcenewpage}%
```

In case of nesting, locally no longer in a \multirow:

```
10397 \boolfalse{LWR@in@multirow@par}%
```

Create the table tag:

```
10398 \LWR@htmlblocktag{table}%
```

Parse the table columns:

```
10399 \LWR@parsetablecols{#3}%
```

Table col spec is: \LWR@tablecolspec which is a string of llccrr, etc.

Do not place the table inside a paragraph:

```
10400 \LWR@stoppars%
```

Without at least one header cell, some screen readers think that the table is just for page layout, and do not read it as data. Add a hidden row with a single non-empty header cell to tell the screen readers that this is a table of data for the user.

```
10401 \LWR@htmltag{tr style="display:none"}%
10402 \LWR@htmltag{th}.\LWR@htmltag{/th}%
10403 \LWR@htmltag{/tr}%
10404 \LWR@orignewline%
10405 \LWR@forceemptyline%
```

Track column #:

```
10406 \defcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
10407 \global\boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
10408 \LWR@clearmidrules%
```

\\ becomes a macro to end the table row:

```
10409 \LetLtxMacro{\\}{\LWR@tabularendofline}%
```

\warpprintonly inside a tabular must grab the next token.

```
10410 \LetLtxMacro\warpprintonly\LWR@tabular@warpprintonly%
```

The following adjust for colortbl.

```
10411 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
10412 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
10413 \def\LWR@columnHTMLcolor{}%
10414 \def\LWR@crowHTMLcolor{}%
10415 \def\LWR@cellHTMLcolor{}%
10416 \@rowcolors%
```

The vertical rules are set to the color active at the start of the tabular. \arrayrulecolor will then affect horizontal rules inside the tabular, but not the vertical rules.

```
10417 \ifdefvoid{\LWR@ruleHTMLcolor}%
10418 {\edef\LWR@vertruleHTMLcolor{black}}%
10419 {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%
```

Tracking the depth of cell color <div>s:

```
10420 \defcounter{LWR@cellcolordepth}{0}%
```

The following may appear before a data cell is created, so after doing their actions, we look ahead with \LWR@getmynextoken to see if the next token might create a new data cell:

The optional parameter for \hline supports the tabls package.

```
10421
        \LWR@traceinfo{LWR@@HTML@tabular: redefining macros}%
        \LetLtxMacro\noalign\LWR@tabularnoalign%
10422
        \LetLtxMacro\hline\LWR@HTMLhline%
10423
        \LetLtxMacro\cline\LWR@HTMLcline%
10424
        \DeclareDocumentCommand{\hdashline}{o}{%
10425
10426
             \ifbool{FormatWP}%
10427
                 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
10428
                 {\defaddtocounter{LWR@hdashedlines}{1}}%
10429
             \LWR@getmynexttoken%
10430
        }%
        \DeclareDocumentCommand{\cdashline}{m}{%
10431
             \LWR@docdashline{##1}\LWR@getmynexttoken%
10432
        }%
10433
        \DeclareDocumentCommand{\firsthdashline}{o}{%
10434
             \ifbool{FormatWP}%
10435
                 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
10436
                 {\defaddtocounter{LWR@hdashedlines}{1}}%
10437
             \LWR@getmynexttoken%
10438
        }%
10439
        \DeclareDocumentCommand{\lasthdashline}{o}{%
10440
             \ifbool{FormatWP}%
10441
                 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
10442
                 {\defaddtocounter{LWR@hdashedlines}{1}}%
10443
             \LWR@getmynexttoken%
10444
        }%
10445
```

The following create data cells and will have no more data in this cell, so we do not want to look ahead for a possible data cell, so do not want to use \LWR@getmynexttoken.

```
10446
         \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
10447
         \renewcommand*{\mrowcell}{%
             \LWR@maybenewtablerow%
10448
             \LWR@tabularleftedge%
10449
             \booltrue{LWR@skippingmrowcell}%
10450
             \booltrue{LWR@foundmrowcell}%
10451
10452
         }%
         \renewcommand*{\mcolrowcell}{%
10453
             \LWR@maybenewtablerow%
10454
             \booltrue{LWR@skippingmcolrowcell}%
10455
10456
             \booltrue{LWR@foundmrowcell}%
10457
         }%
         \verb|\LetLtxMacro\caption\LWR@longtable data caption tag \%| \\
10458
```

Reset for new processing:

Set & for its special meaning inside the tabular:

```
10464 \StartDefiningTabulars%
10465 \protected\gdef&{\LWR@tabularampersand}%
```

Locally force any minipages to be fullwidth, until the end of the tabular:

```
10466 \booltrue{LWR@forceminipagefullwidth}%
```

Nest one level deeper of tabular paragraph handling:

```
10467 \addtocounter{LWR@tabularpardepth}{1}%
```

Look ahead for a possible table data cell:

```
10468 \LWR@traceinfo{LWR@dHTML@tabular: about to LWR@getmynexttoken}% 10469 \LWR@getmynexttoken% 10470 }%
```

Ending the environment:

```
10471 \newcommand*{\LWR@HTML@endtabular}
10472 {%
10473 \LWR@traceinfo{LWR@HTML@endtabular}%
```

Unnest one level of tabular paragraph handling:

```
10474 \addtocounter{LWR@tabularpardepth}{-1}%
```

Finish a row which is not yet done:

```
10475 \ifboolexpr{%
```

```
10476
             test {%
                 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}%
10477
10478
                      {\value{LWR@tabletotalLaTeXcols}}
10479
             } or %
10480
             (%
                 bool{LWR@intabularmetadata} and%
10481
                 not bool{LWR@tabularcelladded} and%
10482
                 test {%
10483
                      \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}%
10484
                          {\value{LWR@tabletotalLaTeXcols}}%
10485
10486
                 }%
10487
             )%
10488
        }%
10489
         {%
10490
             \booltrue{LWR@tabularfinalrow}%
10491
             \LWR@tabularfinishrow%
             \boolfalse{LWR@tabularfinalrow}%
10492
         }%
10493
         {%
10494
             \LWR@closetabledatacell%
10495
         3%
10496
         \ifbool{LWR@startedrow}%
10497
             {\LWR@htmltag{/tr}\LWR@orignewline}%
10498
10499
             {}%
```

xcolor row color support:

```
10500 \@rowc@lors%

10501 \LWR@htmlblocktag{/table}%
10502 \boolfalse{LWR@intabularmetadata}%
```

Unnest one level of tabular:

```
\label{loss} $$ \add to counter\{LWR@tabulardepth\}\{-1\}\%$
```

Restore & to its usual meaning:

```
10504 \ifnumequal{\value{LWR@tabulardepth}}{0}{%
10505 \protected\gdef&{\LWR@origampmacro}%
10506 \StopDefiningTabulars%
10507 }{}%
```

Error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```
\ifbool{LWR@usedmultirow}{%
10508
             \ifbool{LWR@foundmrowcell}%
10509
                 {\relax}%
10510
10511
                 {%
                     \PackageError{lwarp}%
10512
10513
                  When using \protect\multirow, \protect\multicolumnrow, \MessageBreak
10514
10515
                         or the bigdelim package,\MessageBreak
                  place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak
10516
                         in empty cells which are to be skipped.\MessageBreak
10517
                         See the Lwarp package documentation:\MessageBreak
10518
```

```
"Special cases and limitations" -> "Tabular"
10519
                      }%
10520
10521
                      {%
                          See the Lwarp package documentation:\MessageBreak
10522
                          "Special cases and limitations" -> "Tabular".
10523
10524
                      }%
                 }%
10525
        }{}%
10526
        \LWR@traceinfo{LWR@HTML@endtabular finished}%
10527
10528 }
10529
10530 \csletcs{LWR@HTML@endtabular*}{LWR@HTML@endtabular}
10532 \StopDefiningTabulars
   siunitx may redefine tabular, so set the following later:
10533 \AtBeginDocument{
        \LetLtxMacro\LWR@origendtabular\endtabular
10534
10535
        \csletcs{LWR@origendtabular*}{endtabular*}
        \LWR@formatted{@tabular}
10536
10537
         \LWR@formatted{endtabular}
        \LWR@formatted{endtabular*}
10538
10539 }
10540 \end{warpHTML}
```

76 Cross-references

Sectioning commands have been emulated from scratch, so the cross-referencing commands are custom-written for them. Emulating both avoids several layers of patches.

*_html.aux (*file*) A new entry in *_html.aux is used to remember section name, file, and lateximage depth and number for each label:

Table 16 shows the data structures related to cross-referencing.

for HTML output: 10541 \begin{warpHTML}

76.1 Setup

\@currentlabelname To remember the most recently defined section name, description, or caption, for \nameref.

```
\LWR@stripperiod \{\langle text \rangle\} [\langle . \rangle]
```

Table 16: Cross-referencing data structures

```
Original IATEX:
                                                                    (print and HTML)
      \refstepcounter: Steps the couunter and sets \@currentlabel.
      \@currentlabel: \p@<ctr>\the<ctr> Updated by \refstepcounter.
      \label: Writes to the .aux file:
           \newlabel{<label>}{{\@currentlabel}{\thepage}{name}{Href}{()}}
      \newlabel: When the .aux file is read, sets \r@<label>.
      \r@<label>: Set to: {\@currentlabel}{\thepage}{name}{Href}{}
      \ref: Returns the first part of \re<label>.
      \pageref: Returns the second part of \r@<label>.
Added by lwarp:
                                                                         (HTML only)
      \label: Adds HTML tags (section 76.3), and another .aux entry (section 76.2) for
           \r@<label>@lwarp. (nameref changes to \ref, etc. are undone
           \AtBeginDocument.)
      \newlabel: Unchanged. When the .aux file is read, used to set \r@<label>, and
           then \r@<label>@lwarp.
      \re<label>@lwarp: Set to {{section_name}{file_name}{depth}{number}}:
           \LWR@nameref: The section or object name for this label.
           \LWR@currentautosecpageref: The LWR@currentautosecpage for this label.
           \LWR@htmlfileref: The filenumber or name for this label.
           \LWR@lateximagedepthref: The lateximagedepth for this label.
           \LWR@lateximagenumberref: The lateximagenumber for this label.
      \nameref: Emualted from hyperref for lwarp. See section 76.4.
      \ref and \nameref: Adds HTML tags. See section 76.4.
Added by amsmath:
                                                                    (print and HTML)
      \label: Execution is delayed until the math environment is completed.
      \ltx@label: LATEX \label, (HTML: patched by lwarp,) later patched by cleveref.
Added by cleveref:
                                                                    (print and HTML)
      \refstepcounter: Added: sets \cref@currentlabel.
      \cref@currentlabel: (<type>=<ctr> unless an alias is used):
           [<type>][\arabic{<ctr>}][<parent ctrs>]{\p@<ctr>\the<ctr>}
           Also see section 60.4 for use with footnotes.
      \label: Also writes to the .aux file:
           \newlabel{<label>@cref}{{\cref@currentlabel}{\thepage}}
      \newlabel: Unchanged. When the .aux file is read, sets \r@<label>@cref.
      \r@<label>@cref: Set to: {{\cref@currentlabel}{\thepage}}
      Utility functions: See \cref@getlabel, \cref@gettype, \cref@getcounter,
           \cref@getprefix.
      Cross-referencing names: \crefname and \Crefname assign human-readable
           names for references to this counter type.
Additionally patched by lwarp:
                                                                         (HTML only)
      \cref, etc.: Modified for lwarp. See section 203.
      \label inside math: See section 83.7.1.
Footnotes: See \noteentry in section 60.4.
```

Removes a trailing period.

```
10543 \def\LWR@stripperiod#1.\ltx@empty#2\@nil{#1}%
```

```
\LWR@setlatestname \{\langle object \ name \rangle\}
```

Removes \label, strips any final period, and remembers the result.

```
10544 \newcommand*{\LWR@setlatestname}[1]{%
```

Remove \label and other commands from the name, the strip any final period. See gettitlestring.

```
10545 \GetTitleStringExpand{#1}%
10546 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
10547 \edef\@currentlabelname{%
10548 \expandafter\LWR@stripperiod\@currentlabelname%
10549 \ltx@empty.\ltx@empty\@nil%
10550 }%
```

76.2 New lwarp labels.

*_html.aux (*file*) A new entry in *_html.aux is used to remember section name, file, and lateximage depth and number for each label:

See:

```
http://tex.stackexchange.com/questions/57194/
extract-section-number-from-equation-reference
```

```
\LWR@setref \{\langle args\ list \rangle\} \{\langle selector \rangle\} \{\langle label \rangle\}
```

\@setref without the \null (\hbox), and without the warning messages. Each caused problems with lwarp references. The regular reference will cause the warning.

```
10552 \def\LWR@setref#1#2#3{%

10553 \ifx#1\relax%

10554 ??%

10555 \else%

10556 \expandafter#2#1%

10557 \fi}
```

\LWR@nameref $\{\langle label \rangle\}$ Returns the section name for this label:

```
10558 \newcommand*{\LWR@nameref}[1]{%
10559    \begingroup%
10560    \LWR@nullifyfootnotes%
10561    \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@firstoffive{#1}%
10562    \endgroup%
10563 }
```

```
\verb|\LWR@currentautosecpageref| \{\langle label \rangle\} \ Returns \ the \ LWR@currentautosecpage \ for \ this \ label:
```

```
10564 \newcommand*{\LWR@currentautosecpageref}[1]{%
10565 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@secondoffive{#1}%
10566 }
```

\LWR@htmlfileref $\{\langle label \rangle\}$ Returns the file number or name for this label:

```
\label{localize} $$10567 \end{tert} [1]_{% $$10568 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@thirdoffive{#1}% $$10569$$}
```

\LWR@lateximagedepthref $\{\langle label \rangle\}$ Returns the lateximagedepth for this label:

```
10570 \newcommand*{\LWR@lateximagedepthref}[1]{%
10571 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fourthoffive{#1}%
10572 }
```

\LWR@lateximagenumberref $\{\langle label \rangle\}$ Returns the lateximagenumber for this label:

```
10573 \newcommand*{\LWR@lateximagenumberref}[1]{%
10574 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fifthoffive{#1}%
10575 }
```

\LWR@write@lwarplabel $\{\langle label \rangle\}$ Sanitize the name and then creates the label:

```
10576 \newcommand*{\LWR@write@lwarplabel}[1]{%
         \LWR@traceinfo{LWR@write@lwarplabel !#1!}%
10577
         \LWR@setlatestname{\@currentlabelname}%
10578
             \@bsphack%
10579
             \protected@write\@auxout{}%
10580
                 {%
10581
                      \string\newlabel{#1@lwarp}{%
10582
                          {\@currentlabelname}%
10583
                          {\theLWR@currentautosecpage}%
10584
10585
                          {%
                               \ifbool{FileSectionNames}%
10586
                                   {\LWR@thisfilename}%
10587
                                   {\arabic{LWR@htmlfilenumber}}%
10588
                          }%
10589
                          {\arabic{LWR@lateximagedepth}}%
10590
                          {\arabic{LWR@lateximagenumber}}%
10591
                      }%
10592
                 }%
10593
10594
             \@esphack%
10595 }
```

76.3 Labels

\LWR@label@subcreatetag Creates the tag from \LWR@sanitized.

```
10596 \newcommand*{\LWR@label@subcreatetag}{%
10597 \LWR@htmltag{a \LWR@print@mbox{id=\textquotedbl\LWR@sanitized\textquotedbl}}%
10598 \LWR@htmltag{/a}%
10599 }
```

\LWR@label@inmathcomment

```
10600 \newcommand*{\LWR@label@inmathcomment}{%
10601 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
10602 {%
```

The combined LATEX & HTML label is printed in a \mbox field:

```
10603 \mbox{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
\label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
```

Temporarily end the HTML comment, insert the LATEX & HTML label, then resume the HTML comment. \@firstofone is required to remove extra braces introduced by the amsmath package.)

```
\LWR@htmlclosecomment%
10605
                  \LWR@label@subcreatetag%
10606
                  \LWR@htmlopencomment%
10607
             }% mbox
10608
         }% mathjax
10609
10610
         {%
10611
              \LWR@label@subcreatetag%
10612
         }%
10613 }
```

\LWR@label@createtag $\{\langle label \rangle\}$ Creates an HTML id tag.

Used by \LWR@new@label and \hyperdef.

\detokenize is used to allow underscores in the labels.

```
10614 \newcommand*{\LWR@label@createtag}[1]{%
10615 \LWR@traceinfo{LWR@label@createtag !#1!}%
```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```
10616 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
10617 {}%
10618 {% not lateximage
```

If not doing a lateximage, create an HTML ID tag.

```
\LWR@sanitize{#1}%
10619
             \ifbool{LWR@insidemathcomment}%
10620
10621
             {% inside HTML math comment
10622
                 \LWR@label@inmathcomment%
             }% inside HTML math comment
10623
             {% not inside HTML math comment
10624
10625
                 \ifbool{LWR@doingstartpars}%
10626
                 {% pars allowed
10627
                     \ifbool{LWR@doingapar}%
10628
                     {% par started
                          \LWR@label@subcreatetag%
10629
```

```
10630
                      }% par started
                      {% par not started
10631
                          \LWR@stoppars%
10632
10633
                          \LWR@label@subcreatetag%
10634
                          \LWR@startpars%
                      }% par not started
10635
                 }% pars allowed
10636
                 {% pars not allowed
10637
                          \LWR@label@subcreatetag%
10638
                 }% pars not allowed
10639
10640
             }% not inside HTML math comment
10641
        }% not lateximage
10642 }
```

\LWR@new@label $\{\langle label \rangle\}$

 \label during HTML output when not in svG math mode, removing extra spaces around the label, as done by a regular LATEX $\$ label.

The is also used during a lateximage, including svg math, since the special label handling is required, but \LWR@label@createtag does not generate HTML tags inside a lateximage.

clevereref later encases this to add its own cross-referencing.

nameref patches are undone \AtBeginDocument.

```
10643 \newcommand*{\LWR@new@label}[1]{%
10644 \LWR@traceinfo{LWR@new@label: starting}%
10645 \LWR@traceinfo{LWR@new@label: !#1!}%
10646 % \@bsphack%
```

Create a traditional LATEX label, as modified by cleveref:

```
10647 \LWR@orig@label{#1}%
```

Create a special label which holds the section number, section name, LWR@htmlfilenumber, LWR@lateximagedepth, and LWR@lateximagenumber:

```
10648
        \LWR@traceinfo{%
10649
            LWR@new@label: filesectionnames is %
10650
             \ifbool{FileSectionNames}{true}{false}%
10651
        }%
        \LWR@traceinfo{%
10652
            LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!%
10653
        }%
10654
10655
        \LWR@traceinfo{%
10656
             LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}%
10657
        \LWR@write@lwarplabel{#1}%
10658
        \LWR@label@createtag{#1}%
10659
10660
        % \@esphack%
        \LWR@traceinfo{LWR@new@label: done}%
10661
10662 }
```

76.4 References

\LWR@addlinktitle

```
10663 \newcommand*{\LWR@addlinktitle}{%
10664 \ifdefvoid{\LWR@ThisAltText}{}{ % space
10665 title=\textquotedbl\LWR@ThisAltText\textquotedbl\ % space
10666 \gdef\LWR@ThisAltText{}%
10667 }%
10668 }
```

\LWR@startref $\{\langle label \rangle\}$ (Common code for \ref and \nameref.)

Open an HTML tag reference to a filename, # character, and a label.

```
10669 \newcommand*{\LWR@startref}[1]
10670 {%
10671 \LWR@sanitize{#1}%
10672 \LWR@traceinfo{LWR@startref A: !#1!}%
```

Create the filename part of the link:

Create the destination id:

See if LWR@lateximagedepth is unknown:

```
10678     \LWR@traceinfo{LWR@startref D: !#1!}%
10679     \ifcsundef{r@#1@lwarp}%
```

"??" if LWR@lateximagedepth is unknown, so create a link with an unknown destination:

```
10680 {%

10681 \LWR@traceinfo{LWR@startref D0: ??}%

10682 ??%

10683 }%
```

If LWR@lateximagedepth is known. Use a lateximage if the depth is greater than zero, or a regular link otherwise:

(Using xifthen \ifthenelse here failed in some cases, but etoolbox \ifnumgreater works.)

\detokenize is used to allow underscores in the labels:

```
\LWR@print@mbox{\LWR@sanitized}%
10691
10692
                  }%
10693
         }%
         \LWR@traceinfo{LWR@startref E}%
10694
   Closing quote:
10695
         \textquotedbl%
   Maybe add a title:
         \LWR@addlinktitle%
10696
10697
         }%
10698
         \LWR@traceinfo{LWR@startref F}%
10699 }
```

\LWR@subnewref $\{\langle label \rangle\} \{\langle label \ or \ sub@label \rangle\}$

Factored for the subfig package. Uses the original label for the hyper-reference, but prints its own text, such as "1(b)".

```
10700 \NewDocumentCommand{\LWR@subnewref}{m m}{%  
10701 \LWR@traceinfo{LWR@subnewref #1 #2}%  
10702 \LWR@startref{#1}%  
10703 \LWR@print@ref{#2}%  
10704 \LWR@htmltag{/a}%  
10705 }

\ref * {\label\}
```

\ref is redefined to \LWR@HTML@ref, except inside the text part of a \hyperref, where it is redefined to \LWR@ref@ignorestar.

\LWR@HTML@ref * $\{\langle label \rangle\}$ Create an internal document reference link, or without a link if starred per hyperref.

The HTML version:

```
10706 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
10707
         \LWR@traceinfo{LWR@HTML@ref !#2!}%
10708
         \IfBooleanTF{#1}%
             {\LWR@print@ref{#2}}%
10709
             {\LWR@subnewref{#2}{#2}}%
10710
10711 }
10712
10713 \AtBeginDocument{% **8*
10714 \LWR@formatted{ref}
10715 }
10716
10717 \NewDocumentCommand{\LWR@HTML@Ref}{s m}{%
         \LWR@traceinfo{LWR@HTML@Ref !#2!}%
10719
         \IfBooleanTF{#1}%
             {\LWR@print@Ref{#2}}%
10720
             {\LWR@subnewref{#2}{#2}}%
10721
10722 }
```

```
10723
10724 \AtBeginDocument{% **8*
10725 \LWR@formatted{Ref}
10726 }
```

\LWR@refwithsection * $\{\langle label \rangle\}$

Creates a reference, printing the section number as the text. Used for back references.

```
\label{localize} $$10727 \end{\command{\LWR@refwithsection} s m}{\%}$$ 10728 $$ \LWR@traceinfo{LWR@refwithsection !#2!}%
```

If starred, just use the text without a hyperlink:

```
10729 \IfBooleanTF{#1}%
10730 {\LWR@print@ref{\BaseJobname-autopage-\LWR@currentautosecpageref{#2}}}%
```

If not starred: Check for a reference to the start of the document. (Generated by backref.

Open the reference:

```
10739 \LWR@startref{#2}%
```

Add the text of the link.

Check for and handle an undefined reference:

For a defined reference:

```
10743 {% not ??
```

Set \@tempa to \r@<label>, which is {section number}{page number}{name}{Href}{}.

Check the section number alone:

If the reference has no section number print an asterisk:

If there is a section number, print it:

```
10748
                                                                                                                                                        {%
                                                                                                                                                                     \LWR@print@ref{%
                                       10749
                                       10750
                                                                                                                                        \BaseJobname-autopage-\LWR@currentautosecpageref{#2}%
                                       10751
                                        10752
                                                                                                                                                        }%
                                        10753
                                                                                                                               }% not ??
                                                 Close the reference:
                                                                                                      \LWR@htmltag{/a}%
                                        10754
                                        10755
                                                                                          }% not Doc-Start
                                                                             }% not starred
                                       10756
                                       10757 }
                                                 For MATHJAX:
                                        10758 \CustomizeMathJax{\let\LWRref\ref}
                                        10759 \converged \co
\pagerefPageFor Text for page references.
                                       10760 \newcommand*{\pagerefPageFor}{see }
                                                                                        Create an internal document reference, or just the unlinked number
                     \pageref * \{\langle label \rangle\}
                                                 if starred, per hyperref.
                                       10761 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
                                                                 \IfBooleanTF{#1}%
                                        10762
                                        10763
                                                                             {(\pagerefPageFor\LWR@print@ref{#2})}%
                                        10764
                                                                             {(\cpageref{#2})}%
                                       10765 }
                     \verb|\nameref| \{\langle label \rangle\}|
                                                 nameref may have already defined \nameref. Redefine it here.
                                        10766 \providecommand{\nameref}[1]{}%
                                        10768 \renewrobustcmd*{\nameref}[1]{%
                                        10769
                                                                 \LWR@traceinfo{nameref}%
                                        10770
                                                                 \LWR@startref{#1}%
                                                                 \LWR@traceinfo{nameref B}%
                                        10771
                                                                 \LWR@nameref{#1}%
                                        10772
                                                                 \LWR@traceinfo{nameref C}%
                                        10773
                                                                 \LWR@htmltag{/a}%
                                        10774
                                                                 \LWR@traceinfo{nameref: done}%
                                       10775
```

Nameref $\{\langle label \rangle\}$ In print, adds the page number. In HTML, does not.

Overwrites nameref definition if already defined.

10777 \LetLtxMacro\Nameref\nameref

10776 }

\NR@gettitle $\{\langle text \rangle\}$ From nameref, used by caption.

```
10778 \def\NR@gettitle#1{%
10779 \GetTitleString{#1}%
10780 \let\@currentlabelname\GetTitleStringResult
10781 }
```

76.5 Hyper-references



Note that the code currently only sanitizes the underscore character. Additional characters should be rendered inert as well. See the hyperref.sty definition of \gdef\hyper@normalise for an example.

hyperref (Pkg)



Do not tell other packages that hyperref is emulated. Some packages patch various commands if hyperref is present, which will probably break something, and the emulation already handles whatever may be emulated anyhow.

10782 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it: 10783 % \text{LemulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.}

Emulates hyperref:

\@currentHref Added to support backref.

```
10784 \AtBeginDocument{
10785 \def\@currentHref{\BaseJobname-autopage-\theLWR@previousautopagelabel}%
10786 }
```

\LWR@Linkcatcodes Sets catcodes before processing macros which have hyperlinks as arguments.

```
10787 \newcommand*{\LWR@linkcatcodes}{%
10788 \catcode'\#=12%
10789 \catcode'\%=12%
10790 \catcode'\&=12%
10791 \catcode'\~=12%
10792 \catcode'\_=12%
```

For babel-french:

```
10793 \LWR@hook@processingtags%
10794 }
```

\LWR@linkmediacatcodes Sets catcodes before processing macros which have hyperlinks as arguments. Modified for multimedia links.

```
10795 \newcommand*{\LWR@linkmediacatcodes}{%
10796    \catcode'\#=12%
10797    \catcode'\%=12%
10798    \catcode'\&=12% left alone for splitting flash variables
10799    \catcode'\~=12%
10800    \catcode'\_=12%
```

For babel-french:

```
10801 \LWR@hook@processingtags% 10802 }
```

\LWR@subhyperref $\{\langle \mathit{URL} \rangle\}$

Starts a link for \LWR@hrefb. A group must have been opened first, with nullified catcodes. The text name is printed afterwards, after the group is closed and catcodes restored.

```
10803 \NewDocumentCommand{\LWR@subhyperref}{m}{%
        \LWR@traceinfo{LWR@subhyperref !#1!}%
10804
10805
        \edef\tmpb{\detokenize\expandafter{#1}}%
10806
        \LWR@HTMLsanitize@tmpb%
        \LWR@htmltag{%
10807
            a href=\textquotedbl\tmpb\textquotedbl\ % space
10808
             \LWR@addlinktitle % space
10809
             target=\textquotedbl\_{}blank\textquotedbl\ % space
10810
        }%
10811
10812 }
```

\LWR@subhyperreftext@sanizited $\{\langle text \rangle\}$

Finishes the hyperref for \LWR@hrefb. Catcodes must have been restored already. To be used after \LWR@subhyperref, and after its group has been closed.

```
10813 \newcommand{\LWR@subhyperreftext@sanitized}[1]{%
10814 \edef\tmpb{#1}%
10815 \LWR@HTMLsanitize@tmpb%
10816 \tmpb%
10817 \LWR@htmltag{/a}%
10818 \LWR@ensuredoingapar%
10819 }
```

LWR@subhyperreftext@unsanitized $\{\langle text
angle\}$

Finishes the hyperref for \LWR@hrefb. Catcodes must have been restored already. To be used after \LWR@subhyperref, and after its group has been closed.

```
\label{loss_equation} 10820 \end{\command{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR@subhyperreftext@unsanitized}[1]{\cMR
                                                                                                             10821
                                                                                                                                                            \LWR@htmltag{/a}%
                                                                                                             10822
                                                                                                                                                            \LWR@ensuredoingapar%
                                                                                                             10823
                                                                                                             10824 }
\LWR@subhyperrefclass \{\langle URL \rangle\} \{\langle text \rangle\} \{\langle htmlclass \rangle\}
                                                                                                             10825 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
                                                                                                                                                           \LWR@htmltag{%
                                                                                                             10826
                                                                                                             10827
                                                                                                                                                                                 a % space
                                                                                                             10828
                                                                                                                                                                  href=\textquotedbl\begingroup\@sanitize#1\endgroup\textquotedbl\ % space
                                                                                                             10829
                                                                                                                                                                                  class=\textquotedbl#3\textquotedbl\ % space
                                                                                                                                                                                   \LWR@addlinktitle % space
                                                                                                             10830
                                                                                                                                                           }\LWR@orignewline%
                                                                                                             10831
                                                                                                                                                           #2%
                                                                                                             10832
```

```
10833 \LWR@htmltag{/a}%
10834 \LWR@ensuredoingapar%
10835 }
```

```
\label{eq:local_local_local_local} $$ \LWR@href [\langle options \rangle] {\langle URL \rangle} {\langle text \rangle}$
```

Create a link with accompanying text. The accompanyting text is sanitized for HTML.

```
10836 \DeclareDocumentCommand{\LWR@hrefb}{0{} m}{%
10837 \LWR@ensuredoingapar%
10838 \LWR@subhyperref{#2}%
10839 \endgroup% restore catcodes
```

If use $\LWR@subhyperreftext@sanitized$ here, some forms of text may not expand correctly, and thus break.

```
10840 \LWR@subhyperreftext@unsanitized% takes the following text as an argument
10841 }
10842
10843 \newrobustcmd*{\LWR@href}{%
10844 \begingroup%
10845 \LWR@linkcatcodes%
10846 \LWR@hrefb%
10847 }
```

A version which sanitizes both the URL and the text. Used by \LWR@url.

```
10848 \DeclareDocumentCommand{\LWR@hrefb@sanitized}{0{} m}{%
10849 \LWR@ensuredoingapar%
10850 \LWR@subhyperref{#2}%
10851 \endgroup% restore catcodes
```

Used by \LWR@url to sanitize the text argument before printing.

```
LWR@subhyperreftext@sanitized% takes the following text as an argument
10853 }
10854
10855 \newrobustcmd*{\LWR@href@sanitized}{%
10856 \begingroup%
10857 \LWR@linkcatcodes%
10858 \LWR@hrefb@sanitized%
10859 }
```

```
\LWR@href@partsanitized [\langle options \rangle] \{\langle URL \rangle\} \{\langle text \rangle\}
```

Create a link with accompanying text. The accompanyting text is not sanitized, for use internally with algorithmically derived tags.

```
10860 \DeclareDocumentCommand{\LWR@hrefb@partsanitized}{0{} m}{%
10861 \LWR@ensuredoingapar%
10862 \LWR@subhyperref{#2}%
10863 \endgroup% restore catcodes
10864 \LWR@subhyperreftext@unsanitized% takes the following text as an argument
10865 }
10866
10867 \newrobustcmd*{\LWR@href@partsanitized}{%
```

```
10868 \begingroup%
10869 \LWR@linkcatcodes%
10870 \LWR@hrefb@partsanitized%
10871 }
```

\LWR@nolinkurl $\{\langle \mathit{URL} \rangle\}$

Print the name of the link without creating the link:

```
10872 \newcommand*{\LWR@nolinkurlb}[1]{%
       10873
                 \LWR@ensuredoingapar%
       10874
                 \left\{ \frac{1}{\%} \right\}
                 \LWR@HTMLsanitize@tmpb%
       10875
       10876
                 \tmpb%
       10877
                 \endgroup%
       10878 }
       10879
       10880 \newrobustcmd*{\LWR@nolinkurl}{%
                  \begingroup%
       10881
                  \LWR@linkcatcodes%
       10882
                 \LWR@nolinkurlb%
       10883
       10884 }
\LWR@url \{\langle \mathit{URL} \rangle\}
```

Create a link whose text name is the address of the link.

The url package may redefine \url, so it is \let to \LWR@urlahere and also redefined by lwarp-url.

```
10885 \DeclareDocumentCommand{\LWR@urlb}{m}{%
10886
         \LWR@ensuredoingapar%
10887
         \LWR@href@sanitized{#1}{#1}%
10888
         \endgroup%
10889 }
10890
10891 \newrobustcmd*{\LWR@url}{%
10892
         \begingroup%
         \LWR@linkcatcodes%
10893
         \LWR@urlb%
10894
10895 }
```

 $Factored\ from\ {\tt lateximage}.$

```
10896 \newcommand*{\LWR@subinlineimage}[6]{%
        \begingroup%
10897
        \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
10898
10899
             {\renewcommand*{\LWR@tempone}{}}%
10900
             {\renewcommand*{\LWR@tempone}{role="#6"\LWR@indentHTML}}%
10901
10902
        \ifblank{#1}%
10903
        {%
             \LWR@htmltag{img \LWR@indentHTML
10904
                 src=\textquotedbl#3.#4\textquotedbl \LWR@indentHTML
10905
                 alt=\textquotedbl#3\textquotedbl \LWR@indentHTML
10906
```

```
10907
                 \LWR@tempone
                 style = \texttt{\textquotedbl} $$ \text{\textquotedbl \LWR@indentHTML}$
10908
                 class=\textquotedbl#2\textquotedbl \LWR@orignewline
10909
             }%
10910
         }%
10911
10912
         {%
             \LWR@htmltag{img \LWR@indentHTML
10913
                 src=\textquotedbl#3.#4\textquotedbl \LWR@indentHTML
10914
                 alt=\textquotedbl#1\textquotedbl \LWR@indentHTML
10915
10916
                 \LWR@tempone
10917
                 style=\textquotedbl#5\textquotedbl \LWR@indentHTML
                 class=\textquotedbl#2\textquotedbl \LWR@orignewline
10918
10919
             }%
         }%
10920
         \endgroup%
10921
10922 }
10923 \end{warpHTML}
```

Table 17: Float data structures

For each <type> of float (figure, table, etc.) there exists the following:

counter <type>: A counter called <type>, such as figure, table.

\<type>name: Name. \figurename prints "Figure", etc.

\ext@<type>: File extension. \ext@figure prints "lof", etc.

\fps@<type>: Placement.

\the<type>: Number. \thetable prints the number of the table, etc.

\pe<type>: Parent's number. Prints the number of the [within] figure, etc.

\fnum@<type>: Prints the figure number for the caption.

\<type>name \the<type>, "Figure 123".

\<type>: Starts the float environment. \figure or \begin{figure}

\end<type>: Ends the float environment. \endfigure or \end{figure}

\tf@<ext>: The LATEX file identifier for the output file.

LWR@have<type>: A boolean remembering whether a \listof was requested for a float of this type.

File with extension lo<f,t,a-z>: An output file containing the commands to build the \listof<type> "table-of-contents" structure.

Cross-referencing names: For cleveref's \cref and related, \crefname and \Crefname assign human-readable names for references to this float type.

77 Floats

Floats are supported, although partially through emulation.

Table 17 shows the data structure associated with each <type> of float.

77.1 Float environment

for HTML output: 10924 \begin{warpHTML}

\LWR@floatbegin $\{\langle type \rangle\}\ [\langle placement \rangle]$ Begins a \newfloat environment.

 ${\tt 10925 \ NewDocumentCommand \{ \ LWR@floatbegin \} \{ m \ o \} \{ \% \} }$

Warn if starting a float inside a :

 $\verb| LWR@spanwarninvalid{float}| % \\$

10927 \ifbool{FormatWP}{\newline}{}%

10928 \LWR@stoppars%

There is a new float, so increment the unique float counter:

```
10929 \addtocounter{LWR@thisautoid}{1}%
10930 \booltrue{LWR@freezethisautoid}%
10931 \begingroup%
```

Settings while inside the environment:

```
10932 \LWR@print@raggedright%
```

Open an HTML figure tag. The figure is assigned a class equal to its type, and another class according to the float package style, if used. Note that \csuse returns an empty string if \LWR@floatstyle@<type> is not defined.

```
\LWR@htmltag{%
10933
                                                                                                                    figure id=\textquotedbl%
10934
10935
                                                                                                                                                          \LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}%
                                                                                                                    \textquotedbl\ % space
10936
                                                                                                                    class = \texttt{LWR@floatstyle@#1} \\ \texttt{LWR@floatstyle@floatstyle@#1} \\ \texttt{LWR@floatstyle@#1} \\ \texttt{LWR@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floatstyle@floats
10937
                                                                              }%
10938
                                                                              \ifbool{FormatWP}{%
10939
                                                                                                                    \LWR@orignewline%
10940
                                                                                                                     \LWR@BlockClassWP{}{}{wp#1}%
10941
                                                                              }{}%
10942
```

Update the caption type:

```
10943 \renewcommand*{\@captype}{#1}%
```

Mark the float for a word processor conversion:

After each \LWR@floatbegin, look for \centering, etc next, using \LWR@floatalignment.

10950 }

For koma-script. The following does not work for tables.

```
10951 \AtBeginDocument{
10952
10953 \IfPackageLoadedTF{tocbasic}{
10954
10955 \appto\figure@atbegin{%
10956 \LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment%
10957 }
10958
10959 }{}% tocbasic
10960
10961 }% AtBeginDocument
```

 $\label{thm:cont} $$ \ensuremath{\mbox{\tt Qxfloat}}$ Support packages which create floats directly. $$ \ensuremath{\mbox{\tt Qxdlbfloat}}$$

Look for \centering, etc using \LWR@floatalignment.

```
10962 \AtBeginDocument{
         \def\@xfloat #1[#2]{%
10963
              \label{loss} $$ \LWR@floatbegin{#1}[#2] $
10964
10965
              \LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment%
10966
         \def\@xdblfloat #1[#2]{%
10967
              \LWR@floatbegin{#1}[#2]
10968
              \LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment%
10969
10970
         }
10971 }
```

\LWR@floatend Ends a \newfloat environment.

```
10972 \newcommand*{\LWR@floatend}{%
```

If saw a \centering, finish the center environment:

```
10973 \LWR@endfloatalignment%
```

Mark the float end for a word processor conversion:

Close an HTML figure tag:

```
10980 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
10981 \LWR@htmlelementend{figure}%
10982 \endgroup%
10983 \boolfalse{LWR@freezethisautoid}%
10984 \LWR@startpars%
10985 \ifbool{FormatWP}{\newline}{}%
10986}
```

\end@float Support packages which create floats directly. \end@dlbfloat

```
10987 \AtBeginDocument{
10988 \let\end@float\LWR@floatend
10989 \let\end@dblfloat\LWR@floatend
10990 }
```

77.2 Float tracking

LWR@thisautoid (*Ctr*) A sequential counter for all floats and theorems. This is used to identify the float or theorem then reference it from the List of Figures and List of Tables.

```
10991 \newcounter{LWR@thisautoid}
```

LWR@thisautoidWP (*Ctr*) A sequential counter for all word processor conversion <div>s. This is used to convince LibreOffice to form a frame around this element.

```
10992 \newcounter{LWR@thisautoidWP}
```

LWR@freezethisautoid (bool) Prevents multiple increments of \LWR@thisautoid inside a float.

```
10993 \newbool{LWR@freezethisautoid}
10994 \boolfalse{LWR@freezethisautoid}
```

\LWR@forcenewautoidanchor Adds a new <autoid> anchor.

```
10995 \newcommand*{\LWR@forcenewautoidanchor}{%
         \addtocounter{LWR@thisautoid}{1}%
10996
         \ifbool{LWR@doingapar}%
10997
10998
             \LWR@htmltag{a id=\textquotedbl%
10999
                 \LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}%
11000
                 \textquotedbl\ }% space
11001
11002
             \LWR@htmltag{/a }%
11003
        }%
11004
        {%
11005
             \LWR@stoppars%
11006
             \LWR@htmltag{a id=\textquotedbl%
                 \LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}%
11007
             \textquotedbl\ }% space
11008
             \LWR@htmltag{/a }%
11009
             \LWR@startpars%
11010
        }%
11011
11012 }
```

\LWR@newautoidanchor Sometimes adds a new <autoid> anchor.

```
11013 \newcommand*{\LWR@newautoidanchor}{%
11014 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
11015 {}%
11016 {\ifbool{LWR@freezethisautoid}{}{\LWR@forcenewautoidanchor}}%
11017 }
```

\@captype Remembers which float type is in use.

```
11018 \newcommand*{\@captype}{}
```

\LWR@floatalignmentname Set to center, flushleft, or flushright if saw \centering, \raggedright, or \raggedleft.

```
11019 \newcommand*{\LWR@floatalignmentname}{}
```

\LWR@floatalignment If sees a \centering, \raggedleft, or \raggedright, creates a center, flushright, or flushleft environment.

```
11020 \newcommand*{\LWR@floatalignment}{%
11021 \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
11022 \center%
11023 \renewcommand*{\LWR@floatalignmentname}{center}%
11024 }{}%
```

```
\ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
11025
             \flushleft%
11026
11027
             \renewcommand*{\LWR@floatalignmentname}{flushleft}%
11028
        }{}%
         \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
11029
11030
             \flushright%
             \renewcommand*{\LWR@floatalignmentname}{flushright}%
11031
11032
        }{}%
11033 }
```

\LWR@endfloatalignment Closes an environment from \LWR@floatalignment.

```
11034 \newcommand*{\LWR@endfloatalignment}{%
11035 \ifdefvoid{\LWR@floatalignmentname}%
11036 {}%
11037 {\@nameuse{end\LWR@floatalignmentname}}%
11038 \renewcommand*{\LWR@floatalignmentname}{}%
11039}
```

77.3 Caption inside a float environment

\CaptionSeparator How to separate the float number and the caption text, if not defined by the user.

In most cases, caption's settings are used instead.

Prints the float type and number, the caption separator, and the caption text.

\@caption is provided here in case caption is not loaded, and is based on the nameref package.

```
11041 \AtBeginDocument{
11042 \IfPackageLoadedTF{caption}{}{
11043 \let\LWR@orig@caption\@caption%
11044 \long\def\@caption#1[#2]{%
```

Warn if using a caption inside a :

```
11045
               \LWR@spanwarnformat{caption}%
               \LWR@setlatestname{#2}%
11046
               \LWR@orig@caption{#1}[{#2}]% also takes third argument
11047
           }%
11048
11049
           \renewcommand{\@makecaption}[2]{%
11050
               \LWR@traceinfo{@makecaption}%
11051
               \caption@begin{\@captype}%
11052
11053
               \LWR@isolate{#1}%
               \edef\LWR@tempone{#1}%
11054
               11055
               \LWR@isolate{#2}%
11056
```

77.4 Caption and LOF linking and tracking

When a new HTML file is marked in the LATEX PDF file, or at the start of a new section, the LATEX PDF page number at that point is stored in LWR@currentautosecfloatpage, (and the associated filename is remembered by the special LATEX labels). This page number is used to generate an autopage HTML <id> in the HTML output at the start of the new HTML file or section. Meanwhile, there is a float counter used to generate an HTML autoid <id> at the start of the float itself in the HTML file. The autopage and autoid values to use for each float are written to the .lof, etc. files just before each float's entry. These values are used by \l@figure, etc. to create the HTML links in the List of Figures, etc.

 ${\tt LWR@nextautoid} \ ({\it Ctr}) \quad {\tt Tracks} \ {\tt autoid} \ {\tt for} \ {\tt floats}. \ {\tt Tracks} \ {\tt autopage} \ {\tt for} \ {\tt floats}.$

LWR@nextautopage (Ctr)

These are updated per float as the .lof, .lot file is read.

```
11062 \newcounter{LWR@nextautoid}
11063 \newcounter{LWR@nextautopage}
```

```
\LWRsetnextfloat \{\langle autopage \rangle\} \{\langle float\ autoid \rangle\}
```

*_html.lof (file) This is written to the *_html.lof or *_html.lot file just before each float's usual entry. The autopage and the float's autoid are remembered for \l@figure to use when creating the HTML links.

```
11064 \newcommand*{\LWRsetnextfloat}[2]{%
11065 \setcounter{LWR@nextautopage}{#1}%
11066 \setcounter{LWR@nextautoid}{#2}%
11067 }
```

LWR@figcaption (env.) An HTML <figcaption> is not allowed in places where IATEX does allow a figure caption, such as inside a longtable where the tabular has already started, or inside a center environment. Therefore, a <div> of class figurecaption is used instead.

Inside the caption, temporarily prevent underfull \hbox warnings, such as when the caption contains a math svG image.

\LWR@HTML@caption@begin $\{\langle type \rangle\}$

Low-level code to create HTML tags for captions.

The print versions are from the caption package, if loaded.

```
11078 \newcommand*{\LWR@HTML@caption@begin}[1]
11079 {%
11080 \LWR@traceinfo{LWR@HTML@caption@begin}%
```

Keep par and minipage changes local:

```
11081 \begingroup%
```

No need for a minipage or \parbox inside the caption:

Enclose the original caption code inside an HTML tag:

\LWR@HTML@caption@end Low-level patches to create HTML tags for captions.

```
11089 \newcommand*{\LWR@HTML@caption@end}
11090 {%
11091 \LWR@traceinfo{LWR@HTML@caption@end}%
11092 \LWR@print@caption@end%
```

Closing tag:

```
11093 \endLWR@figcaption%
11094 \endgroup%
11095 % \leavevmode% avoid bad space factor (0) error
11096 \LWR@traceinfo{LWR@HTML@caption@end: done}%
11097 }
```

\caption@begin Low-level patches to create HTML tags for captions. These are assigned \AtBeginDocument so that other packages which modify captions will have already been loaded before saving the print-mode version.

Print versions are provided here in case caption is not loaded.

```
11098 \AtBeginDocument{
11099 \providecommand{\caption@begin}[1]{}
11100 \LWR@formatted{caption@begin}
11101
11102 \providecommand{\caption@end}{}
11103 \LWR@formatted{caption@end}
11104}
```

\captionlistentry Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```
11105 \AtBeginDocument{%
11106 \IfPackageLoadedTF{caption}{
        \let\LWR@origcaptionlistentry\captionlistentry
11107
11108
        \renewcommand*{\captionlistentry}{%
11109
             \LWR@ensuredoingapar%
11110
             \LWR@origcaptionlistentry%
11111
11112
        }
        \def\LWR@LTcaptionlistentry{%
11113
             \LWR@ensuredoingapar%
11114
             \LWR@forcenewautoidanchor%
11115
             \bgroup%
11116
             \@ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
11117
                 {\egroup\LWR@LT@captionlistentry}%
11118
11119
11120
         \def\LWR@LT@captionlistentry#1{%
11121
11122
             \caption@listentry\@firstoftwo[\LTcaptype]{#1}%
        }%
11123
11124}% caption loaded
11125 {% caption not loaded
        \newcommand{\captionlistentry}[2][]{}%
11126
11127
        \newcommand{\LWR@LT@captionlistentry}[2][]{}%
11128 }
11129}% AtBeginDocument
```

\addcontentsline Patched to write the autopage and autoid before each float's entry. No changes if writing .toc For a theorem, automatically defines \ext@<type> as needed, to mimic and reuse the float mechanism.

```
11130 \let\LWR@origaddcontentsline\addcontentsline
11131
11132 \renewcommand*{\addcontentsline}[3]{%
        \ifstrequal{#1}{toc}{}{% not TOC
11133
11134
        \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
11135
             {\LWR@newautoidanchor}%
11136
             \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{}%
11137
11138
             \addtocontents{\@nameuse{ext@#2}}{%
11139
                 \protect\LWRsetnextfloat%
                 {\arabic{LWR@currentautosecfloatpage}}%
11140
                 {\arabic{LWR@thisautoid}}%
11141
             }%
11142
        }% not TOC
11143
        \LWR@origaddcontentsline{#1}{#2}{#3}%
11144
11145 }
```

capt-of (Pkg) Either package provides \captionof, which is later patched at the beginning of caption (Pkg)

the document.

\captionof Patched to handle paragraph tags.

```
11146 \RequirePackage{capt-of}
11147
11148 \AtBeginDocument{
11149 \let\LWR@origcaptionof\captionof
11150
11151 \renewcommand*{\captionof}{%
11152 \LWR@stoppars%
11153 \LWR@origcaptionof%
11154 }
11155 }% AtBeginDocument
11156 \end{warpHTML}
```

78 Table of Contents, LOF, LOT

This section controls the generation of the TOC, LOF, and LOT.

The .toc, .lof, and .lot files are named by the source code \jobname.

In HTML, the printed tables are placed inside a <div> of class toc, lof, or lot.

A "sidetoc" is provided which prints a subset of the ToC on the side of each page other than the homepage.

The regular LATEX infrastructure is used for ToC, along with some patches to generate HTML output.

for HTML output: 11157 \begin{warpHTML}

78.1 Reading and printing the TOC

```
\LWR@myshorttoc \{\langle toc/lof/lot/sidetoc \rangle\}
```

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the @ character into a normal letter to allow formatting commands in the section names.

Unlike in regular LATEX, the file is not reset after being read, since the sidetoc may be referred to again in each HTML page.

```
11158 \newcommand*{\LWR@myshorttoc}[1]{%
11159 \LWR@traceinfo{LWR@myshorttoc: #1}%

Only if the file exists:

11160 \IffileExists{\jobname.#1}{%
11161 \LWR@traceinfo{LWR@myshorttoc: loading}%
```

 \triangle

Many of the commands in the file will have @ characters in them, so @ must be

```
made a regular letter.
```

```
11162 \begingroup%
11163 \makeatletter%
```

Disable \ref to avoid nested HTML references.

Read in the TOC file:

\LWR@subtableofcontents $\{\langle toc/lof/lot \rangle\} \{\langle sectionstarname \rangle\}$

Places a TOC/LOF/LOT at the current position.

```
{\tt 11172 \ NewDocumentCommand\{\ LWR@subtable of contents\}\{m\ m\}\{\%\}}
```

Closes previous levels:

```
11173 \@ifundefined{chapter}%
11174 {\LWR@closeprevious{section}}%
11175 {\LWR@closeprevious{chapter}}%
```

Prints any pending footnotes so that they appear above the potentially large TOC:

```
11176 \LWR@printpendingfootnotes%
```

Place the list into its own chapter (if defined) or section:

```
\label{limited} $$ \operatorname{\defined{chapter}_{\section*{\#2}}_{\chapter*{\#2}}}% $$
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
11178 \LWR@htmlelementclass{nav}{#1}%
```

Create the actual list:

```
11179 \LWR@myshorttoc{#1}%
```

Close the nav:

```
11180     \LWR@htmlelementclassend{nav}{#1}%
11181}
```

```
\@starttoc \{\langle ext \rangle\}
```

Patch \@starttoc to encapsulate the TOC inside HTML tags:

```
11182 \let\LWR@orig@starttoc\@starttoc
11183
11184 \renewcommand{\@starttoc}[1]{
11185 \LWR@htmlelementclass{nav}{#1}%
11186 \LWR@orig@starttoc{#1}%
11187 \LWR@htmlelementclassend{nav}{#1}%
11188}
```

LWR@copiedsidetoc (bool) Used to only copy the Toc file to the sidetoc a single time.

(listings and perhaps other packages would re-use \tableofcontents for their own purposes, causing the sidetoc to be copied more than once, and thus end up empty.)

```
11189 \newbool{LWR@copiedsidetoc}
11190 \boolfalse{LWR@copiedsidetoc}
```

\tableofcontents Patch \tableofcontents, etc. to print footnotes first. newfloat uses \listoffigures for all future float types.

```
11191 \AtBeginDocument{
11192
11193 \LetLtxMacro\LWR@origtableofcontents\tableofcontents
11194
11195 \renewcommand*{\tableofcontents}{%
```

Do not print the table of contents if formatting for a word processor, which will presumably auto-generate its own updated table of contents:

Copy the .toc file to .sidetoc for printing the sidetoc. The original .toc file is renewed when \tableofcontents is finished.

```
11202 \ifbool{LWR@copiedsidetoc}{}{%
11203 \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}%
11204 \booltrue{LWR@copiedsidetoc}%
11205 }%
11206 \LWR@printpendingfootnotes
```

Disable \ref to avoid nested HTML references.

```
11207 \begingroup%
11208 \LetLtxMacro\ref\LWR@print@ref%
11209 \LWR@disablepinyin%
11210 \choosigtableofcontents%
11211 \endgroup%
11212 }
11213 }% \tableofcontents
11214
11215 }% AtBeginDocument
```

\listoffigures

```
11216 \let\LWR@origlistoffigures\listoffigures
11217
11218 \renewcommand*{\listoffigures}{
11219 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
11220
11221 === list of figures ===
11222
11223 }
11224 {
11225 \LWR@printpendingfootnotes
```

Disable \ref to avoid nested HTML references.

\listoftables

```
11233 \let\LWR@origlistoftables\listoftables
11234
11235 \renewcommand*{\listoftables}{
11236 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
11237
11238 === list of tables ===
11239
11240 }
11241 {
11242 \LWR@printpendingfootnotes
```

Disable \ref to avoid nested HTML references.

78.2 Toc commands

```
\LWR@listof \{\langle type \rangle\} \{\langle title \rangle\}
```

Emulate the $\$ listof command from the float package (section 278). Used to create lists of custom float types. Also used to redefine the standard $\$ listoffigures and $\$ listoftables commands, and in tocloft and memoir.

```
11250 \NewDocumentCommand{\LWR@listof}{m +m}{%
11251 \@ifundefined{l@#1}{%
```

78.3 Side TOC

The "side ToC" is a table-of-contents positioned to the side.

It may be renamed by redefining \sidetocname, and may contain paragraphs.

Per table 18, css may be used to format the sidetoc.

```
Table 18: CSS related to the sideтос
```

```
div.sidetoccontainer: The entire sideтос.
div.sidetoctitle: The title.
div.sidetoccontents: The table of contents.
```

```
11259 \end{warpHTML}
```

```
for HTML & PRINT: 11260 \begin{warpall}
```

SideTOCDepth (*Ctr*) Controls how deep the side-TOC gets. Use a standard LATEX section level similar to tocdepth. Warn if parts of the website may be inaccessible.

```
11261 \newcounter{SideTOCDepth}
11262 \setcounter{SideTOCDepth}{1}
11263
11264 \AtEndDocument{%
        \ifnumcomp{\value{SideTOCDepth}}{<}{\value{FileDepth}}{
11265
             \PackageWarningNoLine{lwarp}
11266
11267
                 SideTOCDepth is less than FileDepth,\MessageBreak
11268
11269
                 so some website pages may be inaccessible%
11270
             }
11271
        }{}
11272 }
```

\sidetocname Holds the default name for the sidetoc.

```
11273 \newcommand{\sidetocname}{Contents}
11274 \end{warpall}
for HTML output: 11275 \begin{warpHTML}
```

\LWR@sidetoc Creates the actual side-TOC.

```
11276 \newcommand*{\LWR@sidetoc}{%
```

```
11277 \LWR@forcenewpage
11278 \LWR@stoppars
11279
```

The entire sidetoc is placed into a nav of class sidetoc.

The title is placed into a <div> of class sidetoctitle, and may contain paragraphs.

```
11285 \begin{BlockClass}{sidetoctitle}
11286 \ifcsvoid{thetitle}{}\InlineClass{sidetocthetitle}{\thetitle}\par}
11287 \sidetocname
11288 \end{BlockClass}
```

The table of contents is placed into a <div> of class sidetoccontents.

```
11289 \begin{BlockClass}{sidetoccontents}
11290 \LinkHome
11291
11292 \LWR@myshorttoc{sidetoc}
11293 \end{BlockClass}
11294 \LWR@htmlelementclassend{nav}{sidetoc}
11295 \LWR@htmlelementclassend{div}{sidetoccontainer}
11296}
```

78.4 Low-level toc line formatting

```
\numberline \{\langle number \rangle\} (Called from each line in the .aux, .lof files.)
```

Record this section number for further use:

```
11297 \newcommand*{\LWR@numberline}[1]{%
11298 \LWR@sectionnumber{#1}\quad%
11299 }
11300
11301 \LetLtxMacro\numberline\LWR@numberline
```

\LWR@maybetocdata Replaced by tocdata. Adds author name.

```
li302 \newcommand*{\LWR@maybetocdata}{} \hypertoc \{\langle 1: depth \rangle\} \{\langle 2: type \rangle\} \{\langle 3: name \rangle\} \{\langle 4: page \rangle\}  Called by \l@section, etc. to create a hyperlink to a section.
```

The autopage label is always created just after the section opens.

#1 is depth

```
#2 is section, subsection, etc.
```

- **#3** the text of the caption
- #4 page number

```
11303 \NewDocumentCommand{\hypertoc}{m m +m m}{%}
11304 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to tocdepth:

```
11305 \ifnumcomp{#1}{>}{\value{tocdepth}}%
11306 {}%
11307 {%
11308 \LWR@startpars%
```

Create an HTML link to <filename>#autosec-(page), with the name, of the given HTML class.

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
11309
                 \LWR@subhyperrefclass{%
11310
                     \LWR@htmlrefsectionfilename{\BaseJobname-autopage-#4}%
11311
                         \LWR@origpound\LWR@print@mbox{autosec-#4}%
11312
                 }{#3}{toc#2}%
                 \LWR@maybetocdata%
11313
11314
                 \LWR@stoppars%
             }%
11315
11316
        \LWR@traceinfo{hypertoc done}%
11317 }
```

lofdepth (Ctr) TOC depth for figures.

```
11318 \IfClassLoadedTF{memoir}{}{
11319 \newcounter{lofdepth}
11320 \setcounter{lofdepth}{1}
11321 }
```

lotdepth (Ctr) TOC depth for tables.

 $\label{eq:continuous} $$ \left(1: depth \right) \left(2: type \right) \left(3: ext\ of\ parent \right) \left(4: caption \right) \left(5: page \right) \right) $$$

- **#1** is depth
- #2 is figure, table, etc.
- **#3** is lof, lot, of the parent.
- #4 the text of the caption

#5 page number

```
11326 \newcommand{\hypertocfloat}[5]{%
```

If some float-creation package has not yet defined the float type's lofdepth counter, etc, define it here:

Respond to lofdepth, etc.:

Create an HTML link to filename#autoid-(float number), with text of the caption, of the given HTML class.

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
\LWR@subhyperrefclass{%
11335
                  \LWR@htmlrefsectionfilename{%
11336
                       \BaseJobname-autopage-\arabic{LWR@nextautopage}%
11337
11338
                  \label{local-cond} $$ LWR@origpound\LWR@print@mbox{autoid-\arabic}LWR@nextautoid}} 
11339
                  {#4}{toc#2}%
11340
                  \LWR@maybetocdata%
11341
                  \LWR@stoppars%
11342
              }%
11343
11344
              {}%
11345 }
```

Automatically called by \contentsline:

```
\lceil \langle name \rangle \rceil  {\langle page \rangle \rceil}
```

Uses \DeclareDocumentCommand in case the class does not happen to have a \book.

```
\lceil \langle name \rangle \rceil  {\langle page \rangle \rceil}
```

Uses \DeclareDocumentCommand in case the class does not happen to have a \part.

```
\label{lem:lem:lem:model} $$11347 \end{\operatorname{m}}_{m}_{m}^{\pm 1}_{\#1}^{\#2}}$
```

```
\lceil \langle name \rangle \rceil  {\langle page \rangle \rceil}
                                                                                    Uses \DeclareDocumentCommand in case the class does not happen to have a
                                                                                     \chapter.
                                                                     11348 \@ifundefined{chapter}
                                                                     11349 { }
                                                                      11350 {
                                                                     11351 \DeclareDocumentCommand{\l@chapter}{m m}
                                                                                                              {\hypertoc{0}{chapter}{#1}{#2}}
                                                                     11353 }
                            \l@section \{\langle name \rangle\} \{\langle page \rangle\}
                                                                      \label{lem:limit} $$11354 \operatorname{l@section}[2]_{\scriptstyle 11354} \end{losses} $$\{11354 \end{losses} $$\} $$\}$
             \l@subsection \{\langle name \rangle\} \{\langle page \rangle\}
                                                                     \l@subsubsection \{\langle name \rangle\} \{\langle page \rangle\}
                                                                      \l@paragraph \{\langle name \rangle\} \{\langle page \rangle\}
                                                                     \lceil (name) \rceil \{\langle page \rangle \}
                                                                     \l@figure \{\langle name \rangle\} \{\langle page \rangle\}
                                                                     \label{lem:limit} $$11359 \operatorname{l@figure}[2]_{\hypertocfloat}_{1}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\figure}_{\
                                       \l@table \{\langle name \rangle\} \{\langle page \rangle\}
                                                                      \label{lem:limit} 11360 \label{limit} $$1360 \end{letable} [2]_{\hypertocfloat_{1}{table}_{lot}_{\#1}_{\#2}}$
                                                                      11361 \end{warpHTML}
```

79 Index and glossary

```
See:
http://tex.stackexchange.com/questions/187038/
how-to-mention-section-number-in-index-created-by-imakeidx
```

Index links are tracked by the counter LWR@autoindex. This counter is used to create a label for each index entry, and a reference to this label for each entry in

the index listing. This method allows each index entry to link directly to its exact position in the document.

```
for HTML output: 11362 \begin{warpHTML}
                  11363 \newcounter{LWR@autoindex}
                  11364 \setcounter{LWR@autoindex}{0}
                  11365
                  11366 \newcounter{LWR@autoglossary}
                  11367 \setcounter{LWR@autoglossary}{0}
\IndexPageSeparator User-adjustable delimiters for page and range separators in the *.ind files.
\IndexRangeSeparator
                  11368 \newcommand*{\IndexPageSeparator}{, }
                  11369 \newcommand*{\IndexRangeSeparator}{--}
      theindex (env.)
                  11370 \@ifundefined{chapter}
                          {\newcommand*{\LWR@indexsection}[1]{\section*{#1}}}
                  11372
                           {\newcommand*{\LWR@indexsection}[1]{\chapter*{\#1}}}}
                  11373
                  11374
                  11375 \AtBeginDocument{
                  11376
                  11377 \renewenvironment*{theindex}{%
                           \LWR@indexsection{\indexname}%
                  11378
                           \LetLtxMacro\item\LWR@indexitem%
                  11379
                           \LetLtxMacro\subitem\LWR@indexsubitem%
                  11380
                  11381
                           \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
                  11382 }{}
                  11383
                  11384}% AtBeginDocument
     \LWR@indexitem [\langle index \ key \rangle]
                                        The optional argument is added to support repeatindex.
                  11385 \newcommand{\LWR@indexitem}[1][\@empty]{
                  11386
                           \InlineClass{indexitem}{\LWR@htmlcomment{}}#1%
                  11387
                  11388 }
  \LWR@indexsubitem
                  11389 \newcommand{\LWR@indexsubitem}{
                  11391
                           \InlineClass{indexsubitem}{\LWR@htmlcomment{}}%
                  11392 }
\LWR@indexsubsubitem
                  11393 \newcommand{\LWR@indexsubsubitem}{
                  11394
                           11395
                  11396 }
```

\LWR@xindex@modifyentry $\{\langle indexing \ term \rangle\}$

If using *xindex*, modifies the pipe character to become \hyperindexformat. The indexing term is split into two argument at the pipe, then fed to \LWR@xindex@modifyentrysub.

```
\label{localized} $$11397 \end{\command{\command{\command{\cwemodifyentry}{\command{\command{\command{\cwemodifyentrysub\#1}}}} $$
```

Handle left and right parenthesis range argument, or add a hyperindexformat clause.

```
11399 \newcommand*{\LWR@xindex@modifyentrysub}[2]{%
         \edef\LWR@tempone{#1}%
         \edef\LWR@temptwo{#2}%
11402
         \IfValueTF{#2}{%
11403
             \ifx#2(%
11404
                  \appto\LWR@tempone{|(}%
11405
             \else%
                  \ifx#2)%
11406
                      \appto\LWR@tempone{|)}%
11407
11408
                  \else%
                      \appto\LWR@tempone{%
11409
11410
                           |hyperindexformat\LWRleftbrace%
                           \LWRbackslash#2%
11411
11412
                           \LWRrightbrace%
                      }%
11413
                  \fi%
11414
             \fi%
11415
         }%
11416
         {}%
11417
11418 }
```

 ${\tt LWR@xindex@tricked}\ (bool) \quad Used\ to\ track\ {\tt xindex}\ creation.\ See\ next.$

```
11419 \newbool{LWR@xindex@tricked}
11420 \boolfalse{LWR@xindex@tricked}
```

 $\{(indexing\ term)\}$ Redefined to write the LWR@autoindex counter instead of page.

If using *xindex*, the first line is a comment including a special phrase which tricks *xindex* into thinking that hyperref was used.

```
11421 \def\LWR@wrindex#1{%
11422
        \ifbool{LWR@xindex}{%
             \ifbool{LWR@xindex@tricked}{}{%
11423
                 \protected@write\@indexfile{}%
11424
11425
                 {%
                      \LWRpercent\space hyperpage\LWRrightbrace%
11426
                      \LWRpercent\space trick xindex to assume hyperref%
11427
11428
                 \global\booltrue{LWR@xindex@tricked}%
11429
11430
             \LWR@xindex@modifyentry{#1}%
11431
11432
        }{%
             \def\LWR@tempone{#1}%
11433
11434
         \addtocounter{LWR@autoindex}{1}%
11435
```

The label is assigned after the file write to avoid conflict with cleveref.

```
11438     \label{LWRindex-\arabic{LWR@autoindex}}%
11439     \endgroup%
11440     \@esphack%
11441 }
11442
11443 \AtBeginDocument{
11444 \let\@wrindex\LWR@wrindex
11445 }
```

\@wrglossary {\langle term\rangle} Redefined to write the LWR@autoglossary counter instead of page.

```
11446 \def\@wrglossary#1{%
11447   \addtocounter{LWR@autoglossary}{1}%
11448   \LWR@new@label{LWRglossary-\theLWR@autoglossary}%
11449   \protected@write\@glossaryfile{}%
11450   {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
11451   \endgroup%
11452   \@esphack%
11453 }
```

\LWR@indexnameref@anonref $\{\langle LWR@autoindex\rangle\}$

Displays a reference link where there no \ref available.

```
11454 \newcommand*{\LWR@indexnameref@anonref}[1]{%
11455 \LWR@startref{LWRindex-#1}%
11456 (*)%
11457 \LWR@htmltag{/a}%
11458 }
```

\LWR@indexnameref@ref $\{\langle LWR@autoindex\rangle\}$

Creates \ref-style index references. To avoid an unwanted space if there is nothing to reference, the reference is checked first.

```
11459 \newcommand*{\LWR@indexnameref@ref}[1]{%
        \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
11460
        \ifdefvoid{\LWR@thisref}{}{%
11461
             \edef\LWR@thisref{\expandafter\@firstoffive\LWR@thisref}%
11462
11463
             \ifdefvoid{\LWR@thisref}%
11464
                 {\LWR@indexnameref@anonref{#1}}%
                 {\ref{LWRindex-#1}}%
11465
        }%
11466
11467 }
```

\LWR@indexnameref@refnameref $\{\langle LWR@autoindex\rangle\}$

Creates \ref-style index references. To avoid an unwanted space if there is nothing to reference, the reference is checked first. For links to starred or ?? objects, only the name is used.

```
11469
        \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
         \ifdefvoid{\LWR@thisref}{}{%
11470
             \edef\LWR@thisref{\expandafter\@firstoffive\LWR@thisref}%
11471
11472
             \footnote{\LWR@thisref}{}{\%}
11473
                 \ifdefstring{\LWR@thisref}{(*)}%
11474
                      {\ref{LWRindex-#1} }% space
11475
             }%
11476
        }%
11477
         \nameref{LWRindex-#1}%
11478
11479 }
```

\LWR@indexnameref@cref $\{\langle LWR@autoindex\rangle\}$

Creates \cref-style index references. If no numbered reference is available, a \nameref is used instead. If the reference is ??, which will be changed by \LWR@indexnameref to become (*), then the link is changed to show (*).

```
11480 \newcommand*{\LWR@indexnameref@cref}[1]{%
         \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
11481
         \ifdefvoid{\LWR@thisref}{%
11482
11483
             \nameref{LWRindex-#1}%
11484
         }{%
11485
             \edef\LWR@thisref{\expandafter\@firstoffive\LWR@thisref}%
11486
             \ifdefvoid{\LWR@thisref}{%
                 \nameref{LWRindex-#1}%
11487
             }{%
11488
                 \ifdefstring{\LWR@thisref}{(*)}{%
11489
11490
                      \LWR@indexnameref@anonref{#1}%
11491
                 }{%
11492
                      \cref{LWRindex-#1}%
11493
                 }%
11494
             }%
11495
         }%
11496 }
```

\LWR@indexnameref@crefnameref $\{\langle LWR@autoindex\rangle\}$

Creates \cref-style index references. If no numbered reference is available, a \nameref is used instead. If the reference is ??, which will be changed by \LWR@indexnameref to become (*), then the link is changed to show only the name.

```
11497 \newcommand*{\LWR@indexnameref@crefnameref}[1]{%
         \edef\LWR@thisref{\csuse{r@LWRindex-#1}}%
11498
11499
         \ifdefvoid{\LWR@thisref}%
11500
             {}%
             {%
11501
                  \edef\LWR@thisref{\expandafter\@firstoffive\LWR@thisref}%
11502
                 \ifdefvoid{\LWR@thisref}%
11503
                      {}%
11504
                      {%
11505
                          \ifdefstring{\LWR@thisref}{(*)}%
11506
11507
                              {\cref{LWRindex-#1}} % space
11508
                      }%
11509
11510
         \nameref{LWRindex-#1}%
11511
11512 }
```

\LWR@indexnameref $\{\langle LWR@autoindex\rangle\}$

Creates a hyperlink based on the given entry's autoindex.

Temporarily redefine caption's \caption@xref because it was printing ?? in the indexes, and also causing error on expansion:

```
11515
             \ifdef{\caption@xref}{%
11516
                 \renewcommand*{\caption@xref}[2]{(*)}%
11517
             }{}%
11518
             \ifdefstring{\LWR@IndexRef}{ref}{%
11519
                 \LWR@indexnameref@ref{#1}%
11520
             }{%
             \ifdefstring{\LWR@IndexRef}{nameref}{%
11521
                 \nameref{LWRindex-#1}%
11522
11523
             }{%
             \ifdefstring{\LWR@IndexRef}{refnameref}{%
11524
11525
                 \LWR@indexnameref@refnameref{#1}%
11526
11527
             \ifdefstring{\LWR@IndexRef}{cref}{%
11528
                 \LWR@indexnameref@cref{#1}%
             }{%
11529
             \ifdefstring{\LWR@IndexRef}{crefnameref}{%
11530
                 \LWR@indexnameref@crefnameref{#1}%
11531
11532
             }{%
11533
             \ifdefstring{\LWR@IndexRef}{autoref}{%
                 \LWR@indexnameref@cref{#1}%
11534
11535
             }{% text string
11536
                 \LWR@startref{LWRindex-#1}%
11537
                 \LWR@IndexRef%
11538
                 \LWR@htmltag{/a}%
11539
             }}}}}%
        }% group
11540
11541 }
```

 $\label{localization} $$ LWR@doindex, or macros. $$ {\langle range\ end\ or\ blank \rangle} $$$

Creates a hyperlink, or handles \see, \textbf, etc.

```
\label{localized} $$11542 \newrobustcmd{\LWR@doindexentrysubsub}[2]{\%}$
         \IfInteger{#1}%
11543
              {\LWR@indexnameref{#1}}%
11544
              {#1}%
11545
          \IfValueT{#2}{%
11546
              \IndexRangeSeparator%
11547
11548
              \IfInteger{#2}%
11549
                   {\LWR@indexnameref{#2}}%
11550
                   {#2}%
11551
         }%
11552 }
```

\LWR@doindexentrysub $\{\langle range\ delimiter \rangle\} \{\langle LWR@autoindex\ or\ macros,\ possible\ a\ range \rangle\}$

11553 \NewDocumentCommand{\LWR@doindexentrysub}{m >{\SplitArgument{1}{#1}}m}

```
11554
        {\LWR@doindexentrysubsub#2}
```

 $\verb|\LWR@doindexentry| \{ \langle LWR@autoindex\ or\ macros,\ possible\ a\ range \rangle \} \\$

```
11555 \newcommand*{\LWR@doindexentry}[1]{%
11556
        \relax% required
11557
        \expandafter\LWR@doindexentrysub\expandafter{\IndexRangeSeparator}{#1}%
11558 }
```

\LWR@hyperindexrefnullified Handles macros commonly seen inside an \index entry. Each macro is redefined to create and format a link to its entry.

index formatting To handle additional macros:

\appto\LWR@hyperindexrefnullified{...}

```
11559 \newcommand{\LWR@hyperindexrefnullified}{%
                       11560
                       11561
                       \label{texteb} $$\operatorname{\texteb}_{1}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\texteb}_{\
11562
                       \renewrobustcmd{\textlg}[1]{\LWR@HTML@textlg{\LWR@doindexentry{##1}}}%
11563
                       \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
11564
                       \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
11565
                       \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
11566
                       \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
11567
                       \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
11568
                      \renewrobustcmd{\textulc}[1]{\LWR@HTML@textulc{\LWR@doindexentry{##1}}}%
11569
                       \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
11570
11571
                       \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
                       11572
11573 }
```

\hyperindexref $\{\langle list\ of\ LWR@autoindex,\ commas,\ and\ ranges\rangle\}$

\hyperindexref{LWR@autoindex} is inserted into *.ind by the makeindex style file lwarp.ist or the xindy style file lwarp.xdy. For xindex, \hyperpage is inserted, which is \let to \hyperindexref. For gindex, \addindexitem and related are inserted, which are defined to use \hyperindexref.

The argument is split at commas, and also for ranges, then passed to \LWR@hyperindexrefsub.

```
11574 \newcommand*{\hyperindexref}[1]{%
        \relax% required
11576
       \expandafter\LWR@hyperindexref@comma\expandafter{\IndexPageSeparator}{#1}%
11577 }
```

\LWR@hyperindexref@comma $\{\langle separator \rangle\} \{\langle list\ of\ args \rangle\}$

The list is split at commas, and passed to \LWR@hyperindexref@@comma.

```
11578 \NewDocumentCommand{\LWR@hyperindexref@comma}
11579
        {m >{\SplitList{#1}} m}
11580
```

Used to place the separtor between each entry, but not before the first.

```
11581 \def\LWR@hyperindexref@thiscomma{}%
11582 \def\LWR@hyperindexref@nextcomma{#1}%
```

 $Each \ comma-delimited\ entry\ is\ now\ passed\ individually\ to\ \verb|\LWR@hyperindexref@@comma.||$

```
11583 \ProcessList{#2}\LWR@hyperindexref@@comma%
11584 }
```

\LWR@hyperindexref@@comma $\{\langle arg, perhaps with a range \rangle\}$

A comma separator is placed if not the first item, then the range is parsed.

```
11585 \newcommand*{\LWR@hyperindexref@@comma}[1]{%
11586 \LWR@hyperindexref@thiscomma%
11587 \renewcommand{\LWR@hyperindexref@thiscomma}{\LWR@hyperindexref@nextcomma}%
11588 \expandafter\LWR@hyperindexref@range\expandafter{\IndexRangeSeparator}{#1}%
11589 }
```

\LWR@hyperindexref@range $\{\langle range\ delimiter \rangle\} \{\langle arg \rangle\}$

\LWR@hyperindexrefsub $\{\langle range\ start: LWR@autoindex\rangle\} \{\langle range\ end,\ or\ -NoValue-\rangle\}$

Handles the start and end of a range, if applicable.

```
11593 \newcommand*{\LWR@hyperindexrefsub}[2]{%
11594 \LWR@hyperindexrefsubtwo{#1}%
11595 \IfValueT{#2}{%
11596 \IndexRangeSeparator%
11597 \LWR@hyperindexrefsubtwo{#2}%
11598 }%
11599 }
```

\LWR@hyperindexrefsubtwo $\{\langle LWR@autoindex\rangle\}$

```
11600 \newcommand*{\LWR@hyperindexrefsubtwo}[1]{%
```

In long index lines with numerous entries, *makeindex* can insert a newline before the page number, resulting in an extra space before the first digit. If the first character is a space, remove it first.

```
11601 \edef\LWR@tempone{#1}%
11602 \IfBeginWith{\LWR@tempone}{ }{%
11603 \StrGobbleLeft{\LWR@tempone}{1}[\LWR@tempone]%
11604 }{}%
```

If a numeric entry, create a link. If not numeric, such as \see, use the entry as-is. \emph, \textit, etc. have been redefined above to create and format the entry.

```
11605 \IfInteger{\LWR@tempone}%
11606 {\LWR@indexnameref{\LWR@tempone}}%
11607 {%
11608 \begingroup%
```

```
11609 \LWR@hyperindexrefnullified%

11610 #1%

11611 \endgroup%

11612 }%
```

\hyperpage Emulate hyperref.

11614 \LetLtxMacro\hyperpage\hyperindexref

\nohyperpage Emulate hyperref.

11615 \def\nohyperpage#1{}

11619 \end{warpHTML}

\hyperindexformat Emulate hyperref.

```
11616 \def\hyperindexformat#1#2{%
11617  #1{\hyperpage{#2}}%
11618 }%
```

for PRINT output:

A null command for print mode, in case hyperref was not used:

```
11620 \begin{warpprint}
11621 \newcommand{\hyperindexref}[1]{#1}
11622 \end{warpprint}
```

for HTML & PRINT:

For the glossaries package, try to prevent an error where \glo@name was not found:

```
11623 \begin{warpall}
11624 \providecommand{\glo@name}{}
11625 \end{warpall}
```

80 Bibliography presentation

```
for HTML output: 11626 \begin{warpHTML}
```

\bibliography {\(filenames \)\} At one time this was modified to read \BaseJobname.bbl, which meant the HTML version could not resolve until the print version was also present. This also confused multibib. It has been reverted to the original to use \jobname.bbl.

```
\label $$ \{\langle text\mbox{-}refnumber \rangle $$ $$ $$ 11627 \mbox{-}ewcommand{\ebiblabel}[1]{[\#1]} $$ $$ $$ $$ $$ $$ $$ $$ $$
```

thebibliography (env.) To emphasize document titles in the bibliography, the following redefines \emisside thebibliography to gather everything until the next closing brace, then display these tokens with \textit.

```
https://gist.github.com/zr-tex8r/b72555e3e7ad2f0a37f1
11628 \AtBeginDocument{
11629
{\tt 11630} \verb| AtBeginEnvironment{the bibliography}{\tt 1}
11632 \providecommand*{\LWR@newem}[1]{\textit{#1}}
11633
11634 \renewrobustcmd{\em}{%
11635 \begingroup
         \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
11636
         \afterassignment\LWR@em@after
11637
11638
         \toks@\bgroup
11639 }
11640
11641 \def\LWR@em@finish#1{%
        \xdef\LWR@em@after{\noexpand#1{\the\toks@}}%
11642
11643 \endgroup
11644 \LWR@em@after\egroup
11645 }
11646
11647 }% \AtBeginEnvironment{thebibliography}
11649 }% \AtBeginDocument
11650 \end{warpHTML}
```

Adapted from embracedef.sty, which is by TAKAYUKI YATO:

81 Restoring original formatting

for HTML output: 11651 \begin{warpHTML}

\LWR@restoreMathJaxformatting A few macros (ref: tcolorbox) must be treated separately while printing the HTML comment for a MATHJAX expression. These are set here, to which other functions may be appended.

11652 \newcommand*{\LWR@restoreMathJaxformatting}{}

\LWR@restoreorigformatting Used to temporarily restore the print-mode meaning of a number of formatting, graphics, and symbols-related macros while generating svG math or a lateximage.

Must be used inside a group.

Sets \LWR@formatting to print until the end of the group.

A number of packages will \appto additional actions to this macro.

Various packages add to this macro using \appto.

```
11653 \newcommand*{\LWR@restoreorigformatting}{%
11654 \LWR@traceinfo{LWR@restoreorigformatting}%
```

Numerous macros change their print/HTML meaning depending on \LWR@formatting:

```
11655 \renewcommand*{\LWR@formatting}{print}%
11656 \linespread{1}%
```

```
11657
        \setbool{LWR@doingparhooks}{false}%
11658
        \def\color@endgroup{\endgraf\endgroup}%
        \LetLtxMacro\hfil\LWR@orighfil%
11659
        \let\hss\LWR@orighss%
11660
11661
        \let\llap\LWR@origllap%
11662
        \let\rlap\LWR@origrlap%
11663
        \let\hfilneg\LWR@orighfilneg%
        \let\,\LWR@origcomma% disable HTML short unbreakable space
11664
11665
        \let\textless\LWR@origtextless%
        \let\textgreater\LWR@origtextgreater%
11666
11667
        \let\&\LWR@origampersand%
        \LetLtxMacro\em\LWR@origem%
11668
11669
        \LetLtxMacro\normalfont\LWR@orignormalfont%
11670
        \let\sp\LWR@origsp%
11671
        \let\sb\LWR@origsb%
        \LetLtxMacro\underline\LWR@origunderline%
11672
11673
        \LetLtxMacro~\LWR@origtilde%
11674
        \LetLtxMacro\nobreakspace\LWR@orignobreakspace%
   mechanism:
```

\endtabular must be restored to its original, instead of relying on lwarp's \LWR@formatted

```
\LetLtxMacro\endtabular\LWR@origendtabular%
11675
11676
        \csletcs{endtabular*}{LWR@origendtabular*}%
11677
        \LetLtxMacro\noalign\LWR@orignoalign%
11678
        \LetLtxMacro\hline\LWR@orighline%
        \let\newline\LWR@orignewline%
11679
        \LetLtxMacro\includegraphics\LWR@origincludegraphics%
11680
11681
        \LetLtxMacro\@ensuredmath\LWR@origensuredmath%
        \let\math\LWR@orig@math%
11682
        \let\endmath\LWR@orig@endmath%
11683
        \let\displaymath\LWR@orig@displaymath%
11684
        \let\enddisplaymath\LWR@orig@enddisplaymath%
11685
11686 %
11687
        \LWR@restoreorigaccents%
        \LWR@restoreoriglists%
11688
        \let\@mpfootnotetext\LWR@orig@mpfootnotetext%
11689
11690
        \LWR@hook@processingtags%
   To enable MathJax-specific nullification, used for tcolorbox:
        \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
11691
            {\LWR@restoreMathJaxformatting}%
11692
11693
            {}%
11694 }
```

11695 \end{warpHTML}

Nullifying filename formatting 82

The following are used to nullify certain macros and environments while converting section names to file names.

for HTML output: 11696 \begin{warpHTML}

11701

Also commonly used are \@empty, \@gobble, and \@firstofone.

```
11697 \newcommand*{\LWR@dash}{-}
```

\LWR@nullfonts Removes formatting during filename operations, file references, and HTML comments.

\triangle Use only inside a group.

The following are *not* made robust, since they must be expanded to their nullified versions.

```
11698 \catcode'\$=\active% redefining $ below
11699 \catcode'\_=12% redefining \_ below
11700 \newcommand*{\LWR@nullfonts}{%
```

Various built-in symbols.

```
11702
                             \renewcommand*{\%}{-}%
11703
                             \mbox{renewcommand} {\_}{-}%
11704
                             \renewcommand*{\}}{-}%
                             \mbox{renewcommand} {\{}}{-}
11705
                             \ensuremath{\ensuremath{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{
11706
11707
                             \renewcommand*{\\#}{\\-}\%
                             \renewcommand*{\,}{-}%
11708
11709
                             \renewcommand*{~}{-}%
11710 %
11711 % accents:
                             \renewcommand*{\'}[1]{##1}%
11712
11713
                            \renewcommand*{\'}[1]{##1}%
11714
                            \renewcommand*{\^}[1]{##1}%
                            \renewcommand*{\~}[1]{##1}%
11715
                            \renewcommand*{\=}[1]{##1}%
11716
                            \renewcommand*{\u}[1]{##1}%
11717
                            \renewcommand*{\.}[1]{##1}%
11718
11719
                            \renewcommand*{\"}[1]{##1}%
11720
                             \renewcommand*{\H}[1]{##1}%
                             11721
 11722
                             \renewcommand*{\d}[1]{##1}%
11723
                             \renewcommand*{\c}[1]{##1}%
11724
                             \renewcommand*{\b}[1]{##1}%
11725
                             \renewcommand*{\t}[1]{##1}%
11726 %
                             \let\newline\LWR@dash%
11727
                             \let\textasciicircum\LWR@dash%
11728
```

```
\let\textasciitilde\LWR@dash%
11729
        \let\textasteriskcentered\LWR@dash%
11730
11731
        \let\textbackslash\LWR@dash%
11732
        \let\textbar\LWR@dash%
11733
        \let\textbardbl\LWR@dash%
11734
        \let\textbigcircle\LWR@dash%
        \let\textbraceleft\LWR@dash%
11735
        \let\textbraceright\LWR@dash%
11736
        \let\textbullet\LWR@dash%
11737
        \let\textcopyright\LWR@dash%
11738
11739
        \let\textdagger\LWR@dash%
11740
        \let\textdaggerdbl\LWR@dash%
11741
        \let\textdollar\LWR@dash%
11742
        \let\textellipsis\LWR@dash%
11743
        \let\textemdash\LWR@dash%
11744
        \let\textendash\LWR@dash%
        \let\textexclamdown\LWR@dash%
11745
        \let\textgreater\LWR@dash%
11746
        \let\textless\LWR@dash%
11747
        \let\textordfeminine\LWR@dash%
11748
11749
        \let\textordmasculine\LWR@dash%
11750
        \let\textparagraph\LWR@dash%
        \let\textperiodcentered\LWR@dash%
11751
        \let\textpertenthousand\LWR@dash%
11752
11753
        \let\textperthousand\LWR@dash%
11754
        \let\textquestiondown\LWR@dash%
11755
        \let\textquotedblleft\LWR@dash%
11756
        \let\textquotedblright\LWR@dash%
        11757
        \let\textquoteright\LWR@dash%
11758
        \let\textregistered\LWR@dash%
11759
11760
        \let\textsection\LWR@dash%
        \let\textsterling\LWR@dash%
11761
        \let\texttrademark\LWR@dash%
11762
        \let\textunderscore\LWR@dash%
11763
11764
        \let\textvisiblespace\LWR@dash%
11765
        \let\copyright\LWR@dash%
        \let\dag\LWR@dash%
11766
        \let\ddag\LWR@dash%
11767
11768
        \let\dots\LWR@dash%
        \let\P\LWR@dash%
11769
11770
        \let\pounds\LWR@dash%
11771
        \let\S\LWR@dash%
11772 %
11773
        \renewcommand*{\aa}{a}%
11774
        \renewcommand*{\AA}{A}%
11775
        \renewcommand*{\AE}{AE}%
11776
        \renewcommand*{\ae}{ae}%
        \renewcommand*{\dh}{d}%
11777
        \renewcommand*{\DH}{D}%
11778
        \renewcommand*{\DJ}{D}%
11779
11780
        \renewcommand*{\dj}{d}%
11781
        \renewcommand*{\IJ}{IJ}%
        \renewcommand*{\ij}{ij}%
11782
11783
        \renewcommand*{\L}{L}%
        \renewcommand*{\l}{l}%
11784
11785
        \renewcommand*{\NG}{NG}%
11786
        \renewcommand*{\ng}{ng}%
11787
        \renewcommand*{\0}{0}%
        \renewcommand*{\o}{o}%
11788
```

```
11789
        \renewcommand*{\oe}{oe}%
        \renewcommand*{\OE}{OE}%
11790
        \renewcommand*{\ss}{ss}%
11791
        \renewcommand*{\SS}{SS}%
11792
        \renewcommand*{\th}{th}%
11794
        \renewcommand*{\TH}{TH}%
11795 %
        \let\guillemotleft\@empty%
11796
        \let\guilsinglleft\@empty%
11797
        \let\quotedblbase\@empty%
11798
        \let\textquotedbl\@empty%
11799
11800
        \let\guillemotright\@empty%
11801
        \let\guilsinglright\@empty%
11802
        \let\quotesinglbase\@empty%
11803
        \renewcommand*{\HTMLunicode}[1]{}%
11804
        \renewcommand*{\HTMLentity}[1]{}%
        \renewcommand{\textsuperscript}[1]{##1}%
11805
11806
        \renewcommand{\textsubscript}[1]{##1}%
        \renewcommand{\underline}[1]{##1}%
11807
11808
        \RenewDocumentCommand{\hspace}{s m}{}%
11809
        11810
       Nullify math macros.
        \def\(##1\){}%
11811
11812
        \def\[##1\]{}%
11813
        \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
  Nullify logos:
11814
        \renewcommand*{\TeX}{TeX}%
11815
        \renewcommand*{\LaTeX}{LaTeX}%
11816
        \renewcommand*{\LaTeXe}{LaTeX2e}%
11817
        \renewcommand*{\LuaTeX}{LuaTeX}%
11818
        \renewcommand*{\LuaLaTeX}{LuaLaTeX}%
11819
        \renewcommand*{\XeTeX}{XeTeX}%
        \renewcommand*{\XeLaTeX}{XeLaTeX}%
11820
        \renewcommand*{\ConTeXt}{ConTeXt}%
11821
        \renewcommand*{\BibTeX}{BibTeX}%
11822
        \renewcommand*{\MakeIndex}{MakeIndex}%
11823
11824
        \renewcommand*{\AmS}{AmS}%
11825
        \renewcommand*{\MiKTeX}{MiKTeX}%
11826
        \renewcommand*{\LyX}{LyX}%
  Use the simpler form with \texorpdfstring:
```

\def\texorpdfstring{\expandafter\@secondoftwo}%

11827 11828 }

11829 \catcode '\\$=3% 11830 \catcode '_=8%

Adds more nullifying definitions for filename generation.

```
11831 \newcommand*{\FilenameNullify}[1]{%
11832 \appto{\LWR@nullfonts}{#1}%
11833 }
11834 \end{warpHTML}
```

83 Math

83.1 Limitations

See Math, section 8.7.

83.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader's native language.

```
for HTML & PRINT: 11835 \begin{warpall}
```

\AltTextOpen The opening part of HTML alt tag for an image. The default is a left parenthesis.

Default: (

```
11836 \newcommand*{\AltTextOpen}{()
```

\AltTextClose The closing part of HTML alt tag for an image. The default is a right parenthesis.

Default: (

```
11837 \newcommand*{\AltTextClose}{)}
```

 $\verb|\label{thm:local} \verb| ImageAltText| The \verb| HTML| alt tag for an image.$

Default: image

11838 \newcommand*{\ImageAltText}{image}

\MathImageAltText The HTML alt tag for an svG math image.

Default: "math image"

11839 \newcommand*{\MathImageAltText}{math image}

\LWR@ThisAltText The HTML alt tag for the next image. Cleared after use, and also after each lateximage, \LWR@subsingledollar, and each use of MathJax.

```
11840 \newcommand*{\LWR@ThisAltText}{}
```

```
ThisAltText {\langle text \rangle}
```

Assigns the HTML alt tag for the next image generated by lwarp, such as a lateximage, picture, or svg math.

```
11841 \newcommand*{\ThisAltText}[1]{%
11842
        \renewcommand{\LWR@ThisAltText}{#1}%
11843 }
```

\PackageDiagramAltText Appended to the lateximage HTML alt tag for the images generated by many Default: "diagram" packages.

```
11844 \newcommand*{\PackageDiagramAltText}{diagram}
11845 \end{warpall}
```

83.3 Inline and display math

for HTML output: 11846 \begin{warpHTML}

LWR@externalfilecnt (Ctr) Counter for the external files which are generated and then referenced from the HTML:

11847 \newcounter{LWR@externalfilecnt}

LWR@indisplaymathimage (bool)

True if processing display math for svg output. Inside a lateximage, display math is only set to print-mode output if LWR@indisplaymathimage is false. Used to avoid nullifying display math before it has been completed.

11848 \newbool{LWR@indisplaymathimage}

LWR@insidemathcomment (bool) True while inside an HTML comment which is displaying a math environment. Used to undo the comment for a moment while creating a \label, so that the label's HTML tags will be seen by HTML.

```
11849 \newbool{LWR@insidemathcomment}
11850 \boolfalse{LWR@insidemathcomment}
```

LWR@xfakebold (bool) True if xfakebold \setBold is in use.

```
11851 \newbool{LWR@xfakebold}
11852 \boolfalse{LWR@xfakebold}
```

\LWR@orig@setBold Redefined by lwarp-xfakebold.

```
11853 \newcommand*{\LWR@orig@setBold}{}
```

\LWR@orig@unsetBold Redefined by lwarp-xfakebold.

```
11854 \newcommand*{\LWR@orig@unsetBold}{}
```

\LWR@applyxfakebold Redefined by lwarp-xfakebold.

```
11855 \newcommand*{\LWR@applyxfakebold}{}
```

\LWR@setcurrentfont Sets the actual LATEX font to that which was selected for HTML output. Ex: In HTML mode, \bfseries sets \LWR@f@series to "bf". This sets the PDF output here for use inside a lateximage.

```
11856 \newcommand*{\LWR@setcurrentfont}{%
11857
        \LWR@traceinfo{Using font family \LWR@f@family}%
        \@nameuse{LWR@print@\LWR@f@family family}%
11858
        \LWR@traceinfo{Using font series \LWR@f@series}%
11859
        \@nameuse{LWR@print@\LWR@f@series series}%
11860
        \LWR@traceinfo{Using font shape \LWR@f@shape}%
11861
11862
        \@nameuse{LWR@print@\LWR@f@shape shape}%
11863
        \LWR@traceinfo{Using font caps shape \LWR@f@shapecaps}%
        \@nameuse{LWR@print@\LWR@f@shapecaps shape}%
11864
11865 }
```

\\$ Plain dollar signs appearing in the HTML output may be interpreted by MATHJAX to be math shifts. For a plain text dollar \\$, use an HTML entity to avoid it being interpreted by MATHJAX, unless are inside a lateximage, in which case it will not be seen by MATHJAX.

```
11866 \let\LWR@origtextdollar\$
11867
11868 \renewcommand*{\$}{%
11869 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
11870 {\LWR@origtextdollar}%
11871 {\HTMLunicode{00024}}%
11872 }
```

lwarp_baseline_marker.eps

A marker to be used to help *pdfcrop* identify the inline math baseline and width. If either graphicx or graphics is loaded, this marker is placed at the lower left and lower right corners of the inline math. *pdfcrop* is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.

A marker with alpha or opacity of 0% is not registered by *pdfcrop*, so the marker is a small square block of 1% alpha, which seems to work while still being effectively invisible in the final svG image.

If graphicx is loaded, this marker is sized as a tiny 1 sp square. If graphics is loaded, this marker is used at its default size of around .25 pt. If neither graphics package is loaded, the marker is replaced by a 10 sp horizontal space, and there is no assistance for determining baseline or width of the inline math image. The best results are obtained when using graphicx.

\LWR@addbaselinemarker Places a small marker in an svg inline image. If graphics or graphicx are loaded, the marker is a mostly transparent image. If neither is loaded, no marker is used.

```
11873 \AtBeginDocument{
11874
11875 \ifpdf
11876  \newcommand*{\LWR@baselinename}{\lwarp_baseline_marker.png}
11877 \else
11878  \ifXeTeX
11879  \newcommand*{\LWR@baselinename}{\lwarp_baseline_marker.png}
11880  \else
11881  \newcommand*{\LWR@baselinename}{\lwarp_baseline_marker.eps}
```

```
11882
         \fi
11883 \fi
11884
11885 \IfFileExists{\LWR@baselinename}%
11886 {
         \IfPackageLoadedTF{graphicx}{
11887
             \newcommand*{\LWR@addbaselinemarker}{%
11888
                 \LWR@origincludegraphics{\LWR@baselinename}%
11889
11890
             }
         }{
11891
             \IfPackageLoadedTF{graphics}{
11892
11893
                 \newcommand*{\LWR@addbaselinemarker}{%
11894
                      \LWR@origincludegraphics{\LWR@baselinename}%
11895
11896
             }{
                 \newcommand*{\LWR@addbaselinemarker}{%
11897
                      \global\booltrue{LWR@warnbaselinemarker}%
11898
                 }
11899
                 \AtEndDocument{
11900
                      \ifbool{LWR@warnbaselinemarker}{
11901
                          \PackageNoteNoLine{lwarp}{%
11902
                              Load graphicx or graphics for improved\MessageBreak
11903
                              SVG math sizing and baselines%
11904
11905
11906
                      }{}
11907
                 }
11908
             }
11909
11910 }{% lwarp_baseline_marker.png or .eps is not present
         \newcommand*{\LWR@addbaselinemarker}{%
11911
             \global\booltrue{LWR@warnbaselinemarker}%
11912
11913
         }
         \AtEndDocument{
11914
             \ifbool{LWR@warnbaselinemarker}{
11915
                 \PackageWarningNoLine{lwarp}{%
11916
11917
                      File \LWR@baselinename\space is not installed\MessageBreak
11918
                      alongside the lwarp-*.sty files, so\MessageBreak
                      SVG math sizing and baselines may not be accurate}
11919
11920
             }{}
         }
11921
11922 }
11923
11924 }% AtBeginDocument
```

LWR@warnbaselinemarker (bool) True if the math baseline marker was ever called for, but graphics or graphicx were not loaded.

```
11925 \newbool{LWR@warnbaselinemarker}
11926 \boolfalse(LWR@warnbaselinemarker)
```

LWR@unknownmathsize (bool) If TikZ or other objects are used inside math mode, the resulting image may exceed the TEX box, resulting in an incorrect measurement of the size of the resulting image. If this is so, the HTML styles for image size and depth will be neutralized.

```
11927 \newbool{LWR@unknownmathsize}
```

```
\LWR@singledollarmeasure \{\langle math\ expression \rangle\}
```

Measures the size of the image of the math expression.

(In some circumstances svg math is used even if MATHJAX is preferred.)

svg math: \LWR@origensuredmath is part of argument #4.

svg math \ensuremath: \LWR@origensuredmath is part of argument #4.

svg dynamic math: \LWR@origensuredmath is part of argument #4.

MATHJAX: Argument #4 is the contents of the math expression without \LWR@origensuredmath. This case is handled above.

MATHJAX \ensuremath: \LWR@origensuredmath is part of argument #4.

MATHJAX dynamic math: Argument #4 is the contents of the math expression without \LWR@origensuredmath, so \LWR@origensuredmath is added below.

\ifmmode: Included "just in case".

Factored from \LWR@subsingledollarsvg.

```
11928 \newcommand*{\LWR@singledollarmeasure}[1]{%
11929 \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
11930 \LWR@restoreorigformatting%
11931 \RenewDocumentEnvironment{lateximage}{s o s o o d()}{}}% inside group
11932 \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
11933 \LWR@setcurrentfont%
```

lateximagedepth must be nested to avoid generating paragraph tags. $\mathcal{H}_{M}\mathcal{S}$ math modifies the \text macro such that \addtocounter does not always occur as expected. Lower-level code is used instead.

```
11934 \global\advance\c@LWR@lateximagedepth 1\relax%
```

Typeset the math in a box. While doing so, some macros or environments may set LWR@unknownmathsize, in which case this will be used to cancel the HTML styles being generated here.

```
11935
         \boolfalse{LWR@unknownmathsize}%
11936
         \ifmmode%
             \global\sbox{\LWR@singledollarbox}{#1}%
11937
11938
         \else%
             \ifbool{LWR@dynamicmath}{%
11939
                 \ifbool{mathjax}{%
11940
                      \global\sbox{\LWR@singledollarbox}%
11941
                          {\LWR@origensuredmath{#1}}%
11942
                 }{%
11943
                      \global\sbox{\LWR@singledollarbox}{#1}%
11944
                 }%
11945
             }{%
11946
                 \global\sbox{\LWR@singledollarbox}{#1}%
11947
             }%
11948
         \fi%
11949
```

Add a small and almost transparent marker at the depth of the image.

A math minus sign has the same depth as a plus, even though it does not draw anything below the baseline. This means that *pdfcrop* would crop the image without depth. The marker below the baseline is seen by *pdfcrop* and preserves the depth.

```
11950 \global\sbox{\LWR@singledollarbox}{%
11951 \usebox{\LWR@singledollarbox}%
11952 \raisebox{-\dp\LWR@singledollarbox}{%
11953 \LWR@addbaselinemarker%
11954 }%
11955 }%
```

More low-level code to undo the counter change.

```
11956 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.
```

Measure the depth:

```
11957 \setlength{\LWR@singledollardepth}{%
11958 \LateximageFontScale\dp\LWR@singledollarbox%
11959 }%
```

Make the length a global change:

```
\verb| \global\LWR@singledollardepth=\LWR@singledollardepth||
```

Likewise for width:

```
11961 \setlength{\LWR@singledollarwidth}{%
11962 \LateximageFontScale\wd\LWR@singledollarbox%
11963 }%
11964 \global\LWR@singledollarwidth=\LWR@singledollarwidth%
```

Likewise for total height:

```
11965
         \setlength{\LWR@singledollarheight}{%
             \LateximageFontScale\ht\LWR@singledollarbox%
11966
11967
        }%
         \addtolength{\LWR@singledollarheight}{%
11968
             \LateximageFontScale\dp\LWR@singledollarbox%
11969
11970
         \global\LWR@singledollarheight=\LWR@singledollarheight%
11971
11972
        \endgroup%
11973 }
```

\LWR@subsingledollarsvg * { $\langle 2: alt \ text \rangle$ } { $\langle 3: add'l \ hashing \rangle$ } { $\langle 4: math \ expression \rangle$ }

For inline math. Uses svg math. The image is measured and ajusted to the baseline of the HTML output, and placed inside a lateximage.

(In some circumstances svg math is used even if MATHJAX is preferred.)

Factored from \LWR@subsingledollar.

```
11974 \newcommand*{\LWR@subsingledollarsvg}[4]{%
11975 \LWR@traceinfo{LWR@subsingledollartsvg}%
```

Measure the depth, width, and height of the math image:

```
11976 \LWR@singledollarmeasure{#4}%
```

Set a style for the height or width. The em unit is used so that the math scales according to the user's selected font size.

Start with the greater of the width or the height, biased towards the width:

```
11977
          \def\LWR@singledollarstyle{%
11978
             width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
11979
          }%
11980
      }{%
11981
          \def\LWR@singledollarstyle{%
11982
             height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
11983
11984
          }%
      }%
11985
```

If a very narrow width, use the height.

```
11986  \ifdimless{\LWR@singledollarwidth}{.2em}%
11987     {%
11988     \def\LWR@singledollarstyle{%
11989          height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
11990     }%
11991     }%
11992     {}%
```

If very wide and short, use the width:

If there is significant text depth, add the depth to the style.

```
\ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
12000
             \def\LWR@singledollardepthstyle{%
12001
                  \ ; % extra space
12002
                  \LWR@print@mbox{%
12003
                vertical-align:-\LWR@convertto\{em\}\{\the\LWR@singledollardepth\}\ em\%
12004
12005
                  } % extra space
12006
             }%
         }{%
12007
             \def\LWR@singledollardepthstyle{}%
12008
         }%
12009
```

If using certain TikZ actions inside math, the resulting image may exceed the TEX boundaries, so the HTML size styles may be incorrect, and must be neutralized.

```
12010 \ifbool{LWR@unknownmathsize}{%
12011 \def\LWR@singledollarstyle{}%
12012 \def\LWR@singledollardepthstyle{}%
12013 }{}%
```

Create the lateximage using the alternate tag and the computed size and depth. The star causes lateximage to use an MD5 hash as the filename. When hashing, also include the current font and color in the hash.

```
\ifbool{LWR@dynamicmath}{%
12014
             \LWR@traceinfo{subsingledollarsvg: dynamic}%
12015
             \begin{lateximage}% no hashing
12016
12017
                 [\MathImageAltText]% alt tag
                 []% no add'l hashing
12018
                 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
12019
12020
                 (math)% ARIA
        }{% not dynamic math
12021
             \LWR@traceinfo{subsingledollarsvg: static}%
12022
12023
             \IfValueTF{#1}{% #1 True
                 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
12024
```

Support for xfakebold:

```
\ifbool{LWR@xfakebold}%
12025
12026
                      {\def\LWR@tempone{Y}}%
                      {\def\LWR@tempone{N}}\%
12027
                 \LWR@traceinfo{subsingledollarsvg about to lateximage}%
12028
                 \begin{lateximage}*% use hashing
12029
12030
                      Γ#21% alt
                      *% do not add open/closing braces
12031
                      [% addl' hashing
12032
                          #3%
12033
                          FM\LWR@f@family%
12034
                          SR\LWR@f@series%
12035
12036
                          SH\LWR@f@shape%
12037
                          SHC\LWR@f@shapecaps%
12038
                          CL\LWR@tempcolor%
12039
                          FB\LWR@tempone% xfakebold
12040
                      1%
                      [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
12041
12042
                      (math)% ARIA
                      \LWR@traceinfo{subsingledollar did lateximage}%
12043
             }{% #1 False
12044
                 \begin{lateximage}% no hashing
12045
                      [#2]% alt
12046
12047
                      []% no add'l hashing
                      [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
12048
                      (math)% ARIA
12049
12050
             }%
12051
        }% not dynamic math
```

Place small and almost transparent markers on the baseline at the left and right edges of the image. These markers are seen by *pdfcrop*, and force vertically-centered objects such as a dash to be raised off the baseline in the cropped image, and also force the total width and left/right margins to be correct. (Except that in some fonts a character may exceed the bounding box, and thus may appear wider than expected when converted to an image.)

12052 \LWR@addbaselinemarker%

Support for xfakebold:

12053 \LWR@applyxfakebold%

Typeset the contents:

12054 \usebox{\LWR@singledollarbox}%

The closing baseline marker:

```
12055 \LWR@addbaselinemarker%
12056 \end{lateximage}%
12057 %
12058 }
```

\LWR@subsingledollar * { $\langle 2: alt \ text \rangle$ } { $\langle 3: add'l \ hashing \rangle$ } { $\langle 4: math \ expression \rangle$ }

For inline math. Uses MathJax, or for svg math the image is measured and ajusted to the baseline of the HTML output, and placed inside a lateximage.

svg math: \LWR@origensuredmath is part of argument #4.

svg math \ensuremath: \LWR@origensuredmath is part of argument #4.

svG dynamic math: \LWR@origensuredmath is part of argument #4.

MATHJAX: Argument #4 is the contents of the math expression without \LWR@origensuredmath. This case is handled above.

MATHJAX \ensuremath: \LWR@origensuredmath is part of argument #4.

MATHJAX dynamic math: Argument #4 is the contents of the math expression without \LWR@origensuredmath, so \LWR@origensuredmath is added below.

image filename hashing

If starred, a hashed filename is used. If so, the hash is based on the alt tag and also the additional hashing argument.

This may be used to provide an expression with a simple alt tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TEX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is used in the additional hashing argument to ensure a unique image.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple alt tag is still the same.

```
12059 \newlength{\LWR@singledollarwidth}
12060 \newlength{\LWR@singledollarheight}
12061 \newlength{\LWR@singledollardepth}
12062
12063 \newsavebox{\LWR@singledollarbox}
```

```
12064
12065 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
         \LWR@traceinfo{LWR@subsingledollar !#2!}%
12066
         \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
12067
12068
             \LWR@traceinfo{LWR@subsingledollar: already in a lateximage}%
12069
                 #4% contents
12070
         3%
12071
12072
         {% not in a lateximage
12073
             \begingroup%
```

Support for xfakebold:

```
12074 \LWR@applyxfakebold%
```

MATHJAX cannot parse the often complicated TEX expressions which appear in the various uses of \ensuredmath. \ensuremath forces the alt tag to "(math image)", as translated according to \MathImageAltText. If this is the case, force the use of a lateximage even if MATHJAX. Likewise for siunitx if parse-numbers=false.

If MATHJAX, or if formatting math for a word processor, and not \ensuredmath, and not a dynamic math expression, print the math expression:

```
\ifboolexpr{%
12075
12076
                  (
12077
                      bool{mathjax} or
12078
                      ( bool{FormatWP} and bool{WPMarkMath} )
12079
                  ) and
12080
                  ( not test {
                          \ifstrequal {#2}% from \ensuredmath
12081
                               {\AltTextOpen\MathImageAltText\AltTextClose}
12082
12083
                  ) and
12084
                  ( not bool{LWR@dynamicmath} )
12085
12086
```

For MathJax, print the math between \(and \):

```
12087 {%
12088 \LWR@traceinfo{LWR@subsingledollar: Mathjax}%
12089 {%
12090 \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
12091 \textbackslash(%
12092 {%
```

\ifmmode to avoid error about \ttfamily inside math mode in the case of nested math, ex. equation with tcolorbox with math.

For svg, print the math inside a lateximage, with an <alt> tag of the LATEX code, and a css style to control the baseline adjustment.

```
12099 {% not mathjax

12100 \LWR@traceinfo{%

12101 LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic%

12102 }%

12103 \LWR@subsingledollarsvg{#1}{#2}{#3}{#4}%

12104 }% not mathjax

12105 \endgroup%

12106 }% not in a lateximage
```

Clear the single-use alt text:

```
12107 \gdef\LWR@ThisAltText{}%
12108 \LWR@traceinfo{LWR@subsingledollar: done}%
12109 }

12110 \LetLtxMacro\LWR@origdollar$
12111 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting

12112 \LetLtxMacro\LWR@origopenparen\(
12113 \LetLtxMacro\LWR@origcloseparen\)
12114 \LetLtxMacro\LWR@origopenbracket\[
12115 \LetLtxMacro\LWR@origclosebracket\]
```

\$ Redefine the dollar sign to place math inside a lateximage, or use MATHJAX:

```
$$
12116\begingroup
12117\catcode'\$=\active%
12118\protected\gdef${\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

Used by chemformula to escape single-dollar math:

 $\label{thm:local_local$

\LWR@doubledollar Redefine the double dollar sign to place math inside a lateximage, or use Math-Iax:

12120 \protected\gdef\LWR@doubledollar\$#1\$\${%

If MATHJAX or formatting for a word processor, print the LATEX expression:

```
12121 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
```

For MathJax, print the math between \[and \]. If there is a footnote, endnote, or other kind of note ('note' is present), sync the note numbers.

The equation is printed to the PDF output inside HTML comment tags. This allows labels and footnotes to be accepted and processed. The math environment

is selected here, and $\LWR@hidelatexequation$ will use the original print-mode meaning of math.

```
\LWR@hidelatexequation{math}{#1}%
12126
                \InlineClass{hidden}{\LWR@syncnotenumbers}%
12127
                12128
                \textbackslash[%
12129
12130
                {%
12131
                    \LWR@print@ttfamily%
                    \LWR@HTMLsanitizedetokenized{\detokenize{#1}}%
12132
12133
                }%
12134
                \textbackslash]
12135
                \InlineClass{hidden}{\LWR@syncnotenames}%
12136
           }% yes note
12137
            {% no note
12138
                \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
                \textbackslash[%
12139
12140
                {%
                    \LWR@print@ttfamily%
12141
12142
                    \LWR@HTMLsanitizedetokenized{\detokenize{#1}}%
12143
12144
                \textbackslash]
            }% no note
12145
12146
            \endgroup%
12147
        }% mathjax
12148
```

For svg, print the math inside a lateximage, with an <alt> tag of the LATEX code:

```
{% not mathjax
12149
             \begin{BlockClass}{displaymath}%
12150
             \LWR@newautoidanchor%
12151
             \booltrue{LWR@indisplaymathimage}%
12152
             \begin{lateximage}%
12153
             [%
12154
12155
                 \textbackslash{[] % extra space
12156
                 \LWR@HTMLsanitizedetokenized{\detokenize{#1}} % extra space
12157
                 \textbackslash{]}%
12158
             ]%
             *% do not add open/closing braces
12159
             (math)% ARIA
12160
```

Support for xfakebold:

```
12161 \LWR@applyxfakebold%

12162 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
12163 \end{lateximage}%
12164 \end{BlockClass}%
12165 }% not mathjax
```

Clear the single-use alt text:

```
12166 \gdef\LWR@ThisAltText{}%
12167 }%
```

\LWR@singledollar $\{\langle math\ expression \rangle\}$

 $\ensuremath \{\langle expression \rangle\}$

```
12168 \protected\gdef\LWR@singledollar#1${%
        \LWR@traceinfo{LWR@singledollar}%
12169
12170
         \ifbool{mathjax}{%
12171
             \begingroup%
             \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
12172
             \LWR@subsingledollar*%
12173
12174
             {% alt tag
12175
                 \textbackslash( %
                 \LWR@HTMLsanitizedetokenized{\detokenize{#1}} % extra space
12176
                 \textbackslash)%
12177
             }%
12178
             {singledollar}% add'l hashing
12179
12180
             {#1}% contents
12181
             \endgroup%
12182
        }{% not mathjax
12183
             \LWR@subsingledollar*%
12184
             {% alt tag
12185
                 \textbackslash( %
                 \LWR@HTMLsanitizedetokenized{\detokenize{#1}} % extra space
12186
                 \textbackslash)%
12187
12188
             {singledollar}% add'l hashing
12189
             {\LWR@origensuredmath{#1}}% contents
12190
12191
         }% not mathjax
   Clear the single-use alt text:
12192
         \gdef\LWR@ThisAltText{}%
12193 }
\( Redefine to the above dollar macros.
1
12194 \AtBeginDocument{
12195
         \displaystyle \frac{\f(\#1\) {\#1\$}}{\}
12196
         \displaystyle \frac{\f(\#1)}{\$\#1\$}
12197 }
12198
12199 \endgroup% active $
12200 \AtBeginDocument{
12201 \LetLtxMacro\LWR@openbracketnormal\[
12202 \LetLtxMacro\LWR@closebracketnormal\]
12203 }
```

If MathJax, a lateximage is used, since \ensuremath is often used for complex TEX expressions which MathJax may not render. If svg math, a hashed file is used with a simple alt tag, but additional hashing provided by the contents.

```
12204 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
12205
12206 \renewcommand{\@ensuredmath}[1]{%
12207 \ifbool{mathjax}{%}
12208 \begingroup%
```

```
\boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
12209
             \LWR@subsingledollar*{\AltTextOpen\MathImageAltText\AltTextClose}%
12210
12211
               \verb|\protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{\#1}}|
12212
             }%
12213
12214
             {%
                 \relax%
12215
                 \LWR@origensuredmath{#1}%
12216
             }%
12217
             \endgroup%
12218
12219
        }{% SVG math
```

If already inside a lateximage in math mode, continue as-is.

```
12220 \ifmmode%
12221 \LWR@origensuredmath{#1}%
12222 \else%
```

Create an inline math lateximage with a simple alt tag and additional hashing according to the contents.

```
\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
12223
                      {\LWR@origensuredmath{#1}}%
12224
                      {%
12225
                          \LWR@subsingledollar*%
12226
                              {\AltTextOpen\MathImageAltText\AltTextClose}%
12227
12228
                              {%
                                   \protect\LWR@HTMLsanitizedetokenized{%
12229
                                       \detokenize\expandafter{#1}%
12230
12231
                                   }%
12232
                              }%
                              {\LWR@origensuredmath{#1}}%
12233
                      }%
12234
             \fi%
12235
         }%
12236
```

Clear the single-use alt text:

```
12237 \quad \
```

Remember then remove the old math and displaymath environments:

```
12239 \let\LWR@orig@math\math
12240 \let\LWR@orig@endmath\endmath
12241
12242 \let\LWR@orig@displaymath\displaymath
12243 \let\LWR@orig@enddisplaymath\enddisplaymath
12244
12245 \let\math\relax
12246 \let\endmath\relax
12247
12248 \let\displaymath\relax
12249 \let\enddisplaymath\relax
```

math (*env.*) Set math mode then typeset the body of what was between the begin/end. See the environ package for \BODY.

```
12250 \NewEnviron{math}{\expandafter\(\BODY\)}
```

LWR@displaymathnormal (*env.*) Set math mode then typeset the body of what was between the begin/end. See the environ package for \BODY.

Set the default displaymath to the normal version:

```
12252 \LetLtxMacro\displaymath\LWR@displaymathnormal%
12253 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
```

LWR@displaymathother (*env.*) A version of displaymath which can handle complicated objects, but does not supply MathJax or html alt tags.

```
12254 \newenvironment{LWR@displaymathother}
12255 {%
        \begin{BlockClass}{displaymath}%
12256
        \LWR@newautoidanchor%
12257
        \booltrue{LWR@indisplaymathimage}%
12258
        \begin{lateximage}[\MathImageAltText](math)% [alt](ARIA)
12259
        \LWR@origdollar\LWR@origdollar%
12260
12261 }
12262 {%
12263
         \LWR@origdollar\LWR@origdollar%
12264
         \end{lateximage}%
12265
        \end{BlockClass}%
12266 }
```

LWR@equationother (*env.*) A version of displaymath which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```
12267 \newenvironment{LWR@equationother}
12268 {%
         \begin{BlockClass}{displaymathnumbered}%
12269
         \LWR@newautoidanchor%
12270
12271
         \booltrue{LWR@indisplaymathimage}%
         \begin{lateximage}[\MathImageAltText](math)% [alt](ARIA)
12272
         \LWR@orig@equation%
12273
12274 }
12275 {%
         \LWR@orig@endequation%
12276
         \end{lateximage}%
12277
         \end{BlockClass}%
12278
12279 }
```

83.4 MATHJAX support

LWR@nextequation (Ctr) Used to add one to compute the next equation number.

```
12280 \newcounter{LWR@nextequation}
```

Determing how to set MathJax section and equation numbers. Adjusts for various kinds of \theequation to determine \theMathJaxsection and \theMathJaxequation.

```
12281 \newcommand\LWR@article@theequation{\@arabic\c@equation}
{\ifnum \c@chapter>\z@ \thechapter.\fi \@arabic\c@equation}
12285
12286
12290
12291 \AtBeginDocument{
12292
                       % default per article class:
12293
                       \newcommand*{\theMathJaxsubequations}{0}
12294
                       \newcommand*{\theMathJaxsection}{}
12295
                       \newcommand*{\theMathJaxequation}{\arabic{equation}}
12296
                       \ifdefstrequal{\theequation}{\LWR@article@theequation}
12297
12298
                       \ifdefstrequal{\theequation}{\LWR@book@theequation}{
12299
                          12300
12301
12302
                       \ifdefstrequal{\theequation}{\LWR@subsection@thequation}{
                                   \renewcommand*{\theMathJaxsection}{\thesubsection{}.}
12303
12304
                       }{
12305
                       \ifdefstrequal{\theequation}{\LWR@section@thequation}{
12306
                                  \renewcommand*{\theMathJaxsection}{\thesection{}.}
12307
                       \label{the equation} $$ \left( \mathbb{C} \right) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $$ (\mathbb{C}^{\mathbb{C}}) = \mathbb{C}^{\mathbb{C}}. $$ if defining the equation $\mathbb{C}^{\mathbb{C}}. $$ if defining the equatio
12308
                                  \renewcommand*{\theMathJaxsection}{\thechapter{}.}
12309
                       }{% unknown format
12310
                                   \PackageWarningNoLine{lwarp}
12311
12312
                                  {%
                                        Unknown equation tag format for \protect\theequation.\MessageBreak
12313
                                              Article-style equation numbering will be used%
12314
12315
12316
                       }}}}
12317 }
```

\LWR@syncmathjax Sets the MATHJAX equation format and number for the following equations.

These MathJax commands are printed inside "\(" and "\)" characters. They are printed to HTML output, not interpreted by LATEX.

```
12318 \newcommand*{\LWR@syncmathjax}{%
```

Tell MathJax that the next equation number is the current LATEX equation number.

Before each equation, lwarp inserts into the нтмL code:

```
\seteqnumber{subequations?}{section}{number}
```

subequations? is 0 usually, 1 if inside amsmath subequations.

section is a string printed as-is, or empty.

number is auto-incremented by MATHJAX between equations.

Place the MathJax command inside "\(" and "\)" characters, to be printed to html, not interpreted by \LaTeX

```
\LWR@stoppars%
12319
             \InlineClass{hidden}{
12320
                 \textbackslash(%
12321
                 \textbackslash{}setegnumber%
12322
12323
                 \{\theMathJaxsubequations\}%
                 \{\theMathJaxsection\}%
12324
                 \{\theMathJaxequation\}%
12325
                 \textbackslash)%
12326
12327
             \LWR@startpars%
12328
12329 }
```

\LWR@hidelatexequation $\{\langle environment \rangle\} \{\langle contents \rangle\}$

Creates the LATEX version of the equation inside an HTML comment.

12330 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%}

Stop HTML paragraph handling and open an HTML comment:

```
12331 \LWR@stoppars
12332 \LWR@htmlopencomment
12333
```

Start the LATEX math environment inside the HTML comment:

```
12334 \begingroup
12335 \@nameuse{LWR@orig@#1}
```

While in the math environment, restore various commands to their LATEX meanings.

```
12336 \LWR@restoreorigformatting
12337 \booltrue{LWR@insidemathcomment}
```

Temporarily prevent underfull \hbox warnings.

```
12338 \hbadness=10000\relax%
```

See \LWR@htmlmathlabel in section 83.7.1.

Print the contents of the equation:

```
12339 #2
```

End the LATEX math environment inside the HTML comment:

```
12340 \@nameuse{LWR@orig@end#1}
12341 \endgroup
```

Close the HTML comment and resume HTML paragraph handling:

```
12343 \LWR@htmlclosecomment
```

```
12344 \boolfalse{LWR@insidemathcomment}
12345 \LWR@startpars
12346 }
```

```
\LWR@addmathjax \{\langle environment\ name \rangle\} \{\langle contents \rangle\}
```

Given the name of a math environment and its contents, create a MathJax instance. The contents are printed to html output, not interpreted by LATEX.

```
12347 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%}
12348 \LWR@orignobreakspace\LWR@orignewline
```

Enclose the MathJax environment inside printed "\(" and "\)" characters. Print the environment name and contents, sanitizing for html special characters.

The alignat environment takes a mandatory argument, which must be replicated here.

```
12352  \ifboolexpr{
12353     test {\ifstrequal{#1}{alignat}} or
12354     test {\ifstrequal{#1}{alignat*}} or
12355     test {\ifstrequal{#1}{alignat*}} or
12356    }%
12357     {\\arabic{LWR@maxfields@}\\}}%
12358    {\}%
```

The environment contents and \end:

```
12359 \LWR@orignewline%
12360 \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
12361 \LWR@HTMLsanitizeexpanded{\detokenize\expandafter{#2}}%
12362 \LWR@orignewline%
12363 \textbackslash{}end\{#1\}
12364 }%

LWR@orignewline
12366 }
```

83.5 Equation environment

Remember existing equation environment, after redefined by amsmath, if loaded.

```
12367 \AtBeginDocument{
12368 \let\LWR@orig@equation\equation
12369 \let\LWR@orig@endequation\endequation
12370 \csletcs{LWR@orig@equation*}{equation*}
12371 \csletcs{LWR@orig@endequation*}{endequation*}
12372 }
```

```
\LWR@doequation \{\langle env \ contents \rangle\} \{\langle env \ name \rangle\}
```

For svG math output, the contents are typeset using the original equation inside a lateximage, along with an <alt> tag containing a detokenized copy of the LATEX source for the math.

For MathJax output, the contents are typeset in an original equation environment placed inside a HTML comment, with special processing for \labels. The contents are also printed to the HTML output for processing by the MathJax script.

```
12373 \newcommand*{\LWR@doequation}[2]{%
12374
```

If mathjax or FormatWP, print the \LaTeX expression:

```
\label{localization} $$12375 \quad \left( bool{mathjax} \ or \ ( bool{FormatWP} \ and \ bool{WPMarkMath} \ ) \ \}\%$
```

MATHJAX output:

```
12376 {
```

Print commands to syncronize MathJax's equation number and format to the current LATEX chapter/section and equation number:

```
12377 \LWR@syncmathjax%
```

Print the LATEX math inside an HTML comment:

svG output: Create the lateximage along with an HTML <alt> tag having an equation number, the LATEX equation environment commands, and the contents of the environment's \BODY.

```
12380 {% not mathjax
```

Begin the lateximage with an <alt> tag containing the math source:

```
\ifstrequal{#2}{equation*}{%
12381
12382
                 \begin{BlockClass}{displaymath}%
            }{%
12383
                 \begin{BlockClass}{displaymathnumbered}%
12384
            }%
12385
             \LWR@newautoidanchor%
             \booltrue{LWR@indisplaymathimage}%
12387
12388
            \begin{lateximage}[%
12389
                 \ifstrequal{#2}{equation*}{%
                     12390
        %
12391
                                              no tag was given
                     }{%
12392
                         (\LWR@equationtag) % tag was given
12393
                     }%
12394
                 }{%
12395
                     (\LWR@equationtag) % automatic numbering
12396
                 }%
12397
12398
                 \text{textbackslash}\{begin\{\#2\}\}\ % extra space
             \LWR@HTMLsanitizeexpanded{\detokenize\expandafter{#1}} % extra space
12399
                 \text{textbackslash}\{\text{end}\{\#2\}\}\%
12400
            ]*(math)% alt tag, ARIA
12401
```

Support for xfakebold:

```
12402 \LWR@applyxfakebold%
```

Create the actual LATEX-formatted equation inside the lateximage using the contents of the environment.

```
12403 \@nameuse{LWR@orig@#2}%
12404 #1% contents collected by \collect@body
12405 \@nameuse{LWR@orig@end#2}%
12406 \end{lateximage}%
12407 \end{BlockClass}%
12408 }% not mathjax
```

Clear the single-use alt text:

```
12409 \gdef\LWR@ThisAltText{}%
12410 }
```

After the environment, if MathJax, print the math to the html output for MathJax processing. If a footnote is used, sync the footnote counter before, then unsync after for non-equation environments, as defined next.

```
12411 \newcommand*{\LWR@doendequation}[1]{%
12412
         \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
12413
         {%
             \IfSubStr{\detokenize\expandafter{\BODY}}{\detokenize{note}}{%
12414
                  \InlineClass{hidden}{\LWR@syncnotenumbers}%
12415
                  \LWR@addmathjax{#1}{\BODY}%
12416
12417
                  \InlineClass{hidden}{\LWR@syncnotenames}%
12418
             }{%
                  \label{lower} $$ \LWR@addmathjax{#1}{\BODY}% $$
12419
             }%
12420
12421
         }{}%
12422
```

Clear the single-use alt text:

```
12423 \quad \
```

The following are used to syncronize footnote marks and related to MATHJAX if *note* is used inside the MATHJAX expression. The counter is read from LATEX then defined into MATHJAX for use during the following equation. After the equation, the MATHJAX value is returned to the text from \footnotename. Other notes may be added by appending to \LWR@syncnotenumbers and \LWR@syncnotenames.

\LWR@synconenotenumber $\{\langle MathJax \ variable \rangle\} \{\langle mark \rangle\}$

```
12425 \newcommand*{\LWR@synconenotenumber}[2]{%
12426 \textbackslash(
12427 \textbackslash{}def\textbackslash{}#1\{#2\}
12428 \textbackslash)
12429 }
```

\LWR@syncnotenumbers Assignments to make.

```
12430 \newcommand*{\LWR@syncnotenumbers}{\LWR@synconenotenumber{LWRfootnote}{\thefootnote}}
```

```
\LWR@synconenotename \{\langle MathJax \ variable \rangle\} \{\langle text \rangle\}
```

```
12431 \newcommand*{\LWR@synconenotename}[2]{%
12432 \textbackslash(
12433 \textbackslash{}\def\textbackslash{}\#1name\{\#2\}
12434 \textbackslash)
12435 }
```

\LWR@syncnotenames Assignments to make.

 $12436 \land \texttt{LWR@syncnotename} \{ LWR footnote \} \{ footnotename \} \}$

Remove existing equation environment:

```
12437 \AtBeginDocument{
12438 \let\equation\relax
12439 \let\endequation\relax
12440 \csletcs{equation*}{relax}
12441 \csletcs{endequation*}{relax}
12442 }
```

equation (*env*.) The new equation environment is created with \NewEnviron (from the environ package), which stores the contents of its environment in a macro called \BODY.

```
12443 \AtBeginDocument{
12444 \NewEnviron{equation}%
12445 {\LWR@doequation{\BODY}{equation}}%
12446 [\LWR@doendequation{equation}]
12447
12448 \LetLtxMacro\LWR@equationnormal\equation
12449 \LetLtxMacro\endLWR@equationnormal\endequation
12450 }% AtBeginDocument
```

equation* (env.)

Remember the "less" version of equation, which uses MATHJAX and alt tags, but does not support complicated contents such as some TikZ expressions.

```
12459 \AtBeginDocument{
12460 \LetLtxMacro\LWR@equationless\equation
12461 \LetLtxMacro\endLWR@equationless\endequation
12462 \csletcs{LWR@equationlessstar}{equation*}
12463 \csletcs{LWR@endequationlessstar}{endequation*}
12464 }
```

83.6 \displaymathnormal and \displaymathother

\displaymathnormal

By default, or when selecting \displaymathnormal, MATHJAX math display environments print their contents as text into HTML for MATHJAX to interpret, and svg display math environments render their contents as svg images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated TikZ pictures, compilation will fail.

\displaymathother MATHJAX unsupported complicated alt tag When selecting \displaymathother , it is assumed that the contents are more complicated than "pure" math. An example is an elaborate TikZ picture, which will not render in MathJax and will not make sense as an Html alt tag. In this mode, MathJax is turned off, math display environments become svg images, even if MathJax is selected, and the Html alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as TikZ pictures are more likely to compile successfully.

\displaymathnormal Use when display math environments have simple math which is to sent to Math-simple math objects
JAX or included in HTML alt tags.

```
12465 \newcommand*{\displaymathnormal}{%
        \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
12466
        \LetLtxMacro\[\LWR@openbracketnormal%
12467
        \LetLtxMacro\]\LWR@closebracketnormal%
12468
        \LetLtxMacro\displaymath\LWR@displaymathnormal%
12469
        \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
12470
        \LetLtxMacro\equation\LWR@equationnormal%
12471
12472
        \LetLtxMacro\endequation\endLWR@equationnormal%
12473
        \csletcs{equation*}{LWR@equationnormalstar}%
12474
        \csletcs{endequation*}{LWR@endequationnormalstar}%
12475 }
```

\displaymathother Use when display math environments have complicated objects which will not complicated math objects work with MATHJAX or should not be included in HTML alt tags. Complicated contents are more likely to compile correctly.

```
12476 \newcommand*{\displaymathother}{%
                         \boolfalse{mathjax}%
                12477
                         \LetLtxMacro\displaymath\LWR@displaymathother%
                12478
                         \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
                12479
                         \LetLtxMacro\[\LWR@displaymathother%
                12480
                         \LetLtxMacro\]\endLWR@displaymathother%
                12481
                12482
                         \LetLtxMacro\equation\LWR@equationother%
                12483
                         \LetLtxMacro\endequation\endLWR@equationother%
                12484
                         \csletcs{equation*}{displaymath}%
                         \csletcs{endequation*}{enddisplaymath}%
                12485
                12486 }
                12487 \end{warpHTML}
for PRINT output: 12488 \begin{warpprint}
```

Print-mode versions:

```
12491 \newcommand*{\theMathJaxsubequations}{0}
12492 \newcommand*{\theMathJaxsection}{}
12493 \newcommand*{\theMathJaxequation}{\arabic{equation}}
12494 \end{warpprint}

for HTML output: 12495 \begin{warpHTML}
```

83.7 AMS Math environments

83.7.1 Support macros

LWR@amsmultline (bool) True if processing a multline environment.

To compensate for multline-spefific code, LWR@amsmultline is used to add extra horizontal space in \LWR@htmlmathlabel if is used in an amsmath environment which is not a multline environment and not an equation.

```
12496 \newbool{LWR@amsmultline}
12497 \boolfalse{LWR@amsmultline}
```

\LWR@beginhideamsmath Starts hiding LATEX math inside an HTML comment.

```
12498 \newcommand*{\LWR@beginhideamsmath}{
12499 \LWR@stoppars
12500 \LWR@orignobreakspace\LWR@orignewline
12501 \LWR@htmlopencomment
12502
12503 \begingroup
12504 \LWR@restoreorigformatting
```

Temporarily prevent underfull \hbox warnings.

```
12505 \hbadness=10000\relax%

12506 \booltrue{LWR@insidemathcomment}
12507 }
```

\LWR@endhideamsmath Ends hiding LATEX math inside an HTML comment.

```
12508 \newcommand*{\LWR@endhideamsmath}{
12509 \endgroup
12510
12511 \LWR@htmlclosecomment
12512 \boolfalse{LWR@insidemathcomment}
12513 \LWR@orignewline
12514 \LWR@startpars
12515 }
```

83.7.2 Environment patches

The amsmath environments already collect their contents in $\ensuremath{\text{Qenvbody}}$ for further processing. eqnarray is not an \mathcal{H}_MS package, and thus requires special handling.

For svG math: Each environment is encapsulated inside a lateximage environment, along with a special optional argument of \LWR@amsmathbody or \LWR@amsmathbodynumbered telling lateximage to use as the HTML <alt> tag the environment's contents which were automatically captured by the $\mathcal{A}_{M}\mathcal{S}$ environment.

For MathJax: Each environment is synched with LATEX's equation numbers, typeset with LATEX inside an HTML comment, then printed to HTML output for MathJax to process.

eqnarray (*env.*) This environment is not an \mathcal{F}_{MS} environment and thus its body is not automatically captured, so the environ package is used to capture the environment into \BODY.

```
12516 \let\LWR@origeqnarray\eqnarray
12517 \let\LWR@origendeqnarray\endeqnarray
```

To remember whether the starred environment was used, and thus whether to number the equations:

```
12518 \newbool{LWR@numbereqnarray}
12519 \booltrue{LWR@numbereqnarray}
```

Common code used by eqnarray and Begnarray (from fancybox):

```
12520 \newcommand{\LWR@eqnarrayfactor}{%
```

If mathjax or FormatWP, print the LATFX expression:

If MathJax, the environment contents (the \BODY) are executed in a html comment to trigger the correct equation number increment (if not starred), then are included verbatim in the output for MathJax to interpret:

```
12523 \LWR@syncmathjax%
12524 \boolfalse{LWR@amsmultline}%
12525 \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
12526 \ifbool{LWR@numbereqnarray}%
12527 {%
```

If numbering the equations, execute a copy inside an HTML comment block:

```
12528 \LWR@beginhideamsmath%
12529 \LWR@origeqnarray%
12530 \BODY%
12531 \LWR@origendeqnarray%
12532 \LWR@endhideamsmath%
```

Then print the (sanitized) contents to the output for MATHJAX to interpret:

If not numbering equations, just create the contents for MATHJAX:

For numbered svG equations, first create a lateximage with an alt attribute containing sanitized copy of the source code:

```
12542 \begin{BlockClass}{displaymathnumbered}%
12543 \LWR@newautoidanchor%
12544 \booltrue{LWR@indisplaymathimage}%
12545 \begin{lateximage}[(\LWR@startingequationtag\textendash\LWR@equationtag)%
12546 \LWR@addmathjax{eqnarray}{\BODY}]*(math)%
```

Support for xfakebold:

```
12547 \LWR@applyxfakebold%
```

Create the image contents using an actual eqnarray:

```
      12548
      \LWR@origeqnarray%

      12549
      \BODY%

      12550
      \LWR@origendeqnarray%

      12551
      \end{lateximage}%

      12552
      \end{BlockClass}%

      12553
      }%

      12554
      {% not LWR@numbereqnarray
```

If not numbered, do the same, but an extra \nonumber seems to be required:

```
12555 \begin{BlockClass}{displaymath}%
12556 \LWR@newautoidanchor%
12557 \booltrue{LWR@indisplaymathimage}%
12558 \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]*(math)%
```

Support for xfakebold:

```
\LWR@applyxfakebold%
12559
12560
                 \def\@eqncr{\nonumber\@seqncr}
                 \csuse{LWR@origeqnarray}%
12561
                 \BODY%
12562
                 \nonumber\csuse{LWR@origendeqnarray}%
12563
12564
                 \end{lateximage}%
12565
                 \end{BlockClass}%
             }% LWR@numbereqnarray
12566
        }% not mathjax
12567
```

Default to number equations in the future:

```
12568 \booltrue{LWR@numbereqnarray}%
```

Clear the single-use alt text:

```
12569 \gdef\LWR@ThisAltText{}%
12570 }
```

eqnarray itself is made with a blank line before and after to force it to be on its own line:

```
12571 \RenewEnviron{eqnarray}
12572 {%
12573
12574 \LWR@eqnarrayfactor
12575
12576 }
```

The starred version is patched to turn off the numbering:

```
12577 \csgpreto{eqnarray*}{\boolfalse{LWR@numbereqnarray}}
12578 \end{warpHTML}
```

84 Lateximages

84.1 Description

lateximage (env.)

A lateximage is a piece of the document which is typeset in LATEX then included in the HTML output as an image. This is used for math if svG math is chosen, and also for the picture, tikzpicture, and other environments.

Before typesetting the lateximage a large number of formatting, graphics, and symbols-related macros are temporarily restored to their print-mode meaning by \LWR@restoreorigformatting. (See section 81.)

A lateximage is typeset on its own PDF page inside an HTML comment which starts on the preceding page and ends on following page, and instructions are written to lateximage.txt for *lwarpmk* to extract the lateximage from the page of the PDF file then generate an accompanying .svg file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML is created to hold both the HTML comment, which will have the *pdftotext* conversion, and also the link to the final .svg image.

A LATEX label is used to remember which PDF page has the image. A label is used because footnotes, endnotes, and pagenotes may cause the image to appear at a later time. The label is declared along with the image, and so it correctly remembers where the image finally ended up.

нтмL alt tag

The HTML alt tag is set to the LATEX source for svg math, some chemistry expressions, and perhaps some other expressions which make sense for text copy/paste. In some other cases, the alt tag is set according to the package name.

When creating an svG math image, its HTML alt tag may be set to the math expression, which may be hashed for image reuse. In the case of \ensuremath or after \inlinemathother, where the contents require a unique image for each instance of the same expression, the alt tag is set to \MathImageAltText, along with \AltTextOpen and \AltTextClose, and the image is not reused.

This alt expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "math image", and it may be

changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following svG math images.

For many packages, the output is placed inside a lateximage with an HTML alt tag set to the package name followed by \PackageDiagramAltText. For example:

```
(-xy- diagram)
```

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "diagram", and may it be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.

svg image font size

For the lateximage environment, the size of the math and text used in the svg image may be adjusted by setting \LateximageFontSizeName to a font size name—without the backslash, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline svg math, font size is instead controlled by *\LateximageFontScale*, which defaults to:

\newcommand*{\LateximageFontScale}{.75}

84.2 Support counters and macros

```
for HTML output: 12579 \begin{warpHTML}
```

LWR@lateximagenumber (Ctr) Sequence the images.

```
12580 \newcounter{LWR@lateximagenumber}
12581 \setcounter{LWR@lateximagenumber}{0}
```

 ${\tt LWR@lateximagedepth}\ ({\it Ctr}) \quad {\tt Do\ not\ create\ \ \ \ } lateximage\ inside\ of\ \ \ \ \ lateximage.$

```
12582 \newcounter{LWR@lateximagedepth}
12583 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
12584 \edef\LWR@hashmark{\string#} % for use in \write
12585 \edef\LWR@percent{\@percentchar} % for use in \write
```

```
12586 \newcounter{LWR@LIpage}
12587 \end{warpHTML}
```

84.3 Font size

\LateximageFontSizeName Declares how large to write text in \lateximages. The .svg file text size should blend well with the surrounding HTML text size.

no backslash Do not include the leading backslash in the name.

12589 \newcommand*{\LateximageFontSizeName}{normalsize}

\LateximageFontScale Declares how large to scale inline svg math images. The .svg file text size should blend well with the surrounding HTML text size. The default is 1, but it may be redefined as needed depending on the HTML font.

```
12590 \newcommand*{\LateximageFontScale}{1}
12591 \end{warpall}
```

84.4 Equation numbers

for HTML output: 12592 \begin{warpHTML}

LWR@startingequation (Ctr) For use with lateximage and multi-line numbered equations. Remembers the next equation number so that it may be printed in the alt tag.

```
12593 \newcounter{LWR@startingequation}
12595 \@ifundefined{chapter}
12596 {
12597 \renewcommand{\theLWR@startingequation}{%
        \arabic{LWR@startingequation}%
12598
12599 }
12600 }
12601 {% chapter defined
12602 \renewcommand{\theLWR@startingequation}{%
        \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
12603
         \arabic{LWR@startingequation}%
12604
12605 }
12606 }
```

LWR@isstartingequation (bool) True for the first equation tag, false for later tags in the same environment.

12607 \newbool{LWR@isstartingequation}

Prints the starting equation number or tag. \LWR@startingequationtag

 ${\tt 12608 \ let LWR@starting equation} the LWR@starting equation$

Prints the ending equation number or tag. \LWR@equationtag

> This is reset by lateximage, may be temporarily overwritten by \tag calling \LWR@remembertag.

12609 \newcommand*{\LWR@equationtag}{}

Only if svg math, patch \tag after packages have loaded, in case someone else modified \tag.

```
12610 \AtBeginDocument{
12611
12612 \ifbool{mathjax}{}{% not mathjax
```

```
\LWR@remembertag \{\langle tag \rangle\}
```

For use inside the math environments while using svg math. Sets \t the LWR@startingequation and \t the equation to the given tag.

```
12613 \NewDocumentCommand{\LWR@remembertag}{m}{%
12614 \ifbool{LWR@isstartingequation}%
12615 {%
12616 \global\boolfalse{LWR@isstartingequation}%
12617 \xdef\LWR@startingequationtag{#1}%
12618 }{}%
12619 \xdef\LWR@equationtag{#1}%
12620 }%
12621 }% not mathjax
12622 }% AtBeginDocument
```

84.5 HTML alt tags

\LWR@amsmathbody $\{\langle envname \rangle\}$ For use inside the optional argument to a lateximage to add the contents of a AMS math environment to the <alt> tag.

```
12623 \newcommand*{\LWR@amsmathbody}[1]
12624 {%
12625 \textbackslash\{begin\}\{#1\} % extra space
12626 \LWR@HTMLsanitizeexpanded{\detokenize\expandafter{\the\@envbody}}%
12627 \textbackslash\{end\}\{#1\}%
12628 }
```

\LWR@amsmathbodynumbered $\{\langle envname \rangle\}$ For use inside the optional argument to a lateximage to add the contents of a AMS math environment to the alt tag, prefixed by the equation numbers.

84.6 lateximage environment

\LWR@lateximage@oneimage $\{\langle 1: alt\ text \rangle\} \{\langle 2: filename \rangle\} \{\langle 3: css\ style \rangle\} \{\langle 4: delimit? \rangle\} \{\langle 5: aria\ role \rangle\}$

Creates an image for the lateximage, whose alt text depends on the circumstances.

```
12645 \newcommand{\LWR@lateximage@oneimage}[5]{%
12646
         \LWR@traceinfo{LWR@lateximage@oneimage !#1!#2!#3!#4!#5!}%
         \ifdefvoid{\LWR@ThisAltText}{%
12647
             \IfBooleanTF{#4}{%
12648
                 \LWR@lateximage@oneimageb{#1}{#2}{#3}{#5}%
12649
12650
             }{%
                 \LWR@lateximage@oneimageb%
12651
12652
                     {\AltTextOpen#1\AltTextClose}%
12653
                     {#2}{#3}{#5}%
12654
             }%
        }{%
12655
             \LWR@lateximage@oneimageb%
12656
12657
                 {\AltTextOpen\LWR@ThisAltText\AltTextClose}%
12658
                 {#2}{#3}{#5}%
12659
        }%
12660 }
```

 $lateximage (env.) * [\langle 2: \langle alt \rangle tag \rangle] * [\langle 4: add'l \ hashing \rangle] [\langle 5: css \ style \rangle] (\langle 6: aria \ role \rangle)$

Typesets the contents and then renders the result as an svg file. Star #1 causes the image to be hashed for reuse. Star #3 causes the alt tag to not include \AltTextOpen and \AltTextClose, for use with math expressions.

The optional <alt> tag is included in the HTML code for use with copy/paste.

image filename hashing

If starred, a hashed filename is used. If so, the hash is based on the alt tag and also the additional hashing argument.

This may be used to provide an expression with a simple alt tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TEX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is used in the additional hashing argument to ensure a unique image.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple alt tag is still the same.

*_html.aux (file) A new label is placed into the file *_html.aux:

```
\newlabel{LWRlateximage-<BaseJobname>-<number>}{{<x>}}
```

This is used to find the image in the PDF file, according to its name.

*-images.txt (file) A list of images to generate is created in <jobname>-images.txt. Each line has three pipe-delimited fields, containing the PDF page number from <jobname>_html.pdf, where the image is located, a boolean indicating whether the image is hashed, and the filename of the image. The last line has "end" in each field, and is used to detect an incomplete compile.

```
12661 \catcode'\$=\active%
12662
12663 \NewDocumentEnvironment{lateximage}{s O{\ImageAltText} s O{} O{} D(){}}%
12664 {%
12665 \LWR@traceinfo{lateximage !#1!#2!#3!#4!#5!#6!}%
12666 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
12667 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%
```

Nested lateximages remain one large lateximage:

```
12668 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
```

If nesting inside an already-existing lateximage, simply record one more level. $\mathcal{H}_{M}\mathcal{S}$ packages redefine \addtocounter to do nothing if inside a \text, so lower-level TFX macros are used for tracking nested lateximages.

```
12669 {%
12670 % \addtocounter{LWR@lateximagedepth}{1}%
12671 \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
12672 }%
```

Otherwise, this is the outer-most lateximage:

```
12673 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

The default equation tag, unless overwritten by \tag:

```
12679 \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
12680 \addtocounter{LWR@lateximagenumber}{1}%
12681 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
12682 \boolfalse{mathjax}%
```

While inside a lateximage, do not use HTML tags for verbatim content, and do not sanitize HTML tags for <, >, &, etc.

```
12683 \boolfalse{LWR@verbtags}%
12684 \boolfalse{LWR@HTMLsanitize@tmpb@enable}%
```

Be sure that are doing a paragraph:

```
12685 \LWR@ensuredoingapar%
```

Inside the lateximage, temporarily prevent underfull \hbox warnings.

```
12686 \hbadness=10000\relax%
```

Next file:

```
12687 \addtocounter{LWR@externalfilecnt}{1}%
12688 \LWR@traceinfo{lateximage: LWR@externalfilecnt is \arabic{LWR@externalfilecnt}}%
```

Figure out what the next page number will be. \setcounterpageref assigns LWR@LIpage to the page number for the reference LWRlateximage-BaseJobname-XXX:

```
12689 \setcounterpageref{LWR@LIpage}{%
12690    LWRlateximage~\BaseJobname~\arabic{LWR@lateximagenumber}%
12691  }%
12692 \LWR@traceinfo{lateximage: LWR@LIpage is \arabic{LWR@LIpage}}%
```

Create an HTML span which will hold the comment which contains the *pdftotext* translation of the image's page, and also will hold the link to the .svg file:

Write instructions to the <ImagesDirectory>.txt file:

```
12699 \LWR@traceinfo{lateximage: about to write to \BaseJobname-images.txt}%
12700 \IfBooleanTF{#1}% starred
12701 {% hash
```

Compute and save the hashed file name for later use:

```
\ifdefvoid{\LWR@ThisAltText}{%
12702
                 \IfBooleanTF{#3}{%
12703
                      \edef\LWR@hashedname{%
12704
                          \LWR@mdfive{\detokenize\expandafter{#2}-!-#4}%
12705
12706
                     }%
                 }{%
12707
                     \edef\LWR@hashedname{%
12708
                  \LWR@mdfive{\detokenize\expandafter{\AltTextOpen#2\AltTextClose}-!-#4}%
12709
12710
                     }%
                 }%
12711
             }{%
12712
                 \edef\LWR@hashedname{%
12713
                \LWR@mdfive{\detokenize\expandafter{\AltTextOpen\LWR@ThisAltText\AltTextClose}-!-#4}%
12714
                 }%
12715
12716
             \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%
12717
```

Write the page, hashing, and hashed name:

No hash, so write the page, no hashing, and the image number:

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```
12728 \LWR@traceinfo{lateximage: about to create open comment}% 12729 \LWR@htmlopencomment%
```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an $\mathcal{A}_{M}S$ \text, since the outer-most level will never be in math mode.

```
12730 \addtocounter{LWR@lateximagedepth}{1}%
```

Start the new PDF page:

```
12731 \LWR@traceinfo{lateximage: about to create a new page}% 12732 \LWR@maybe@orignewpage%
```

If the current page is larger, typeset the image in a "standard" width page and font size:

```
12733
        \LWR@traceinfo{lateximage: about to create minipage}%
        \setcounter{LWR@mpfootnote@store}{\value{mpfootnote}}
12734
12735
        \ifdimless{\linewidth}{6in}{%
             \LWR@print@minipage{\linewidth}%
12736
12737
        }{%
12738
             \LWR@print@minipage{6in}%
12739
        }%
12740
        \ifnumgreater{\value{LWR@minipage@depth}}{0}%
12741
             {\setcounter{mpfootnote}{\value{LWR@mpfootnote@store}}}%
12742
             {}%
        \@nameuse{LWR@print@\LateximageFontSizeName}%
12743
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for \hspace, etc. inside a lateximage.

```
12744 \LWR@traceinfo{lateximage: about to temporarily restore formatting}% \LWR@restoreorigformatting%
```

If not inside a minipage, use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

Create the LWRlateximage-jobname-<number> label:

Adjust the rule color to match HTML:

```
12757 \ifdefvoid{\LWR@ruleHTMLcolor}{}%
12758 \LWR@print@arrayrulecolor[HTML]{\LWR@ruleHTMLcolor}%
12759 }%
```

Enable print-mode math functions:

Only enable print-mode display math if are not already inside display math:

```
12764
        \ifbool{LWR@indisplaymathimage}{}{% not in display math
            \LetLtxMacro\[\LWR@origopenbracket%
12765
            \LetLtxMacro\]\LWR@origclosebracket%
12766
            \let\equation\LWR@orig@equation%
12767
12768
            \let\endequation\LWR@orig@endequation%
12769
            \csletcs{equation*}{LWR@orig@equation*}%
12770
            \csletcs{endequation*}{LWR@orig@endequation*}%
12771
        }% not in display math
```

For chemformula:

```
12772 \LetLtxMacro\LWR@newsingledollar$%
12773 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting
12774}% end of outer-most lateximage
12775 \LWR@traceinfo{lateximage: finished start of environment}%
12776}% end of \begin{lateximage}
```

\endlateximage When the lateximage environment closes:

```
12777 {% start of \end{lateximage}
12778 \LWR@traceinfo{lateximage: starting end of lateximage}%
```

Nested more than one deep?

```
12779 \LWR@traceinfo{lateximage: internal depth was \arabic\{LWR@lateximagedepth\}\} 12780 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
```

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level TEX macro due to \mathcal{FMS} \text change of \addtocounter.

If this is the outer-most lateximage:

```
12785 {% end of outer-most lateximage
```

Finish the lateximage minipage and start a new PDF page:

```
12786 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
12787 \endLWR@print@minipage%
12788 \LWR@maybe@orignewpage%
```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdftotext*:

```
12789 \LWR@print@vspace*{.5\baselineskip}%
12790 \LWR@htmlclosecomment%
12791 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
12792 \LWR@traceinfo{about to LWR@lateximage@oneimage !#2!}%
12793 \IfBooleanTF{#1}% starred
12794 {% hash
12795 \LWR@lateximage@oneimage{#2}{\LWR@hashedname}{#5}{#3}{#6}%
12796 }% hash
12797 {% no hash
12798 \LWR@lateximage@oneimage{#2}{\LWR@ImagesName\theLWR@externalfilecnt}{#5}{#3}{#6}%
12799 }% no hash
```

Be sure that are doing a paragraph:

```
12800 \LWR@ensuredoingapar%
```

Close the HTML span which has the *pdftotext* comment and also the link to the .svg image:

```
12801 \LWR@htmltag{/span}%
12802 \ifbool{HTMLDebugComments}{%
12803 \LWR@htmlcomment{End of lateximage}%
12804 \}{}%
```

Undo one lateximage level. This is not inside an \mathcal{H}_MS \text, so regular \addtocounter may be used here.

```
12805 \addtocounter{LWR@lateximagedepth}{-1}%
```

Clear the single-use alt text:

```
12806 \gdef\LWR@ThisAltText{}%
12807 }% end of outer-most lateximage
```

```
12808 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
                 12809 \LWR@traceinfo{lateximage: done}%
                 12810 }%
                12811 \catcode'\$=3% math shift
                12812 \end{warpHTML}
for PRINT output: 12813 \begin{warpprint}
  lateximage (env.) * [\langle \text{calt} > tag \rangle] * [\langle add'l \ hashing \rangle] [\langle css \ style \rangle]
                    Ignored in print mode.
                 12814 \NewDocumentEnvironment{lateximage}{s o s o o d()}
                 12815
                         {}{}
                 12816 \end{warpprint}
                           center, flushleft, flushright
                    85
for HTML output: 12817 \begin{warpHTML}
      center (env) Replace center functionality with css tags. In a <span>, these macros are nullified,
                    but extra % are used to remove spurrious spaces here as well.
                 12818 \newenvironment*{LWR@HTML@center}
                 12819 {%
                          \LWR@forcenewpage%
                 12820
                         \ifbool{FormatWP}%
                 12821
                              {\BlockClass[\LWR@print@mbox{text-align:center}]{center}}%
                 12822
                              {\BlockClass{center}}%
                 12823
                 12824 }
                 12825 {\endBlockClass}
                 12827 \LWR@formattedenv{center}
  flushright (env.)
                 12828 \newenvironment*{LWR@HTML@flushright}
                 12829 {%
                          \LWR@forcenewpage%
                 12830
                 12831
                          \ifbool{FormatWP}%
                              {\BlockClass[\LWR@print@mbox{text-align:right}]{flushright}}%
                 12832
                              {\BlockClass{flushright}}%
                 12833
                12834 }
                 12835 {\endBlockClass}
                 12837 \LWR@formattedenv{flushright}
   flushleft (env.)
                 12838 \newenvironment*{LWR@HTML@flushleft}
```

12839 **{%** 12840

\LWR@forcenewpage%

\centering, \raggedleft, and \raggedright usually have no effect on the HTML output, but they may be used to compare with the next token to identify their use at the start of a float. See \LWR@floatalignment.

```
at the start of a float. See \LWR@floatalignment.
 \centering
          \verb|\ifbool{HTMLDebugComments}|{\%}|
          12850
                      \LWR@htmlcomment{centering}%
         12851
                  }{}%
         12852 }
          12853 \LWR@formatted{centering}
\raggedleft
         {\tt 12854 \ \ } \\ {\tt LWR@HTML@raggedleft} \\ {\tt \%}
          12855
                  \ifbool{HTMLDebugComments}{%
                      \LWR@htmlcomment{raggedleft}%
          12856
         12857
                  }{}%
         12858 }
         12859 \LWR@formatted{raggedleft}
\raggedright
          12860 \newcommand*{\LWR@HTML@raggedright}{%
                  \ifbool{HTMLDebugComments}{%
          12861
                      \LWR@htmlcomment{raggedright}%
          12862
          12863
          12864 }
          12865 \LWR@formatted{raggedright}
  \leftline \{\langle text \rangle\}
          \centerline \{\langle text \rangle\}
          12867 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
 \rightline \{\langle text \rangle\}
          12868 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
          12869 \end{warpHTML}
```

86 Preloaded packages

for HTML output: 12870 \begin{warpHTML}

If the given package was loaded before or by lwarp, load the lwarp version as well.

\LWR@PreloadedPackage $\{\langle packagename \rangle\}$

Undo nameref if already loaded, such as by memoir:

```
12880 \LWR@PreloadedPackage{nameref}
```

If inputtrc was loaded before lwarp, as is usually done, explicitly load the lwarp patches now:

```
12881 \LWR@PreloadedPackage{inputtrc}
```

If textcomp was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
12882 \LWR@PreloadedPackage{textcomp}
```

If xunicode was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
12883 \LWR@PreloadedPackage{xunicode}
```

If graphics or graphicx were loaded before lwarp, perhaps by xunicode, explicitly load the lwarp patches now:

```
12884 \LWR@PreloadedPackage{graphics}
12885 \LWR@PreloadedPackage{graphicx}
```

tagpdf-base may have been preloaded by pdfmanagement-testphase

```
12886 \LWR@PreloadedPackage{tagpdf-base}
```

scalefnt may have been preloaded by babel

```
12887 \LWR@PreloadedPackage{scalefnt}
```

fontaxes must be preloaded so that lwarp may patch it for HTML.

```
12888 \LWR@PreloadedPackage{fontaxes}
```

Various font packages which may be loaded before lwarp:

```
12889 \LWR@PreloadedPackage{cmbright}
12890 \LWR@PreloadedPackage{fourier}
12891 \LWR@PreloadedPackage{kpfonts}
12892 \LWR@PreloadedPackage{kpfonts-otf}
12893 \LWR@PreloadedPackage{libertinust1math}
12894 \LWR@PreloadedPackage{pxfonts}
12895 \LWR@PreloadedPackage{txfonts}
12896 \LWR@PreloadedPackage{txgreeks}
12897 \LWR@PreloadedPackage{newpxmath}
12898 \LWR@PreloadedPackage{newtxmath}
12899 \LWR@PreloadedPackage{newtxsf}
12900 \LWR@PreloadedPackage{mathalpha}
12901 \LWR@PreloadedPackage{unicode-math}
12902 \LWR@PreloadedPackage{realscripts}
   nfssext-cfr may be preloaded by cfm-lm or related font packages.
12903 \LWR@PreloadedPackage{nfssext-cfr}
   ulem may be preloaded by ctex, ctexart, and related classes.
12904 \LWR@PreloadedPackage{ulem}
12905 \LWR@PreloadedPackage{xetexko}
   geometry is preloaded by lwarp, and perhaps by various classes.
12906 \LWR@PreloadedPackage{geometry}
   plext is preloaded by some CJK classes.
12907 \LWR@PreloadedPackage{plext}
   stfloats is preloaded by ltj* classes.
12908 \LWR@PreloadedPackage{stfloats}
   lltjext is preloaded by ltj* classes.
12909 \LWR@PreloadedPackage{lltjext}
   luatexko must be loaded before lwarp.
12910 \LWR@PreloadedPackage{luatexko}
12911 \end{warpHTML}
```

87 siunitx

A few HTML unit equivalents are defined here.

siunitx is well supported by lwarp.

Limitations Some general limitations:

Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

\cancel is not currently supported for siunitx v3.

Negative values are not automatically colored.

Tabular S and s columns are rendered as simple c columns, although key settings will be set. If using scientific notation, table-format, table-align-uncertainty, drop-exponent, etc.. use \tablenum for each cell. This is especially required for drop-exponent, without which the value will be shown incorrectly.

drop-exponent

table-auto-round table-auto-round is ignored.

Math rendering Math may be rendered in several ways in the same document:

For math mode with svg display: The original siunitx code is used while generating the svg image.

For HTML text mode: lwarp uses siunity code patched for HTML, and simplified units.

For math expressions while using MATHJAX: A limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. The result usually looks fine, and otherwise is enough to get the meaning across.

Custom units siunitx allows customized units:

\DeclareSIUnit $\{\langle name \rangle\} \{\langle definition \rangle\}$

\DeclareSIUnit declares a version of the unit for the print version. This is also used when the unit is printed in svg math or a lateximage. It is also used for HTML if an HTML-specific version is not defined with \HTMLDeclareSIUnit.

\DeclareSIUnit\myunit{\ensuremath{\text{m}_y}}

\HTMLDeclareSIUnit $\{\langle name \rangle\} \{\langle definition \rangle\}$

v3 only! Use this after the print unit has been defined. For siunitx v3, \HTMLDeclareSIUnit declares a simplified version of the unit for HTML, for example if the print-mode unit uses TEX boxes or \ensuremath:

\HTMLDeclareSIUnit\myunit{\text{m}\textsubscript{\textit{y}}}

It is also possible to provide a custom unit for MATHJAX:

\CustomizeMathJax{\newcommand{\myunit}{\text{m}_y}}

Predefined units Most units work as-is with HTML. For the following units, lwarp has already set \HTMLDeclareSIUnit: \celsius, \arcminute, \arcsecond, \elementarycharge, \clight, \bohr, \electronmass, \hartree, \planckbar.



Document modifications required for MATHJAX

• Place \sisetup in the preamble before \begin{document}. Changes made later may be ignored, especially with MATHJAX. The MATHJAX emulation also ignores most macro options.

complex numbers

• Complex numbers are displayed as entered, ignoring output-complex-root.

custom units

• Custom units may be added with \CustomizeMathJax. For example, from lwarp-common-mathjax-siunitx:

 • Units work better using ~ between units instead of using periods.

• To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

• For \numlist, the argument is printed as text as-is, so use space between semicolons for improved readability.

Missing \$ inserted

 If using parse-numbers = false, also use \num or \qty. siunitx=siunitx>Missing \$ inserted.

Also see MathJax option, section 8.7.5.

for HTML output: 12912 \begin{warpHTML}

Options for siunitx:

```
12913 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}}
12914 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
12915 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
12916 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLunicode{2033}}
12917 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLunicode{210F}}}}
12918
12919 \appto\LWR@restoreorigformatting{%
12920 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
12921 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
12922 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
12923 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime}}}%
12924 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
12925 \}
```

for PRINT output: The print version of \HTMLDeclareSIUnit.

```
12927 \begin{warpprint}
12928 \NewDocumentCommand{\HTMLDeclareSIUnit}{o +m m}{}
12929 \end{warpprint}
```

88 Graphics print-mode modifications

88.1 General limitations

file extensions

Per table 9, image filenames may be specified either with or without an extension. If an extension is given it will be used as-is, for either print or html output. If no extension is given, a list of possible extensions is tried, which depends on whether print or html is being generated. This allows a PDF file for print and a svg file for html, for example. If no extension is given, the automatic search will only return lowercase extensions, even if the filename actually has an uppercase extension, and lwarp cannot get around this problem, so image file extensions must be lowercase to be seen by the html browser with lwarp. For example, name the image file image.pdf instead of image.PDF, but refer to it in the source as image, without an extension. For images which may be used as-is with either print or html, such as Jpg or png, you may use a capitalized extension if it is specified in the source, such as image.Jpg.

\includegraphics file formats

For \includegraphics with .pdf or .eps files, the user must provide a .pdf or .eps image file for use in print mode, and also a .svg, .png, or .jpg version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, lwarp will automatically choose the .pdf or .eps format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a .pdf or .eps image is referred to with its file extension, the extension will be changed to .svg for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

pdftocairo (*Prog*)
PDF to SVG

To convert a PDF image to svg, use the utility *pdftocairo*:

Enter ⇒ pdftocairo -svg filename.pdf

lwarpmk pdftosvg (*Prog*) For a large number of images, use *lwarpmk*:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

lwarpmk epstopdf (Prog)

For EPS images converted to PDF using the package epstopdf, use

epstopdf (*Prog*)
epstopdf package

Enter ⇒ lwarpmk pdftosvg *.PDF

to convert to svg images.

DVI LATEX When using DVI latex, it is necessary to convert EPS to PDF and then to SVG:

```
Enter \Rightarrow lwarpmk epstopdf *.eps (or a list of filenames)

Enter \Rightarrow lwarpmk pdftosvg *.pdf (or a list of filenames)
```

PNG and JPG

For PNG or JPGwhile using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

GIF GIF files may be used for HTML, but another format must also be provided for print output.

file extension priorities

If a file extension is not used, for HTML the file extension priorities are: svg, GIF, PNG, then JPG.

duplicate files image not displayed

A complication occurs if a file of the same name exists elsewhere in the TEX tree, such as a test image from some LATEX package. TEX looks in the local document directory before considering the directories specified by \graphicspath, but the TEX tree is found as "local", so any file in the tree is found before the directories in \graphicspath. To use such an image, it must be copied to the document's directory to be used for HTML, and furthermore must be in the document's base directory instead of an images subdirectory.

If using the older graphics syntax, use both optional arguments for \includegraphics. A single optional parameter is interpreted as the newer graphicx syntax. Note that viewports are not supported by lwarp—the entire image will be shown.

viewport

units

For \includegraphics, avoid px and % units for width and height, or enclose them inside warpHTML environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys width=.5\linewidth, or similar for \textwidth or \textheight to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the scale option, since it is not well supported by HTML browsers.

options \includegraphics accepts width and height, origin, rotate and scale, plus new class and alt keys. (alt has recently been incorportated into graphicx itself.)

HTML class With HTML output, \includegraphics accepts an optional class=xyz keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

Likewise, the \includegraphics alt key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag according to \ImageAltText.

```
\includegraphics[scale=<xx>]{ . . . }
```

to:

\includegraphics[width=<yy>\linewidth]{ . . . }

\rotatebox \rotatebox accepts the optional origin key.

hrowser support

\rotatebox, \scalebox, and \reflectbox depend on modern browser support. The css3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike LATEX, so expect some ugly results for scaling and rotating.

88.2 Print-mode modifications

for PRINT output: For print output, accept and then discard the new class key:

12930 \begin{warpprint}
12931 \define@key{Gin}{class}{}

Print-mode additions for the overpic package. See section 464 for the HTML version.

```
12932 \AtBeginDocument{
12933 \IfPackageLoadedTF{overpic}{
12934 \newcommand*{\overpicfontsize}{12}\
12935 \newcommand*{\overpicfontskip}{14}\
12936 }{}
12937 }
12938 \end{warpprint}
```

89 xcolor boxes

xcolor (*Pkg*) A few new definitions are provided for enhanced HTML colored boxes, and \fcolorbox is slightly modified. Print-mode version are also provided.

Print-mode versions of new xcolor defintions. These are defined inside warpall because they are also used for HTML while inside a lateximage. They are defined \AtBeginDocument so that the xcolor originals may first be loaded and saved for reuse.

The framed versions are modified to allow a background color of none, in which case only the frame is drawn, allowing the background page color to show.

```
for HTML & PRINT: 12939 \begin{warpall}
```

After xparse may have been loaded ...

12940 \AtBeginDocument{

... and *only* if xcolor was loaded:

```
12941 \IfPackageLoadedTF{xcolor}{
12942 \LWR@traceinfo{patching xcolor}
```

The print version:

\colorboxBlock \colorboxBlock is the same as \colorbox:

12943 \LetLtxMacro\colorboxBlock\colorbox

The original definition is reused by the new versions:

12944 \LetLtxMacro\LWR@orig@print@fcolorbox\fcolorbox

```
\label{lem:lemodel} $$ \colorbox [\langle framemodel \rangle] {\langle framecolor \rangle} [\langle boxmodel \rangle] {\langle text \rangle} $$
```

In print mode, \fcolorbox is modified to accept a background color of none.

($\footnote{location}$ combinations of $\footnote{location}$ if thenelse.)

```
12945 \newsavebox{\LWR@colorminipagebox}
12946
12947 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
12948 \LWR@traceinfo{LWR@print@fcolorbox #2 #4}%
```

Pre-load the contents into an LR box so that they can be used inside a \fcolorbox:

```
12949 \begin{lrbox}{\LWR@colorminipagebox}%
12950 #5%
12951 \end{lrbox}%
```

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a \fcolorbox.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```
\ifstrequal{#4}{none}%
                    12952
                    12953
                                  \LWR@traceinfo{background is none}%
                    12954
                                  {% scope the \colorlet
                    12955
                    12956
                                      \colorlet{LWR@currentcolor}{.}%
                    12957
                                      \color{#2}%
                    12958
                                      \fbox{%
                                           \color{LWR@currentcolor}%
                   12959
                                           \usebox{\LWR@colorminipagebox}%
                   12960
                                      }% fbox
                   12961
                                 }% colorlet
                   12962
                   12963
                             }% #4 none
                             {% #4 not none
                    12964
                             \LWR@traceinfo{background not none}%
                    12965
                    12966
                             \IfValueTF{#1}%
                    12967
                                  \IfValueTF{#3}%
                    12968
                               \label{localize} $$ \LWR@orig@print@fcolorbox[#1]{#2}[#3]{#4}{\LWR@colorminipagebox}}\% $$
                    12969
                              {\LWR@orig@print@fcolorbox[#1]{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
                    12970
                    12971
                             {% no value #1
                    12972
                                  \IfValueTF{#3}%
                    12973
                    12974
                              {\LWR@orig@print@fcolorbox{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
                    12975
                                 {\LWR@orig@print@fcolorbox{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
                    12976
                             }% no value #1
                    12977
                             }% #4 not none
                             \LWR@traceinfo{LWR@print@fcolorbox done}%
                    12978
                   12979 }
                   12980 \renewrobustcmd*{\fcolorbox}{\LWR@print@fcolorbox}%
    \label{lock} $$ \{\langle framemodel \rangle \} \{\langle framecolor \rangle \} [\langle boxmodel \rangle ] \{\langle boxcolor \rangle \} \{\langle text \rangle \} $$
                       In print mode, \fcolorboxBlock is the same as \fcolorbox.
                   12981 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}
                   12982 \newrobustcmd*{\fcolorboxBlock}{\LWR@print@fcolorboxBlock}
f(s) = \frac{(a.boxcolor)}{(3.boxmodel)} {(3.boxmodel)} {(4.boxcolor)} [(5.align)]
                       [\langle 6:height \rangle] [\langle 7:inner-align \rangle] \{\langle 8:width \rangle\}
```

In print mode, becomes a \fcolorbox containing a minipage:

Pre-load the contents into an LR box so that they can be used inside a \fcolorbox:

```
12986 \begin{lrbox}{\LWR@colorminipagebox}%
```

If inner alignment is not given, use the outer alignment instead:

```
12987 \IfValueTF{#7}%
12988 {\begin{minipage}[#5][#6][#7]{#8}}%
12989 {\begin{minipage}[#5][#6][#5]{#8}}%
12990 }%
12991 {%
12992 \end{minipage}%
12993 \end{lrbox}%
12994 \LWR@traceinfo{*** starting end fcolorminipage #1 #2 #3 #4 #8}%
```

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a \fcolorbox.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```
12995
        \ifstrequal{#4}{none}%
12996
        {% #4 none
            {% scope the \colorlet
12997
                \colorlet{LWR@currentcolor}{.}%
12998
                \color{#2}%
12999
                \fbox{%
13000
                    \color{LWR@currentcolor}%
13001
                    \usebox{\LWR@colorminipagebox}%
13002
13003
                }% fbox
            }% colorlet
13004
13005
        }% #4 none
13006
        {% #4 not none
            \IfValueTF{#1}%
13007
13008
            {%
            \IfValueTF{#3}%
13009
         {\LWR@orig@print@fcolorbox[#1]{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
13010
13011
         {\LWR@orig@print@fcolorbox[#1]{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
13012
            {% no value #1
13013
            \IfValueTF{#3}%
13014
          \label{localize} $$ \LWR@colorbox{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}% $$
13015
13016
           13017
            }% no value #1
        }% #4 not none
13018
        \LWR@traceinfo{*** finished end fcolorminipage}%
13019
13020 }
```

xcolor is known to have been loaded, and provided HTML versions of the following, and the print versions are provide above, so now they may be \LW@formatted.

```
13021 \LWR@formatted{colorbox}
13022 \LWR@formatted{colorboxBlock}
13023 \LWR@formatted{fcolorbox}
13024 \LWR@formatted{fcolorboxBlock}
13025 \LWR@formattedenv{fcolorminipage}
```

```
13026 \LWR@traceinfo{xcolor patches done}
13027 \{}% xcolor loaded
13028 \% AtBeginDocument
13029 \end{warpall}
```

90 chemmacros environments

\makepolymerdelims and redox reactions must be enclosed in a lateximage during HTML output. These environments are provided here in print mode, and in the chemmacros code in HTML mode, as a high-level semantic syntax which automatically embeds the contents in a lateximage with an appropriate alt tag.

```
for PRINT output: 13030 \begin{warpprint}
                         13031 \AtBeginDocument{
                         13032 \IfPackageLoadedTF{chemmacros}{
polymerdelims
                         13033 \DeclareDocumentEnvironment{polymerdelims}{}
                         13034
                                  {}{}
redoxreaction
                             \{\langle space\ above \rangle\} \{\langle space\ below \rangle\}
                            For print output, extra space is include above and below the image, and a
                            lateximage is not necessary. This extra space must be enforced, even inside a
                            float, so zero-width rules are used.
                            For the HTML version, see section 194.5.
                         13035 \DeclareDocumentEnvironment{redoxreaction}{m m}
                                  {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}
                         13037 }{}% chemmacros
                         13038}% AtBeginDocument
```

91 cleveref

13039 \end{warpprint}

loading order

cleveref and lwarp-cleveref with its associated macro patches are automatically preloaded at the end of the preamble via \AtEndPreamble and \AfterEndPreamble. This is done because the HTML conversion requires cleveref. The user's document may not require cleveref, thus the user may never explicitly load it, so during HTML output lwarp loads it last. If the user's document preamble uses cleveref options, or functions such as \crefname, then cleveref may be loaded in the user's preamble near the end, and lwarp's additional loading of cleveref will have no effect.

\AtEndPreable forces cleveref to be loaded last, if it has not yet been loaded by the user.

for HTML output: 13040 \begin{warpHTML}

```
13041
13042 \AtEndPreamble{
13043 \RequirePackage{cleveref}
13044 }
13045
13046 \end{warpHTML}
```

92 Preexisting label and reference definitions

Remember and patch some label-related defintions. These will be further encased and patched by other packages later.

 $\label and \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to print or \verb|\pageref| do NOT change their behavior according to the print of the print$

for HTML output:

Not using \VerifyCommand for \label because various packages change \label.

```
13047 \begin{warpHTML}
13048 \LetLtxMacro\LWR@orig@label\label
13049 \LetLtxMacro\label\LWR@new@label
13050
13051 \AtBeginDocument{%
13052 \LetLtxMacro\LWR@orig@pageref\pageref%
13053 \LetLtxMacro\pageref\LWR@new@pageref%
13054 }
```

\label Detokenize \@currentnamelabel to avoid bug if math is in the name.

```
13055 \xpatchcmd{\LWR@orig@label}
         {{\@currentlabelname}}
13056
         {{\detokenize\expandafter{\@currentlabelname}}}
13057
13058
        {}
13059
             \typeout{***}
13060
             \typeout{***}
13061
             \typeout{*** Package lwarp warning:}
13062
             \typeout{*** Could not patch \string\label.}
13064
          \typeout{*** This may cause an error with section names or float captions}
13065
             \typeout{*** containing math, for example.}
          \typeout{*** (Recent updates in the LaTeX kernel may make things work again.)}
13066
             \typeout{***}
13067
             \typeout{***}
13068
13069
        }
13070
13071 \end{warpHTML}
```

93 picture environment

picture (env.) The picture environment is enclosed inside a \lateximage.

```
for HTML output: 13072 \begin{warpHTML}
```

```
picture (env.)
```

13073 \BeforeBeginEnvironment{picture}{\begin{lateximage}[picture]} 13075 \AfterEndEnvironment{picture}{\end{lateximage}} 13076 \end{warpHTML}

94 Minipages and Boxes

A css flexbox is used for minipages and parboxes, allowing external and internal vertical positioning.

A line of text with an inline minipage or \parbox will have the minipage or \parbox placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

placement

minipages and \parboxes will be placed side-by-side in HTML unless you place a \newline between them.

side-by-side

Side-by-side minipages may be separated by \quad, \quad, \enskip, \hspace, \hfill, or a \rule. When inside a center environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.

minipage in a span

There is limited support for minipages inside an HTML . An HTML <div> cannot appear inside a . While in a , minipages, and \parboxes, and any enclosed lists have limited HTML tags, resulting in an "inline" format, without markup except for HTML breaks. Use \newline or \par for an HTML break.

minipage size

When using minipage, \parbox, and fminipage, a virtual 6×9 inch text area is used for \linewidth, \textwidth, and \textheight, both for sizing the minipage, and also for its contents.

if width is \linewidth

If a minipage or \parbox is assigned a width of exactly \linewidth, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if HTML A new macro \minipagefullwidth requests that, during HTML output, the next single minipage or \parbox be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version's width makes no sense in HTML.

tabular, multicols

\UseMinipageWidths \IgnoreMinipageWidths Inside a tabular or multicols environment, where the width depends on the browser window, \minipagefullwidth is effectively used by default for every minipage or \parbox inside the environment. \UseMinipageWidths may be used to tell lwarp to honor the specified widths of all following minipages and \parboxes until the end of the local scope, and \IgnoreMinipageWidths may be used to tell lwarp to ignore the specified widths.

 \triangle multicol Inside a multicols, \linewidth is divided by the specified number of columns.

text alignment

Nested minipages adopt their parent's text alignment in HTML, whereas in regular LATEX PDF output they do not. Use a flushleft or similar environment in the child minipage to force a text alignment.

for HTML output: 13077 \begin{warpHTML}

94.1 Computed lengths

\LWR@minipagewidth (*Len*) Used to convert the width into printable units.

13078 \newlength{\LWR@minipagewidth}

\LWR@minipageheight (*Len*) Used to convert the height into printable units.

13079 \newlength{\LWR@minipageheight}

94.2 Virtual page size

LWR@virtualpagedepth (Ctr) Used to only reset the line width at the outermost minipage.

```
13080 \newcounter{LWR@virtualpagedepth}
13081 \setcounter{LWR@virtualpagedepth}{0}
```

LWR@setvirtualpage (env.) * [$\langle columns \rangle$]

If not nesting a minipage, adjust \linewidth , \textwidth , and \textheight for a virtual 6×9 page, and start on a new PDF page to help prevent page overflows.

If starred, force a new page in the PDF before generating more HTML. This may be done to reduce the chance of page overflow when starting a new minipage.

The optional number of columns defaults to 1.

```
13082 \NewDocumentEnvironment{LWR@setvirtualpage}{s 0{1}}{%
        \ifnumequal{\value{LWR@virtualpagedepth}}{0}{%
13083
            \IfBooleanT{#1}{\LWR@maybe@orignewpage}%
13084
            \setlength{\linewidth}{6in/#2}%
13085
13086
            \setlength{\textwidth}{6in}%
13087
             \setlength{\textheight}{9in}%
13088
        }{}%
        \addtocounter{LWR@virtualpagedepth}{1}%
13089
13091 {\addtocounter{LWR@virtualpagedepth}{-1}}
```

94.3 Footnote handling

Also see section 60 for other forms of footnotes. Minipage footnotes are gathered in section 60.5, and then placed into the document in section 94.4.

94.4 Minipage handling

LWR@minipagefullwidth (bool) Should the next minipage have no HTML width?

```
13092 \newbool{LWR@minipagefullwidth}
13093 \boolfalse{LWR@minipagefullwidth}
```

LWR@forceminipagefullwidth (bool)

Should the next minipage have no HTML width? Used to force full width for all minipages in an environment such as tabular or multicols, where the actual width depends on the browser width. Controlled by \useminipagewidths and \ignoreminipagewidths.

```
13094 \newbool{LWR@forceminipagefullwidth}
13095 \boolfalse{LWR@forceminipagefullwidth}
```

\minipagefullwidth Requests that the next minipage have no width tag in HTML:

```
for HTML output: 13096 \newcommand*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}
```

\UseMinipageWidths Locally requests that minipage widths be honored.

```
\label{localize} 13097 \verb|\newcommand*{\UseMinipageWidths}{\Noolfalse{LWR@forceminipagefullwidth}} \\
```

\IgnoreMinipageWidths Locally requests that minipage widths be ignored.

```
\label{local-prop} $$13098 \end{warpHTML} $$13099 \end{warpHTML}
```

```
for PRINT output: 13100 \begin{warpprint}
```

13101 \newcommand*{\minipagefullwidth}{}
13102 \newcommand*{\UseMinipageWidths}{}
13103 \newcommand*{\IgnoreMinipageWidths}{}
13104 \end{warpprint}

for HTML output: 13105 \begin{warpHTML}

LWR@minipagethispar (bool) Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
13106 \newbool{LWR@minipagethispar}
13107 \boolfalse{LWR@minipagethispar}
```

LWR@minipage@depth (*Ctr*) Used to track whether to change footnote styles in a lateximage inside an HTML minipage.

```
13108 \newcounter{LWR@minipage@depth}
13109 \setcounter{LWR@minipage@depth}{0}
```

LWR@mpfootnote@store (Ctr) Used to maintain minipage footnote number while nesting inside a lateximage.

```
minipage (env.) [\langle vert\ position \rangle] [\langle height \rangle] [\langle inner\ vert\ position \rangle] \{\langle width \rangle\}
```

The vertical positions may be 'c', 't', or 'b'. The inner position may also be 's'.

When using \l inewidth, \t inewidth, or \t these are scaled proportionally to a 6×9 inch text area.

```
13111 \NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m}
13112 {%
13113 \LWR@traceinfo{minipage}%
```

Start an environment, in which width and height is computed based on a virtual page size instead of the extra-large PDF page used during HTML tag generation.

```
13114 \begin{LWR@setvirtualpage}*%
```

Save the requested width now that \linewidth, etc. are adjusted to virtual size.

```
13115 \setlength{\LWR@minipagewidth}{#4}%
13116 \ifnumequal{\value{LWR@virtualpagedepth}}{1}{%
13117  \addtolength{\LWR@minipagewidth}{3em}% room for frames
13118 }{}%
13119 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

LATEX wants to start a paragraph for the virtual minipage, then start a paragraph again for the contents of the minipage, so cancel the paragraph tag handling until the minipage has begun.

```
13122 \ifbool{FormatWP}{\newline}{}%
13123 \LWR@stoppars%
```

If FormatWP, add a text frame:

Create the <div> tag with optional alignment style:

Print the width and optional height styles:

```
13144 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
13145 \ifbool{LWR@minipagefullwidth}%
13146 {\global\boolfalse{LWR@minipagefullwidth}}%
13147 {%
13148 \ifbool{LWR@forceminipagefullwidth}%
```

```
13149
            {}%
            {%
13150
                 \left\{ 4, \right\}
13151
13152
                     {}%
                     {width:\LWR@printlength{\LWR@minipagewidth} ; }%
13153
13154
            }%
13155 }%
13156 \LWR@traceinfo{minipage: about to print the height}%
13157\ifblank{#2}{}{height:\LWR@printlength{\LWR@minipageheight}; }%
13158 \textquotedbl%
13159 }%
```

Finish with an empty line to start the contents on a new line.

```
13160
13161% The preceding empty line is required.
```

Set the user-accessible line and text width and height values inside the virtual minipage. These do not affect the actual size of the PDF output, but are used by any reference to \linewidth, etc. inside the virtual minipage being created here. \LWR@minipagewidth was the original then padded by 3em, which is restored here. This is done instead of settings back to #4, in case #4 was \linewidth, which was changed to 6in above.

```
\label{lem:linear_lambda} $$13162 \left(\wRewirtualpagedepth\right)_{1}_{\%}$$ 13163 \addtolength_{\LWReminipagewidth}_{-3em}_{\%}$ undo frame padding $$13164 _{}_{\%}$$ 13165 \setlength_{\LWReminipagewidth}_{\%}$
```

\raggedright cancels hyphenation, which will be done by HTML instead.

```
13166 \LWR@print@raggedright%
13167 \LWR@newautopagelabel{page}%
```

Set minipage footnotes:

```
13168 \def\@mpfn{mpfootnote}%
13169 \def\thempfootnote\\c@mpfootnote\z@%
13170 \let\@footnotetext\@mpfootnotetext%
```

Track depth for lateximage footnote type:

```
{\tt 13171 \setminus add to counter\{LWR@minipage@depth\}\{1\}\%}
```

Resume paragraph tag handling for the contents of the minipage:

```
13172 \LWR@startpars%
13173 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
13174
13175 === begin minipage ===
13176
13177 }{}%
13178 \LWR@traceinfo{minipage: finished starting the minipage}%
13179 }% finished \minipage
13180 {% \endminipage
```

Print pending minipage footnotes:

```
13181 \LWR@printpendingmpfootnotes%
```

13199 \ifbool{FormatWP}{\newline}{}%

End the environment with closing tag:

```
13182 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
13184 === end minipage ===
13185
13186 }{}%
13187 \LWR@stoppars%
13188
13189 \ifbool{FormatWP}{%
13190
13191 \LWR@htmlelementend{div}%
13192
13193 }{}%
   Wrapup:
13194 \addtocounter{LWR@minipage@depth}{-1}%
13195 \LWR@htmldivclassend{minipage}%
13196
13197 \end{LWR@setvirtualpage}%
13198 \LWR@startpars%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

94.5 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:

```
\parbox [\langle pos \rangle] [\langle height \rangle] [\langle inner-pos \rangle] \{\langle width \rangle\} \{\langle text \rangle\}
A parbox uses the minipage code:
```

```
13209 \NewDocumentCommand{\LWR@HTML@parbox}{0{t} 0{t} m +m}
13210 {
13211 \LWR@traceinfo{parbox of width #4}%
13212 \begin{minipage}[#1][#2][#3]{#4}%
13213 #5
13214 \end{minipage}%
13215 }
```

```
13216
                   13217 \LWR@formatted{parbox}
               \mbox \{\langle text \rangle\}
                                     Nullified for HTML.
                   13218 \mbox{LWR@HTML@mbox}[1]{{#1}}
                   13220 \LWR@formatted{mbox}
\LWR@@makebox@paren \{\langle width \rangle\}, \{\langle height \rangle\}
                      Adds to the style in \LWR@temptwo.
                   13221 \NewDocumentCommand{\LWR@@makebox@paren}{m m}{%}  
                   13222 \IfValueTF{#2}{%
                            \setlength{\LWR@tempwidth}{#1\unitlength}%
                   13223
                   13224
                            \setlength{\LWR@tempheight}{#2\unitlength}%
                   13225
                            \appto{\LWR@temptwo}{%
                                 \LWR@print@mbox{width:\LWR@printlength{\LWR@tempwidth}}; % space
                   13226
                                 \LWR@print@mbox{height:\LWR@printlength{\LWR@tempheight}} ; % space
                   13227
                            }%
                   13228
                   13229 }{%
                            \PackageError{lwarp}%
                   13230
                                 {(width,height) is missing a comma ',' character}%
                   13231
                                 {\protect\makebox\space and \protect\framebox\space accept
                   13232
                                     a size in the format (width, height).}%
                   13233
                   13234 }%
                   13235 }
\LWR@@makebox@align \{\langle alignment\ character\rangle\}
                      Adds to the style in \LWR@temptwo.
                   13236 \newcommand*{\LWR@@makebox@align}[1]{%
                            \def\LWR@align{center}%
                   13237
                            \ifstrequal{#1}{l}{\def\LWR@align{left}}{}%
                   13238
                            \ifstrequal{#1}{r}{\def\LWR@align{right}}{}%
                   13239
                            \ifstrequal{#1}{s}{\def\LWR@align{justify}}{}%
                   13240
                   13241
                            \appto{\LWR@temptwo}{%
                   13242
                                 \LWR@print@mbox{text-align:\LWR@align}; %
                   13243
                            }%
                   13244 }
            \makebox (\langle width, height \rangle) [\langle width \rangle] [\langle pos \rangle] \{\langle text \rangle\}
                   13245\NewDocumentCommand(\LWR@HTML@makebox){<}SplitArgument{1}{,}}d() o o +m){%}
                      Build the style depending on arguments:
                            \begin{LWR@setvirtualpage}%
                   13246
                                 \def\LWR@temptwo{}%
                   13247
                                 \IfValueTF{#1}%
                   13248
                                 {% (width, height) ...
                   13249
                   13250
                                      \LWR@@makebox@paren #1%
                   13251
                                     \IfValueT{#2}%
                                     {% (width, height) [posn]
                   13252
                                          \LWR@@makebox@align{#2}%
                   13253
```

```
13254
                                   }%
                              }%
                 13255
                              {% [width]
                 13256
                                   \IfValueT{#2}% [width]
                 13257
                 13258
                                       \strut_{LWR@tempwidth}{\#2}%
                 13259
                                       \ifdimgreater{\LWR@tempwidth}{0pt}{%
                 13260
                                           \appto{\LWR@temptwo}{%
                 13261
                                                width: \verb|\LWR@printlength{\LWR@tempwidth}| ; \% space
                 13262
                                           }%
                 13263
                                       }{}%
                 13264
                 13265
                                   }%
                 13266
                              }%
                 13267
                               \IfValueT{#3}%
                 13268
                              {% [width] [posn]
                                   \LWR@@makebox@align{#3}%
                 13269
                 13270
                              \InlineClass[%
                 13271
                                   \LWR@print@mbox{display:inline-block} ; %
                 13272
                                   \LWR@temptwo%
                 13273
                              ]%
                 13274
                              {makebox}%
                 13275
                              {#4}%
                 13276
                          \end{LWR@setvirtualpage}%
                 13277
                 13278 }
                 13279 \LWR@formatted{makebox}
         \framebox (\langle width, height \rangle) [\langle width \rangle] [\langle pos \rangle] \{\langle text \rangle\}
                 13281
                          \fbox{\makebox(#1)[#2][#3]{#4}}%
                 13282 }
                 13283
                 13284 \LWR@formatted{framebox}
\LWR@forceminwidth \{\langle legth \rangle\}
                    Sets \LWR@atleastonept to be at least 1pt.
                 13285 \newlength{\LWR@atleastonept}
                 13287 \newcommand*{\LWR@forceminwidth}[1]{%
                 {\tt 13288 \setminus setlength\{\setminus LWR@atleastonept\}\{\#1\}\%}
                 13289 \ifthenelse{%
                          13290
                          \lengthtest{\LWR@atleastonept<1pt}%
                 13291
                 13292 }%
                          {\setlength{\LWR@atleastonept}{1pt}}%
                 13293
                 13294
                          {}%
                 13295 }
    \LWR@fboxstyle Prints the HTML attributes for a black border and padding.
```

\LWR@forceminwidth must be used first in order to set the border width.

```
13296 \newcommand*{\LWR@fboxstyle}{%
13297 \LWR@findcurrenttextcolor%
13298 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor; %
```

```
13299 padding: \LWR@printlength{\fboxsep} ; % 13300 color: \LWR@origpound\LWR@tempcolor% 13301 } 
 \fbox \{\langle text \rangle\}
```

Creates a framed inline span enclosing the text.

Create a new HTML version, but don't use it until after xcolor may have loaded:

```
13302 \newcommand{\LWR@HTML@fbox}[1]{%
        \LWR@traceinfo{HTML fbox}%
13304
        \LWR@forceminwidth{\fboxrule}%
        \LWR@traceinfo{HTML fbox B}%
13305
13306
        \InlineClass[%
13307
            \LWR@print@mbox{display:inline-block} ; %
            \LWR@fboxstyle%
13308
13309
        ]{fbox}{#1}%
13310
        \LWR@traceinfo{HTML fbox: done}%
13311 }
```

xcolor \lets things to \fbox when it is loaded, and this must remain even for HTML output while in a lateximage, so \fbox is not modified until \AtBeginDocument:

```
{\tt 13312 \ AtBeginDocument\{\ LWR@formatted\{fbox\}\}}
```

\fboxBlock $\{\langle text \rangle\}$ Creates a framed HTML <div> of the text.

First, a print-mode version. This is newly defined for print mode, so it is defined inside warpall.

```
for HTML & PRINT: 13313 \end{warpHTML}
                 13315 \begin{warpall}
                 13316 \let\fboxBlock\fbox
                 13317 \end{warpall}
                 13318
                 13319 \begin{warpHTML}
                    Next, an HTML version:
 for HTML output:
                 {\tt 13320 \ \ lock}[1]{\tt \%}
                 13321 \LWR@forceminwidth{\fboxrule}%
                 13322 \LWR@stoppars%
                 13323 \begin{BlockClass}[\LWR@fboxstyle]{fboxBlock}
                 13324 #1
                 13325 \end{BlockClass}
                 13326 \LWR@startpars%
                 13327 }
                 13328
                 13329 \LWR@formatted{fboxBlock}
                 13331 \end{warpHTML}
```

fminipage (env.) $[\langle align \rangle] [\langle height \rangle] [\langle align \rangle] \{\langle width \rangle\}$

Creates a framed HTML <div> around its contents.

```
for HTML & PRINT: Print version:
```

```
13332 \begin{warpall}
13333
13334 \newsavebox{\LWR@fminipagebox}
13335
13336 \NewDocumentEnvironment{fminipage}{0{t} o 0{t} m}
13337 {%
```

An outer minipage will be used for vertical alignment. An inner minipage will be framed with \fbox.

If the optional inner alignment is not given, use the outer instead:

```
13338 \IfValueTF{#3}%
13339 {\def\LWR@thisalign{#3}}
13340 {\def\LWR@thisalign{#1}}%
```

Form the outer minipage depending on whether a height was given. Make the outer minipage larger to compensate for the frame.

```
\label{liming} $$13341 \left[ \frac{\#2+2\fboxsep+2\fboxrule][\LWR@thisalign]{\#4+2\fboxsep+2\fboxrule}} \\ $$13343 {\mininipage[\#1]{\#4+2\fboxsep+2\fboxrule}} \\ $$1343 {\mininipage[\#1]{\#14+2\fboxrule}} \\ $$1443 {\mininipage[\#1]{\#14+2\fboxrule}} \\ $$1443 {\mininipage[\#1]{\#14+2\fboxrule}} \\ $$1443 {\mininipage[\#1]{\#14+2\fboxrule}} \\ $$1443 {\mininipage[\#1]{\#14+2\fboxrule}} \\ $$1444 {\mininipage[\#1]{\#14+2\fboxrule}}
```

Capture the contents of the environment:

```
13344 \begin{lrbox}{\LWR@fminipagebox}%
```

Nest the contents inside an inner minipage of the desired size:

```
13345 \ IfValueTF{#2}%
13346 \ \minipage[#1][#2][\LWR@thisalign]{#4}}%
13347 \ \minipage[#1]{#4}}%
13348 \ \\
13349 \ \%
```

Close the inner minipage and the LR box with the contents:

```
13350 \endminipage%
13351 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
13352 \fbox{\usebox{\LWR@fminipagebox}}%
```

13360 \LWR@traceinfo{fminipage #1 #2 #3 #4}%

The entire thing is placed inside the outer minipage:

```
13353 \endminipage%
13354 }
13355 \end{warpall}

HTML version:

for HTML output: 13356 \begin{warpHTML}
13357
13358 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
```

Locally change to the virtual page size before processing the requested sizes:

```
13361 \begin{LWR@setvirtualpage}*%
13362 \setlength{\LWR@tempwidth}{#4}%
13363 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%

Use a rule of at least one pixel in width:
```

```
13364 \LWR@forceminwidth{\fboxrule}%
13365 \LWR@stoppars%
13366 \begin{BlockClass}[%
13367 \LWR@fboxstyle; %
\label{locality} 13368 \label{locality} $$13368 \label{locality} If ValueT{\#2}{height:\LWR@printlength{\LWR@tempheight}} ; }$
{\tt 13369} \verb| ifbool{LWR@minipagefullwidth}{\tt \%}
13370 {\global\boolfalse{LWR@minipagefullwidth}}%
13371 {%
          \ifbool{LWR@forceminipagefullwidth}%
13372
               {}%
13373
13374
               {%
13375
                    \ifdimequal{\LWR@tempwidth}{\linewidth}%
```

13376 13377

13378

13379 }%

13381 } 13382 {% }%

13380]{fminipage}%

paragraph:

13383 \end{BlockClass}%

13384 \end{LWR@setvirtualpage}%

Prevent paragraph tags around horizontal white space until the start of the next

{width:\LWR@printlength{\LWR@tempwidth} ; }%

```
13385 \global\booltrue{LWR@minipagethispar}%
13386 \LWR@traceinfo{fminipage done}%
13387 }
13388
13389 \LWR@formattedenv{fminipage}
\raisebox {\(\alphaiselen\rangle\)} [\(\alphaeight\rangle\)] [\(\alphaepth\rangle\)] {\(\alphaextrace{text}\rangle\)}
13390 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
13391 #4%
13392 }
13393
13394 \LWR@formatted{raisebox}
```

95 Direct formatting

HTML special chars

&, <, and > have special meanings in HTML. If \&, \textless, and \textgreater are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim

program listings

For program listings, the listings package is supported, and its literate option is used to automatically convert &, <, and > to proper HTML entities.

minted sanitizes HTML automatically by its colorizing, which splits the special characters from the rest of the tag.

verbatim

The fancyvrb and fvextra packages automatically sanitize HTML entities, but the core LATEX verbatim-related environments do not, nor does the verbatim package, so care must be taken to avoid accidentally including valid HTML code inside these environments. It may be sufficient to add a space on either side of &, <, and >.

gobble fancyvrb does not sanitize HTML when using the gobble option.

For high-level block and inline custom css classes, see section 52.10.

```
for HTML & PRINT: 13396 \begin{warpall}
```

FixSmallCaps (bool) User may set FixSmallCaps to true if small caps are being incorrectly rendered as all caps.

```
13397 \newbool{FixSmallCaps}
                13398 \boolfalse{FixSmallCaps}
                13399 \end{warpall}
for HTML output: 13400 \begin{warpHTML}
```

```
\mbox{emph } \{\langle text \rangle\}
```

```
13401 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
13402
        {%
             \LWR@HTML@itshape%
13403
             \LWR@htmlspan{em}{#1}%
13404
13405
         }%
13406 }
13408 \LWR@formatted{emph}
```

\textmd $\{\langle text \rangle\}$

```
13409 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
13410
             \LWR@HTML@mdseries%
13411
             \InlineClass(font-weight:normal){textmd}{#1}%
13412
13413
         }%
13414 }
13415
13416 \LWR@formatted{textmd}
```

```
\textbf \{\langle text \rangle\}
```

```
{\tt 13417 \backslash DeclareRobustCommand \{\backslash LWR@HTML@textbf\}[1]\{\%\}}
     13418
                   \LWR@HTML@bfseries%
     13419
     13420
                   \LWR@htmlspan{b}{#1}%
     13421
              }%
     13422 }
     13423
     13424 \LWR@formatted{textbf}
\texteb \{\langle text \rangle\}
                       From nfssext-cfr.
     13425 \IfPackageLoadedTF{nfssext-cfr}{
     13427
                   \LWR@HTML@ebweight%
     13428
                   \InlineClass{texteb}{#1}%
     13429
     13430
     13431 }
     13432
     {\tt 13433 \setminus LWR@formatted\{texteb\}}
     13434 }{% if not loaded
               \providerobustcmd{\texteb}[1]{}
     13435
     13436 }
\textlg \{\langle text \rangle\}
                       From nfssext-cfr.
     13437 \IfPackageLoadedTF{nfssext-cfr}{
     13438 \verb|\DeclareRobustCommand{\LWR@HTML@textlg}[1]{\%}
     13439
                   \LWR@HTML@lgweight%
     13440
     13441
                   \InlineClass{textlg}{#1}%
     13442
               }%
     13443 }
     13445 \LWR@formatted{textlg}
     13446 }{% if not loaded
              \providerobustcmd{\textlg}[1]{}
     13447
     13448 }
\textrm \{\langle text \rangle\}
     13450
              {%
                   \LWR@HTML@rmfamily%
     13451
                   \InlineClass(font-family:serif){textrm}{#1}%
     13452
     13453
     13454 }
     13455
     13456 \LWR@formatted{textrm}
\textsf \{\langle text \rangle\}
     {\tt 13457 \setminus DeclareRobustCommand\{\setminus LWR@HTML@textsf\}[1]\{\%\}}
     13458
                   \LWR@HTML@sffamily%
     13459
                   \InlineClass(font-family:sans){textsf}{#1}%
     13460
              }%
     13461
```

```
13462 }
                    13463
                    13464 \LWR@formatted{textsf}
  \texttt \{\langle text \rangle\}
                     13465 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
                    13466
                                                               \LWR@HTML@ttfamily%
                    13467
                                                               \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
                    13468
                                                }%
                    13469
                    13470 }
                    13471
                    13472 \LWR@formatted{texttt}
  \textup \{\langle text \rangle\}
                    13473 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
                    13474
                    13475
                                                               \LWR@HTML@upshape%
                    13476
                                                                \InlineClass(font-style:normal){textup}{#1}%
                    13477
                                                 }%
                    13478 }
                    13479
                    13480 \LWR@formatted{textup}
  \textit \{\langle text \rangle\}
                    {\tt 13481 \setminus DeclareRobustCommand\{\setminus LWR@HTML@textit\}[1]\{\%\}}
                    13482
                                                               \LWR@HTML@itshape%
                    13483
                    13484
                                                               \LWR@htmlspan{i}{#1}%
                                                }%
                    13485
                    13486 }
                    13488 \LWR@formatted{textit}
  \textsc \{\langle text \rangle\}
                    \LWR@HTML@scshape%
                    13491
                                                               \verb|\InlineClass{textsc}{#1}|%
                    13492
                                                }%
                    13493
                    13494 }
                    13495
                    13496 \LWR@formatted{textsc}
\textulc \{\langle text \rangle\}
                                                                           From fontaxes.
                    13497 \DeclareRobustCommand{\LWR@HTML@textulc}[1]{%
                    13498
                                                {%
                                                               \LWR@HTML@ulcshape%
                    13499
                    13500
                                                               \InlineClass{textulc}{#1}%
                    13501
                                                }%
                    13502 }
```

```
13503
          13504 \LWR@formatted{textulc}
    \textsi \{\langle text \rangle\}
          13505 \@ifundefined{textsi}{
                    \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
          13507 }{}
          13508
          {\tt 13509 \setminus DeclareRobustCommand\{\setminus LWR@HTML@textsi\}[1]\{\%\}}
          13510
                    {%
                        \LWR@HTML@sishape%
          13511
                        \textsc{\textit{#1}}%
          13512
          13513 %
                           \InlineClass(
                                font-style: italic;
          13514 %
          13515 %
                                font-variant: small-caps ;
          13516 %
                                font-variant-numeric: oldstyle-nums ;
          13517 %
                           ){textsi}{#1}%
          13518
                    }%
          13519 }
          13520
          13521 \LWR@formatted{textsi}
    \textsl \{\langle text \rangle\}
          13522 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
          13523
          13524
                        \slshape%
                        \InlineClass(font-style:oblique){textsl}{#1}%
          13525
          13526
                    }%
          13527 }
          13529 \LWR@formatted{textsl}
   \textssc \{\langle text \rangle\}
          {\tt 13530 \ \ learned \{LWR@HTML@textssc}[1]{\tt \ \ \ \ \ \ \ }}
          13531 \LWR@formatted{textssc}
\textnormal \{\langle text \rangle\}
          13532 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{%
                        \LWR@HTML@mdseries%
          13533
                        \LWR@HTML@rmfamily%
          13534
                        \LWR@HTML@upshape%
          13535
                        \LWR@HTML@ulcshape%
          13536
          13537
                        \InlineClass(%
                             font-weight: normal;
          13538
          13539
                             font-family: serif;
          13540
                             font-style: normal;
          13541
                             font-variant: normal;
                             font-variant-numeric: normal ;
          13542
                        ){textnormal}{#1}%
          13543
          13544 }
          13545
          13546 \LWR@formatted{textnormal}
```

```
13547 \FilenameNullify{%
        \LetLtxMacro\emph\@firstofone%
13548
        \LetLtxMacro\textmd\@firstofone%
13549
13550
        \LetLtxMacro\textbf\@firstofone%
13551
        \LetLtxMacro\texteb\@firstofone%
13552
        \LetLtxMacro\textlg\@firstofone%
        \LetLtxMacro\textrm\@firstofone%
13553
        \LetLtxMacro\textsf\@firstofone%
13554
        \LetLtxMacro\texttt\@firstofone%
13555
        \LetLtxMacro\textup\@firstofone%
13556
13557
        \LetLtxMacro\textit\@firstofone%
13558
        \LetLtxMacro\textsc\@firstofone%
13559
        \LetLtxMacro\textulc\@firstofone%
13560
        \LetLtxMacro\textsi\@firstofone%
13561
        \LetLtxMacro\textsl\@firstofone%
13562
        \LetLtxMacro\textssc\@firstofone%
        \LetLtxMacro\textnormal\@firstofone%
13563
13564 }
```

Remembers the current font family, series, and shape. fontaxes support is integrated here.

```
13565 \newcommand*{\LWR@f@family}{rm}
13566 \newcommand*{\LWR@f@series}{md}
13567 \newcommand*{\LWR@f@shape}{up}
13568 \newcommand*{\LWR@f@shapecaps}{ulc}
```

\LWR@textcurrentfont $\{\langle text \rangle\}$

Prints the text with the current font choices. Avoids nesting repeated font selections.

```
13569 \newcounter{LWR@textcurrentfontdepth}
13570 \setcounter{LWR@textcurrentfontdepth}{0}
13571
13572 \newcommand*{\LWR@textcurrentfont}[1]{%
        \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
13573
             {%
13574
                 \addtocounter{LWR@textcurrentfontdepth}{1}%
13575
13576
                 \addtocounter{LWR@textcurrentfontdepth}{-1}%
13577
             }%
13578
             {%
13579
                 \addtocounter{LWR@textcurrentfontdepth}{1}%
13580
                 \ifboolexpr{%
13581
13582
                     test {\ifdefstring{\LWR@f@family}{rm}} and
13583
                     test {\ifdefstring{\LWR@f@series}{md}} and
13584
                     test {\left\{ \begin{array}{c} LWR@f@shape}{\left\{ up}\right\} \end{array}\right\} } and
                     13585
                 }%
13586
                     {\InlineClass{textnormal}{#1}}%
13587
                     {%
13588
                          \InlineClass{%
13589
                                  text\LWR@f@family\LWR@orignobreakspace{}%
13590
                                  text\LWR@f@series\LWR@orignobreakspace{}%
13591
13592
                                  text\LWR@f@shape\LWR@orignobreakspace{}%
                                  text\LWR@f@shapecaps%
13593
                              }%
13594
                              {#1}%
13595
```

```
13596
                             13597
                                              \addtocounter{LWR@textcurrentfontdepth}{-1}%
                             13598
                                          }%
                             13599 }
LWR@blocktextcurrentfont (env.) Prints the contents with the current font choices.
                             13600 \newenvironment*{LWR@blocktextcurrentfont}{%
                             13601 \LWR@stoppars%
                             13602 \BlockClass{%
                                          text\LWR@f@family\LWR@orignobreakspace{}%
                             13603
                                          text\LWR@f@series\LWR@orignobreakspace{}%
                             13604
                                          text\LWR@f@shape\LWR@orignobreakspace{}%
                             13605
                             13606
                                          text\LWR@f@shapecaps%
                                     }%
                             13607
                             13608 }{\endBlockClass\LWR@startpars}
                     \mdseries
                             13609 \newrobustcmd*{\LWR@HTML@mdseries}{%
                             13610
                                      \LWR@print@mdseries%
                             13611
                                      \renewcommand*{\LWR@f@series}{md}%
                             13613 \LWR@formatted{mdseries}
                     \bfseries
                             13614 \newrobustcmd*{\LWR@HTML@bfseries}{%
                                      \LWR@print@bfseries%
                             13615
                                      \renewcommand*{\LWR@f@series}{bf}%
                             13616
                             13617 }
                             13618 \LWR@formatted{bfseries}
                     \ebweight From nfssext-cfr.
                             13619 \IfPackageLoadedTF{nfssext-cfr}{
                             13620 \newrobustcmd*{\LWR@HTML@ebweight}{%
                             13621
                                      \LWR@print@ebweight%
                             13622
                                      \renewcommand*{\LWR@f@series}{eb}%
                             13623 }
                             13624 \LWR@formatted{ebweight}
                             13625 }{}
                     \lgweight From nfssext-cfr.
                             13626 \IfPackageLoadedTF{nfssext-cfr}{
                             13627 \newrobustcmd*{\LWR@HTML@lgweight}{%
                             13628
                                      \LWR@print@lgweight%
                                      \renewcommand*{\LWR@f@series}{lg}%
                             13630 }
                             13631 \LWR@formatted{lgweight}
                             13632 }{}
```

\rmfamily

```
13633 \newrobustcmd*{\LWR@HTML@rmfamily}{%
                \LWR@print@rmfamily%
       13635
                \renewcommand*{\LWR@f@family}{rm}%
       13636 }
       13637 \LWR@formatted{rmfamily}
\sffamily
       13638 \newrobustcmd*{\LWR@HTML@sffamily}{%
                \LWR@print@sffamily%
       13639
                \verb|\renewcommand*{\LWR@f@family}{sf}||
       13640
       13641 }
       13642 \LWR@formatted{sffamily}
\ttfamily
       13643 \newrobustcmd*{\LWR@HTML@ttfamily}{%
                \LWR@print@ttfamily%
       13644
       13645
                \renewcommand*{\LWR@f@family}{tt}%
       13646 }
       13647 \LWR@formatted{ttfamily}
          The following use \AtBeginDocument due to the LATEX core \reinstall@nfss@defs,
          which redefines these \AtBeginDocument. See texdoc source2e.
 \upshape
       13648 \newrobustcmd*{\LWR@HTML@upshape}{%
                \LWR@print@upshape%
       13649
                \renewcommand*{\LWR@f@shape}{up}%
       13650
       13651 }
       13652 \AtBeginDocument{\LWR@formatted{upshape}}
 \itshape
       13653 \newrobustcmd*{\LWR@HTML@itshape}{%
                \LWR@print@itshape%
       13654
       13655
                \renewcommand*{\LWR@f@shape}{it}%
       13657 \AtBeginDocument{\LWR@formatted{itshape}}
 \scshape Note: \LWR@print@scshape is not used here since some fonts, such as erewhon,
          copy/paste as all-caps.
       13658 \newrobustcmd*{\LWR@HTML@scshape}{%
               \ifbool{FixSmallCaps}{}{%
       13659
       13660
                    \LWR@print@scshape%
                }%
       13661
       13662
                \renewcommand*{\LWR@f@shapecaps}{sc}%
       13663 }
       13664 \AtBeginDocument{\LWR@formatted{scshape}}
```

\ulcshape From fontaxes.

```
13665 \@ifundefined{ulcshape}{
                  \LetLtxMacro\ulcshape\upshape
         13668 \newrobustcmd*{\LWR@HTML@ulcshape}{%
         13669
                  \LWR@print@ulcshape%
                  \renewcommand*{\LWR@f@shapecaps}{ulc}%
         13670
         13671 }
         13672 \AtBeginDocument{\LWR@formatted{ulcshape}}
   \sishape
         13673 \@ifundefined{sishape}{
         13674
                  \LetLtxMacro\sishape\scshape
         13675 }{}
         13676 \newrobustcmd*{\LWR@HTML@sishape}{%
                  \ifbool{FixSmallCaps}{}{%
         13677
         13678
                       \LWR@print@sishape%
         13679
                  \renewcommand*{\LWR@f@shape}{it}
         13680
                  \renewcommand*{\LWR@f@shapecaps}{sc}%
         13681
         13682 }
         13683 \AtBeginDocument{\LWR@formatted{sishape}}
   \slshape
         13684 \newrobustcmd*{\LWR@HTML@slshape}{%
         13685
                  \LWR@print@slshape%
                  \renewcommand*{\LWR@f@shape}{sl}%
         13686
         13687 }
         13688 \AtBeginDocument{\LWR@formatted{slshape}}
  \sscshape
         {\tt 13689 \ hewrobustcmd{\ LWR@HTML@sscshape}} \\ {\tt LWR@HTML@scshape} \\
         13690 \AtBeginDocument{\LWR@formatted{sscshape}}
\normalfont
         13691 \newrobustcmd*{\LWR@HTML@normalfont}{\rmfamily\mdseries\upshape\ulcshape}
         13692 \LWR@formatted{normalfont}
         13693 \FilenameNullify{%
         13694
                  \LetLtxMacro\rmfamily\@empty%
         13695
                  \LetLtxMacro\sffamily\@empty%
         13696
                  \LetLtxMacro\ttfamily\@empty%
         13697
                  \LetLtxMacro\bfseries\@empty%
                  \LetLtxMacro\ebweight\@empty%
         13698
                  \LetLtxMacro\lgweight\@empty%
         13699
                  \LetLtxMacro\mdseries\@empty%
         13700
                  \LetLtxMacro\upshape\@empty%
         13701
                  \LetLtxMacro\slshape\@empty%
         13702
                  \LetLtxMacro\sishape\@empty%
         13703
                  \LetLtxMacro\scshape\@empty%
         13704
         13705
                  \LetLtxMacro\itshape\@empty%
         13706
                  \LetLtxMacro\ulcshape\@empty%
                  \LetLtxMacro\sscshape\@empty%
         13707
                  \LetLtxMacro\normalfont\@empty%
         13708
         13709 }
```

```
\sp \{\langle text \rangle\}
                   For siunitx-v2. Must work in math mode.
               13710 \ensuremath{\sp}[1]{\text{<}sup>#1</}
               \sb \{\langle text \rangle\}
                   For siunitx-v2. Must work in math mode.
               13711 \renewcommand{\sb}[1]{\text{<sub>#1</sub>}{}}
 \textsuperscript \{\langle text \rangle\}
                13712 \newrobustcmd{\LWR@HTML@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
               13713 \LWR@formatted{textsuperscript}
\ensuremath{\texttt{(dext)}}
               13714 \newcommand{\LWR@HTML@@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
                13715 \LWR@formatted{@textsuperscript}
   \textsubscript \{\langle text \rangle\}
               13716
                        \newrobustcmd{\LWR@HTML@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
               13717
                        \LWR@formatted{textsubscript}
  \ensuremath{\texttt{(dext)}}
                         13718
                        \LWR@formatted{@textsubscript}
               13719
               \up \{\langle text \rangle\} Prints superscript.
                   This is \let at the beginning of the document in case some other package has
                   changed the definition.
               13720 \AtBeginDocument{\let\up\textsuperscript}
              \fup \{\langle text \rangle\} Prints superscript.
                   Supports fmtcount package.
                   This is \let at the beginning of the document in case some other package has
                   changed the definition.
                13721 \AtBeginDocument{\let\fup\textsuperscript}
       \underline \{\langle text \rangle\}
                13722 \renewcommand{\underline}[1]{%
               13723
                        \InlineClass%
                             (text-decoration:underline; text-decoration-skip: auto)%
                13724
                             {underline}{#1}%
                13725
               13726 }
```

```
\LWR@overline \{\langle text \rangle\}
                              13727 \newcommand{\LWR@overline}[1]{%
                              13728
                                       \InlineClass%
                                           (text-decoration:overline; text-decoration-skip: auto)%
                              13729
                                           {overline}{#1}%
                              13730
                              13731 }
         \LWR@currenttextcolor The color to use for text and \rule, defaulting to black:
                              13732 \newcommand*{\LWR@currenttextcolor}{black}
                \LWR@tempcolor The color converted to HTML colorspace.
             \LWR@tempcolortwo
           \LWR@tempcolorthrew33 \newcommand*{\LWR@tempcolor}{}
                             13734 \newcommand*{\LWR@tempcolortwo}{}
                              13735 \newcommand*{\LWR@tempcolorthree}{}
    \LWR@findcurrenttextcolor Sets \LWR@tempcolor to the current color.
                              13736 \newcommand*{\LWR@findcurrenttextcolor}{%
                                       \renewcommand{\LWR@tempcolor}{000000}%
                              13737
                              13738 }
         \LWR@textcurrentcolor \{\langle text \rangle\} Like \textcolor but uses the current \color instead.
                              13739 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
                              13740
                                       \renewcommand*{\LWR@currenttextcolor}{black}%
                              13741
                              13742 }
                              13743 \end{warpHTML}
             for PRINT output: 13744 \begin{warpprint}
          \LWR@textcurrentfont \{\langle text \rangle\}
                                 Prints the text with the current font choices.
                              13745 \newcommand*{\LWR@textcurrentfont}[1]{#1}
LWR@blocktextcurrentfont (env.) Prints the contents with the current font choices.
                              13746 \newenvironment*{LWR@blocktextcurrentfont}{}{}
              \FilenameNullify \{\langle macros\ to\ nullify\rangle\}
                              13747 \newcommand*{\FilenameNullify}[1]{}
                              13748 \end{warpprint}
```

96 Skips, spaces, font sizes

```
for HTML output: 13749 \begin{warpHTML}
```

LWR@HTMLsanitize@nobreakspace Used to disable the nbsp entity inside verbatims sections, but not inside (bool) inline verbatims where spacing must be preserved by <nbsp>.

(fvextra used ~ which showed as <nbsp>.)

```
13750 \newbool{LWR@HTMLsanitize@nobreakspace}
13751 \booltrue{LWR@HTMLsanitize@nobreakspace}
```

\, and \thinspace may be redefined by other packages, so are redefined \AtBeginDocument here.

Direct-formatting space commands become HTML entities:

```
13752 \AtBeginDocument{%
13754 \renewrobustcmd*{\,}{\HTMLunicode{202f}}% HTML thin non-breakable space, not using LWR@formatted
13755 %
13756 \newrobustcmd*{\LWR@HTML@thinspace}{\HTMLunicode{202f}}% HTML thin non-breakable space
13757 \LWR@formatted{thinspace}
13758 %
13759 \newrobustcmd*{\LWR@HTML@negthinspace}{\HTMLunicode{202f}} % HTML thin non-breakable space
13760 \LWR@formatted{negthinspace}
```

Cannot use \LWR@formatted for ~ or \nobreakspace.

```
13761 \renewrobustcmd*{~}{%
13762 \ifbool{LWR@HTMLsanitize@nobreakspace}%
13763 {\leavevmode\nobreak\HTMLentity{nbsp}}%
13764 {\LWR@orignobreakspace}%
13765 }
13766
13767 \LetLtxMacro\nobreakspace~
```

\?-\nobreakspace seems to be necessary for packages such as ctexbook, where this is used at the end of the document.

13768 \expandafter\LetLtxMacro\csname ?-\string\nobreakspace\endcsname~

```
13769 \newrobustcmd*{\LWR@HTML@textellipsis}{\HTMLunicode{2026}}
13770 \LWR@formatted{textellipsis}
13771 %
13772 \newrobustcmd*{\LWR@HTML@vdots}{\HTMLunicode{22EE}}
13773 \LWR@formatted{vdots}
13774 %
13775 }% AtBeginDocument
```

Direct-formatting font sizes are remembered for future use:

```
13776 \newcommand*{\LWR@font@size}{normalsize}
13777
13778 \newrobustcmd*{\LWR@HTML@normalsize}{\renewcommand*{\LWR@font@size}{normalsize}}
13779 \LWR@formatted{normalsize}
13780
```

```
13782 \LWR@formatted{small}
                               13784 \newrobustcmd { \LWR@HTML@footnotesize } \{ \newrobustcmd { \LWR@HTML@footnotesize } \} \\
                               13785 \LWR@formatted{footnotesize}
                               13788 \LWR@formatted{scriptsize}
                               13790 \newrobustcmd*{\LWR@HTML@tiny}{\renewcommand*{\LWR@font@size}{tiny}}
                               13791 \LWR@formatted{tiny}
                               13793 \newrobustcmd*{\LWR@HTML@large}{\renewcommand*{\LWR@font@size}{large}}
                               13794 \LWR@formatted{large}
                               \label{large} $$13796 \end{$\times {\LWR@HTML@Large}_{\renewcommand} {\LWR@font@size}_{\Large}_{\renewcommand} $$
                               13797 \LWR@formatted{Large}
                               \label{lem:linear_large} $$13799 \end{$\LWR@HTML@LARGE} {\renewcommand*{\LWR@font@size}} $$ $$13799 \end{$\label{lem:linear_large} $$$ $$13799 \end{$\label{lem:linear_large} $$$ $$13799 \end{$\label{lem:linear_large} $$$$ $$13799 
                               13800 \LWR@formatted{LARGE}
                               13802 \newrobustcmd*{\LWR@HTML@huge}{\renewcommand*{\LWR@font@size}{huge}}
                               13803 \LWR@formatted{huge}
                               13805 \newrobustcmd*{\LWR@HTML@Huge}{\renewcommand*{\LWR@font@size}{Huge}}
                               13806 \LWR@formatted{Huge}
                               13807 \DeclareDocumentCommand{\onecolumn}{}{}
                               {\tt 13809 \setminus Declare Document Command \{ \setminus two column \} \{ 0 \} \} \{ the column \} \{ t
                               13810
                               13811 #1
                               13812
                               13813 }
               \hfill
                               13814 \newcommand*{\LWR@HTML@hfill}{\qquad}
                               13815 \LWR@formatted{hfill}
\hrulefill
                               13816 \newcommand*{\LWR@HTML@hrulefill}{%
                                                              \ifbool{LWR@doingapar}%
                               13818
                                                                             {\rule{1in}{1pt}}%
                                                                             {%
                               13819
                                                                                            \LWR@findcurrenttextcolor%
                               13820
                                                                                            13821
                                                                                            {%
                               13822
                                                                                                            \begin{BlockClass}{hrule}%
                               13823
                                                                                                            \end{BlockClass}%
                               13824
                                                                                            }%
                               13825
                                                                                            {%
                               13826
                                                                                                            \begin{BlockClass}[%
                               13827
                                                                                                                  border-top: 1px solid \LWR@origpound\LWR@tempcolor % space
                               13828
                                                                                                            ]{hrule}%
                               13829
                                                                                                            \end{BlockClass}%
                               13830
                                                                                            }%
                               13831
```

```
13832
                           }%
             13833 }%
             13834 \LWR@formatted{hrulefill}
      \dotfill
             13835 \newcommand*{\LWR@HTML@dotfill}{\dots}
             13836 \LWR@formatted{dotfill}
      \newpage Not \LWR@foramtted since cannot be used inside a lateximage anyhow.
             13837 \renewcommand*{\newpage}{
             13838
             13839 }
      \newline Uses the HTML <br /> element.
             \label{localize} $$13840 \newrobustcmd*{\LWR@newlinebr}_{\unskip\LWR@htmltag\{br /}\LWR@orignewline}_{\normalfont}$$
             13841 \LetLtxMacro\newline\LWR@newlinebr
            \\ Redefined to \LWR@endofline or \LWR@tabularendofline.
\LWR@endofline * [\langle len \rangle]
                \\ is assigned to \LWR@endofline at \LWR@LwarpStart.
                Inside tabular, \\ is temporarily changed to \LWR@tabularendofline.
             13842 \LetLtxMacro\LWR@origendofline\\
             13843 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
             13844 { %
             13845 \newline%
             13846 \setlength{\LWR@templengthone}{#2}%
             13847 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
             13848 }
```

\LWR@minipagestartpars Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a <div> to be inside a p, paragraphs must be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, lwarp correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to be on its own line. Since people often place small horizontal space between minipages, it is desirable to maintain this space if possible. Lwarp tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around \hspace, \enskip, \quad, and \qquad until the end of the paragraph, when the closing p tag is created.

\hspace \enskip \quad

\qquad

When a minipage is seen, the boolean LWR@minipagethispar is set, telling the following horizontal whitespace commands to try to suppress their surrounding paragraph tags. LWR@minipagethispar is cleared at the next end of paragraph, when the HTML paragraph closing tag is generated.

```
Placed just before \hspace, \quad, or \qquad's HTML output.
```

```
13849 \newcommand*{\LWR@minipagestartpars}{%
13850 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
13851 }
```

\LWR@minipagestoppars Placed just after \hspace, \quad, or \qquad's HTML output.

```
13852 \newcommand*{\LWR@minipagestoppars}{%
13853 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
13854 }
```

\quad Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

```
13855 \newrobustcmd*{\LWR@HTML@quad}{%
13856 \LWR@minipagestoppars%
13857 \HTMLunicode{2003}%
13858 \LWR@minipagestartpars%
13859 }
13860 \LWR@formatted{quad}
```

\qquad Handles special minipage & horizontal space interactions.

```
13861 \newrobustcmd*{\LWR@HTML@qquad}{\quad\quad}
13862 \LWR@formatted{qquad}
```

\enskip Handles special minipage & horizontal space interactions.

```
13863 \newrobustcmd*{\LWR@HTML@enskip}{%
13864 \LWR@minipagestoppars%
13865 \HTMLunicode{2002}%
13866 \LWR@minipagestartpars%
13867 }
13868 \LWR@formatted{enskip}
```

\LWR@tempwidth (Len) Used to compute span width, height, raise for \hspace and \rule:

Handles special minipage & horizontal space interactions.

Prints a span of a given width. Ignores the optional star.

\hspace{\fill} is converted to \hspace{2em}, equal to \qquad.

If \fill, change to \qquad:

```
13874 \ifnum\gluestretchorder\LWR@tempwidth>0%
13875 \setlength{\LWR@tempwidth}{2em}%
13876 \fi%
```

Only if the width is greater than zero:

```
13877 \ifdimcomp{\LWR@tempwidth}{>}{0pt}{%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
13878 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
13879 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
13880    {%
13881 \HTMLunicode{2009}% thin breakable space
13882 }%
```

Print the span with the converted width. Not rounded.

If formatting for a word processor, approximate with a number of \quads, in case a span of a given width is not supported:

```
13888 \ifbool{FormatWP}{%
13889 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
13890 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
13891 \quad%
13892 \addtolength{\LWR@templengthone}{-1em}%
13893 }%
13894 }%
```

If NOT formatting for a word processor, include an empty comment to avoid an empty span:

```
13895 {\LWR@htmlcomment{}}%
```

Close the span:

```
13896 \LWR@htmltagc{/span}%
13897 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
13898 \LWR@minipagestartpars%
13899 \{\}% width greater than 0
13900 \}%
13901 \LWR@formatted{hspace}
```

```
\LWR@vspace * \{\langle length \rangle\} Nullified vspace.
                13902 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{}
                13904 \LWR@formatted{vspace}
      \linebreak [\langle num \rangle]
                                   Inserts an HTML br tag.
                13905 \renewcommand*{\linebreak}[1][]{\newline}
    \nolinebreak [\langle num \rangle]
                13906 \renewcommand*{\nolinebreak}[1][]{}
      \pagebreak [\langle num \rangle]
                                   Starts a new paragraph.
                13907 \renewcommand*{\pagebreak}[1][]{
                13908
                13909 }
    \nopagebreak [\langle num \rangle]
                13910 \renewcommand*{\nopagebreak}[1][]{}
\enlargethispage *\{\langle len \rangle\}
                13911 \RenewDocumentCommand{\enlargethispage}{s m}{}
      \clearpage
\cleardoublepage
                13912 \renewcommand*{\clearpage}{}
                13913 \renewcommand*{\cleardoublepage}{}
            \rule [\langle raise \rangle] \{\langle width \rangle\} \{\langle height \rangle\}
                   Handles special minipage & horizontal space interactions.
                   Creates a span of a given width and height. Ignores the optional star.
                   \fill is zero-width, so \hspace{\fill} is ignored.
                13914 \newcommand*{\LWR@HTML@rule}[3][]{%
                   The width is copied into a temporary LATEX length, from which comparisons and
                   conversions may be made:
                13915 \setlength{\LWR@tempwidth}{#2}%
                   If it's zero-width then skip the entire rule:
                13916 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}%
                13917{}% zero- width
                13918 {% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
13919 \ifthenelse{%
13920 \lengthtest{\LWR@tempwidth>0pt}\AND%
13921 \lengthtest{\LWR@tempwidth<1pt}%
13922 }%
13923 {\setlength{\LWR@tempwidth}{1pt}}%
13924 {}%</pre>
```

Likewise with height:

```
13925 \setlength{\LWR@tempheight}{#3}%
13926 \ifthenelse{%
13927 \lengthtest{\LWR@tempheight>0pt}\AND%
13928 \lengthtest{\LWR@tempheight<1pt}%
13929 }%
13930 {\setlength{\LWR@tempheight}{1pt}}%
13931 {}%</pre>
```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
13932 \LWR@minipagestoppars%
```

Print the span with the converted width and height. The width and height are NOT rounded, since a height of less than 1pt is quite common in LATEX code.

```
13933 \LWR@findcurrenttextcolor%
13934 \LWR@htmltagc{%
13935 span\LWR@indentHTML%
13936 style=\textquotedbl%
```

The HTML background color is used to draw the filled rule according to the LATEX foreground color set by \textcolor.

```
13937 \ifbool{FormatWP}{}{background:\LWR@currenttextcolor;}%
```

The width and height are printed, converted to PT:

```
13938 width:\LWR@printlength{\LWR@tempwidth}; %
13939 height:\LWR@printlength{\LWR@tempheight}; %
```

The raise height is converted to a css transform. The *2 raise multiplier is to approximately match HTML output's X height. Conversion to a LATEX length allows a typical LATEX expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a LATEX length limits the allowable syntax. To do: A superior method would compute a ratio of LATEX ex height, then print that to HTML with an ex unit.

```
\ifblank{#1}%
13940
13941
        {}%
13942
        {%
             \setlength{\LWR@tempraise}{0pt-#1}%
13943
13944
             \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
             \LWR@indentHTML%
13945
             -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
13946
             \LWR@indentHTML%
13947
```

```
-webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); % \LWR@indentHTML% transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); % \LWR@indentHTML% \LWR@tempraise}); % \LWR@indentHTML% }%
```

Display inline-block to place the span inline with the text:

```
13953 display:inline-block;\textquotedbl\LWR@orignewline%
13954 }%
```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

If NOT formatting for a word processor, add a comment to avoid an empty :

```
13962 {\LWR@htmlcomment{}}%
Close the span:
```

```
13963 \LWR@htmltagc{/span}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

97 \phantomsection

```
for HTML output: 13970 \begin{warpHTML}
```

\LWR@phantomsection Emulate the hyperref \phantomsection command, often used to insert the bibliography into the table of contents. Ignores \ForceHTMLTOC.

```
13971 \newrobustcmd*{\LWR@phantomsection}{%
13972 \begingroup%
13973 \boolfalse{LWR@forcinghtmltoc}%
13974 \section*{}%
13975 \endgroup%
13976 }
```

13977 \end{warpHTML}

98 \LaTeX and other logos

Logos for HTML and print modes:

Some of these logos may be redefined in a later package, so after loading other packages, and at the beginning of the document, their definitions are finally set by \LWR@formatted.

For css conversions, see: http://edward.oconnor.cx/2007/08/tex-poshlet http://nitens.org/taraborelli/texlogo and the spacing described in the metafont package documentation.

```
for HTML & PRINT: 13978 \begin{warpall}
                 13979 \newbool{LWR@warnXe}
                 13980 \boolfalse{LWR@warnXe}
                 13981
                 13982 \newrobustcmd*{\Xe}
                 13983
                          {%
                               X\hspace{-.1667em}\raisebox{-.5ex}{E}%
                 13984
                 13985
                               \global\booltrue{LWR@warnXe}%
                 13986
                          }
                 13987
                 13988 \AtBeginDocument{
                          \IfPackageLoadedTF{graphics}{
                 13990
                               \IfPackageLoadedTF{metalogo}{}{
                 13991
                                   \renewrobustcmd*{\Xe}
                                       {X\hspace}_{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}
                 13992
                 13993
                               }
                          }{}
                 13994
                 13995 }
                 13996
                 13997 \AtEndDocument{
                          \ifbool{LWR@warnXe}{
                 13998
                 13999
                               \PackageNoteNoLine{lwarp}{Load graphicx or graphics
                 14000
                                   for improved XeTeX logo}
                 14001
                          }{}
                 14002 }
                 14003
                 14004 \providerobustcmd*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}
                 14005 \providerobustcmd*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}
                 14006 \providerobustcmd*{\AmS}{%
                          \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex%
                 14007
                          \hbox{$\mathcal M$}\kern-.2em\mathcal S$}%
                 14008
                 14010 \newrobustcmd*{\LyX}{\textsf{LyX}}}
                 14011 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
                 14012 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
                 14013 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
                 14014 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}
                 14015 \verb|\providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{}t}}|
                 14016 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
                 14017 \end{warpall}
```

The print-mode versions of the following may be changed by metalogo, so their print formatting is recorded \AtBeginDocument.

```
\TeX TEX
```

latexlogo is a css class used to properly typeset the E and A in LATEX and friends.

latexlogofont is a css class used to select the font for the rest of the logo in LATEX, LuaTEX, ConTeXt, etc.

```
14019 \newrobustcmd*{\LWR@HTML@TeX}
     14020 {%
     14021
               \InlineClass{latexlogofont}%
     14022
     14023
                    \InlineClass{latexlogo}%
     14024
                    {%
     14025
                         T%
     14026
                         \InlineClass{latexlogosub}{e}%
     14027
     14028
                    }%
               }%
     14029
     14030 }
     14031 \AtBeginDocument{\LWR@formatted{TeX}}% may have been patched by metalogo
\LaTeX \LaTeX, \LaTeX2\varepsilon
\LaTeXe
     14032 \newrobustcmd*{\LWR@HTML@LaTeX}
     14033 { %
               \InlineClass{latexlogofont}%
     14034
      14035
      14036
                    \InlineClass{latexlogo}%
      14037
                    {%
      14038
                         \InlineClass{latexlogosup}{a}%
     14039
     14040
                         \InlineClass{latexlogosub}{e}%
     14041
                         Х%
     14042
                    }%
     14043
               }%
     14044
     14045 }
     14046
     14047 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo
     14048
     14049
     14050 \newrobustcmd*{\LWR@HTML@LaTeXe}
     14051 {%
               \LaTeX%
     14052
               \InlineClass{latexlogofont}{%
     14053
                    \InlineClass{latexlogotwoe}{%
     14054
     14055
                         \InlineClass{latexlogotwoesub}{\HTMLunicode{03B5}}%
     14056
     14057
                    }%
     14058
               }%
     14060 \ \texttt{AtBeginDocument} \ \texttt{LWR@formatted} \ \texttt{LaTeXe}\} \% \ \ may \ \ have \ \ been \ \ patched \ \ by \ \ metalogo
```

```
\LuaTeX LuaT<u>E</u>X, LuaL<u>ATE</u>X
\LuaLaTeX
```

```
14061 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
        14062 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
        14064 \verb|\newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}| \\
        14065 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo
    \XeTeX XaTeX, XaIATeX
  \XeLaTeX
            xetexlogo is a css class which aligns the backwards E in XaTeX and spaces TeX
            appropriately.
            xelatexlogo is a css class which aligns the backwards E in XHIATEX and spaces
            LATEX appropriately.
        14066 \newrobustcmd*{\LWR@HTML@Xe}
        14067
                 {%
        14068
                      \InlineClass{xelatexlogosub}{\HTMLunicode{18e}}%
        14069
        14070
        {\tt 14071 \ AtBeginDocument\{\ LWR@formatted\{Xe\}\}\% \ may \ have \ been \ patched \ by \ metalogo}
        14073 \verb|\newrobustcmd*{\LWR@HTML@XeTeX}{\InlineClass{xelatexlogo}{\Xe}\TeX}| \\
        14074 \ \texttt{AtBeginDocument} \ \texttt{LWR@formatted} \ \texttt{XeTeX}\} \ \texttt{M} \ \texttt{may have been patched by metalogo}
        14076 \verb|\newrobustcmd*{\LWR@HTML@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}| \\
        14077 \land AtBeginDocument{\LWR@formatted{XeLaTeX}}\% may have been patched by metalogo
  \ConTeXt ConTeXt
        14078 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
                  \InlineClass{latexlogofont}{Con}\TeX{}%
        14079
        14080
                  \InlineClass{latexlogofont}{t}%
        14081 }
        14082 \LWR@formatted{ConTeXt}
   \BibTeX BibT<sub>E</sub>X, MakeIndex
\MakeIndex
        14083 \newrobustcmd*{\LWR@HTML@BibTeX}
                 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
        14085 \LWR@formatted{BibTeX}
        14086
        {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
        14089 \LWR@formatted{MakeIndex}
      \AmS \mathcal{F}_{M}S
            amslogo is a css class used for the \mathcal{A}_{M}\mathcal{S} logo.
         14090 \AtBeginDocument{%
        14091 \newrobustcmd*{\LWR@HTML@AmS}
        14092 {%
                  \InlineClass{amslogo}{%
        14093
                      \textit{%
        14094
                           Α%
        14095
```

\InlineClass{latexlogosub}{M}%

14096 14097

99 Starting and stopping lwarp

for HTML output: 14108 \begin{warpHTML}

\LWR@LwarpStart Automatically sets up the HTML-related actions for the start and end of the docu-\LWR@LwarpEnd ment.

```
14109 \AfterEndPreamble{\LWR@LwarpStart}
14110 \AtEndDocument{\LWR@LwarpEnd}
14111 \DeclareHookRule{enddocument}{\lwarp}{\after}{\legacy}
14112 \end{\warpHTML}
```

100 Loading array

array is required for lwarp's column parsing. It and its patches are now loaded.

The following are compared with the tabular preamble > to add css classes to adjust tabular cells. Defined here now that \arraybackslash is defined after array is loaded.

```
14115 \edef\LWR@detect@centeringarraybackslash{\centering\arraybackslash}
14116 \edef\LWR@detect@raggedrightarraybackslash{\raggedright\arraybackslash}
14117 \edef\LWR@detect@raggedleftarraybackslash{\raggedleft\arraybackslash}
14118 \def\LWR@detect@itshape{\itshape}
14119 \def\LWR@detect@bfseries{\bfseries}
14120 \def\LWR@detect@bfit{\bfseries\itshape}
14121 \end{warpHTML}
```

101 Loading everyshi patches

everyshi is emulated by the LATEX core, so its patches are loaded here. \AtBeginDocument is used in case an older verison of LATEX is used.

102 Loading textcomp patches

textcomp has now been integrated into the LATEX core, so its patches are loaded now.

103 Loading amsmath, amsthm patches, centernot

amsmath, amsthm, and centernot may have been preloaded, such as by newtx, so their patches are loaded now.

104 Loading Koma-script class patches

Load patches to koma-script.

```
for HTML output: 14143 \begin{warpHTML}
```

```
14144 \ IfClassLoadedTF{scrbook}{\RequirePackage{\lwarp-patch-komascript}}{\}
14145 \ IfClassLoadedTF{scrartcl}{\RequirePackage{\lwarp-patch-komascript}}{\}
14146 \ IfClassLoadedTF{scraprt}{\RequirePackage{\lwarp-patch-komascript}}{\}
14147 \ end{\warpHTML}
```

105 Loading Memoir class patches

Load patches to memoir.

106 ut* class patches

Load patches to uj* and ut* classes, as well as ltj* classes.

```
\textbf{for HTML output:} \ 14154 \verb|\begin{warphtml}|
```

14155 \newcommand*{\LWR@patchujtclasses}{

uj/t does not use \partname

```
\def\@partnameformat{}
14156
         \def\@partcntformat##1{%
14157
             \prepartname%
14158
             \csname the##1\endcsname%
14159
             \postpartname%
14160
             \quad%
14161
14162
         \@ifundefined{chapter}{}{
14163
             \def\@chapcntformat##1{%
14164
                 \prechaptername%
14165
14166
                 \csname the##1\endcsname%
14167
                 \postchaptername%
                 \quad%
14168
14169
             }
14170
14171
         \renewcommand*{\LWR@printchaptername}{}
```

Use decimal points instead of centered dots:

```
14172 \renewcommand{\thepart}{\@Roman\c@part}
14173 \@ifundefined{chapter}{
14174 \renewcommand{\thesection}{\@arabic\c@section}
14175 }{
14176 \renewcommand{\thechapter}{\@arabic\c@chapter}
```

```
14177
            \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
14178
        \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
14179
        \renewcommand{\thesubsubsection}{%
14180
14181
        \thesubsection.\@arabic\c@subsubsection}
14182
        \renewcommand{\theparagraph}{%
        \thesubsubsection.\@arabic\c@paragraph}
14183
        \renewcommand{\thesubparagraph}{%
14184
        \theparagraph.\@arabic\c@subparagraph}
14185
        \@ifundefined{chapter}{
14186
            \renewcommand{\thefigure}{\@arabic\c@figure}
14187
14188
            \renewcommand{\thetable}{\@arabic\c@table}
14189
        }{
14190
            \renewcommand{\thefigure}{%
14191
            \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
14192
            \renewcommand{\thetable}{%
            \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
14193
        }
14194
14195 }
14196
14197 \IfClassLoadedTF{ujarticle}{\LWR@patchujtclasses}{}
14198 \IfClassLoadedTF{ujbook}{\LWR@patchujtclasses}{}
14199 \IfClassLoadedTF{ujreport}{\LWR@patchujtclasses}{}
14200 \IfClassLoadedTF{utarticle}{\LWR@patchujtclasses}{}
14201 \IfClassLoadedTF{utbook}{\LWR@patchujtclasses}{}
14202 \IfClassLoadedTF{utreport}{\LWR@patchujtclasses}{}
14203 \IfClassLoadedTF{ltjarticle}{\LWR@patchujtclasses}{}
14204 \IfClassLoadedTF{ltjbook}{\LWR@patchujtclasses}{}
14205 \IfClassLoadedTF{ltjreport}{\LWR@patchujtclasses}{}
14206 \IfClassLoadedTF{ltjsarticle}{\LWR@patchujtclasses}{}
{\tt 14207 \LWR@patchujtclasses} \{\} \\
14208 \IfClassLoadedTF{ltjsreport}{\LWR@patchujtclasses}{}
14209 \IfClassLoadedTF{ltjskiyou}{\LWR@patchujtclasses}{}
14210 \IfClassLoadedTF{ltjspf}{\LWR@patchujtclasses}{}
14211 \IfClassLoadedTF{ltjtarticle}{\LWR@patchujtclasses}{}
14212 \IfClassLoadedTF{ltjtbook}{\LWR@patchujtclasses}{}
14213 \IfClassLoadedTF{ltjtreport}{\LWR@patchujtclasses}{}
14214 \end{warpHTML}
```

107 CTEX patches

Patches for ctex and related classes, which are loaded before lwarp.

All CTEX classes and the ctex package seem to load ctexpatch, so its presence is used to decide whether to have lwarp patch CTEX.

for HTML output: 14215 \begin{warpHTML}

\AtBeginDocument in case the user set FileSectionNames in the preamble.

```
14216 \AtBeginDocument{
14217 \IfPackageLoadedTF{ctexpatch}{%
14218 \def\@partcntformat#1{%
14219 \LWR@isolate{\CTEX@partname}~%
14220 \CTEX@part@aftername%
14221 }%
```

```
14222
             \def\@partnameformat{}
14223
14224
14225
             \def\@chapcntformat#1{%
14226
                 \LWR@isolate{\CTEX@chaptername}~%
                  \CTEX@chapter@aftername%
14227
             }%
14228
14229
             \renewcommand*{\LWR@printchaptername}{}
14230
14231
         }{}
14232 }
14233 \end{warpHTML}
```

108 kotexutf patches

Patch for kotexutf, which is loaded before lwarp.

kotexutf's \@setref was conflicting with lwarp's cross references.

for HTML output: 14234 \begin{warpHTML}

If kotexutf's version of \@setref is detected, it is reverted to the original.

```
14235 \AtBeginDocument{
14236 \IfPackageLoadedTF{kotexutf}{%
        \def\LWR@kotexutf@setref#1#2#3{%
            \@setref@dhucs@orig{#1}{#2}{#3}%
14238
           \ifx#1\relax\else
14239
             \bgroup
14240
             \dhucs@make@cjkchar@null
14241
             \edef\@temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
14242
14243
             \egroup
           \fi%
14244
14245
        }%
14246
14247
         \ifdefequal{\@setref}{\LWR@kotexutf@setref}{
14248
             \let\@setref\@setref@dhucs@orig
14249
        }{}
14250 }{}
14251 }
14252 \end{warpHTML}
```

109 babel and polyglossia warnings

lwarp prints a message instructing the user how to avoid the following error.

(These are not \PackageWarnings because there may not be a problem.)

lwarp uses cleveref, which has some limitations when using polyglossia, possibly resulting in the error

```
! Undefined control sequence. . . . \__hook begindocument
```

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```

or some other language supported by cleveref, then select other languages using \setotherlanguages.

Once the print version works with cleveref and polyglossia, the HTML version should work as well using lwarp.

```
for HTML output: 14253 \begin{warpHTML}
                14254 \AtBeginDocument{
                14255
                {\tt 14256 \setminus IfPackageLoadedTF\{polyglossia\}\{}
                         \PackageNoteNoLine{lwarp}
                14257
                14258
                         {%
                14259
                             Polyglossia has been loaded. Lwarp also uses cleveref.\MessageBreak
                14260
                             See the cleveref documentation regarding\MessageBreak
                14261
                             polyglossia support. Some languages are not supported.\MessageBreak
                             --- \MessageBreak
                14262
                             If the error\MessageBreak
                14263
                14264
                             \space\space Undefined control sequence ...
                14265
                             \protect\__hook begindocument\MessageBreak
                             occurs here, use the polyglossia macro:\MessageBreak
                14266
                             \space\space\protect\setmainlanguage\protect{\dots\}
                14267
                14268
                14269 }{
                14270
                         \IfPackageLoadedTF{babel}{
                14271
                             \PackageNoteNoLine{lwarp}
                14272
                                  Babel has been loaded. Lwarp also uses cleveref.\MessageBreak
                14273
                14274
                                  See the cleveref documentation regarding\MessageBreak
                14275
                                  babel support. Some languages are not supported%
                14276
                         }{}
                14277
                14278 }
                14279
                14280 }
                14281 \end{warpHTML}
```

110 MATHJAX warnings

```
\LWR@mathjaxwarn \{\langle packagename \rangle\} \{\langle More\ text. \rangle\}
```

Issue a warning that MATHJAX is emulated. To be done \AtBeginDocument.

```
14282 \newcommand*{\LWR@mathjaxwarn}[2]{%
14283 \IfPackageLoadedTF{\underset{warp-#1}{%}
14284 \ifblank{#2}{%}
14285 \PackageWarningNoLine{\underset{warp}}
14286 {%
14287 Lwarp provides emulation for MathJax when used\MessageBreak
```

```
14288
                                            with the #1 package%
                  14289
                                        }
                               }{%
                   14290
                                    \PackageWarningNoLine{lwarp}
                  14291
                  14292
                                         Lwarp provides emulation for MathJax when used\MessageBreak
                  14293
                                            with the #1 package.\MessageBreak
                  14294
                                            #2%
                  14295
                                        }
                  14296
                               }%
                  14297
                   14298
                           }{}%
                   14299 }
                   14300
                   14301 %
                         \begin{macro}{\LWR@nomathjaxwarn} \marg{packagename} \marg{More text.}
                  14302 %
                  14303% Issue a warning that \MathJax\ is not supported.
                  14304 % To be done \cs{AtBeginDocument}.
                  14305 %
                  14306% \changes{v0.894}{2020/12/22}{Warn if using packages not supported by \MathJax.}
                  \begin{macrocode}
                  14308 %
                  14309 \newcommand*{\LWR@nomathjaxwarn}[2]{%
                           \IfPackageLoadedTF{lwarp-#1}{%
                  14310
                   14311
                               \ifblank{#2}{%
                  14312
                                    \PackageWarningNoLine{lwarp}
                  14313
                                        {%
                  14314
                                         Lwarp does not provide MathJax support for #1.\MessageBreak
                  14315
                                            Use SVG math by removing the Lwarp mathjax option%
                  14316
                  14317
                               }{%
                                    \PackageWarningNoLine{lwarp}
                  14318
                  14319
                                         Lwarp does not provide MathJax support for #1.\MessageBreak
                  14320
                   14321
                   14322
                  14323
                                }%
                  14324
                           }{}%
                  14325 }
\LWR@forceSVGmessage \{\langle packagename \rangle\}
                  14326 \newcommand*{\LWR@forceSVGmessage}[1]{%
                   14327
                           SVG math output may be enabled for select math\MessageBreak
                           expressions to preserve #1 visual\MessageBreak
                   14328
                           features \ for \ those \ particular \ expressions. \\ \verb|\| MessageBreak|
                   14329
                  14330
                           Before the chosen inline math, use \protect\inlinemathother\MessageBreak
                  14331
                           to begin using SVG math, and \protect\inlinemathnormal\MessageBreak
                  14332
                           afterward to resume using MathJax math.\MessageBreak
                  14333
                           Before display math, use \protect\displaymathother\MessageBreak
                           to begin using SVG math, and use \verb|\protect\displaymath| normal \\| MessageBreak|
                  14334
                           after to resume using MathJax for the following math.\MessageBreak
                  14335
                           Or, use SVG math for all expressions by removing\MessageBreak
                  14336
                  14337
                           the mathjax option for the lwarp package%
                  14338 }
```

If MathJax is being used, issue a warning for certain packages.

```
14339 \AtBeginDocument{
14340 \ifbool{mathjax}{
```

```
14341
             \LWR@nomathjaxwarn{aligned-overset}{}
14342
             \LWR@nomathjaxwarn{amscdx}{\LWR@forceSVGmessage{amscdx}}
14343
             \LWR@mathjaxwarn{arydshln}
                 {In a math array, do not use the optional argument\MessageBreak
14344
14345
                 for \protect\cdashline.\space\space
14346
                 Furthermore, \protect\cline\space is not\MessageBreak
                 supported by MathJax}
14347
             \LWR@nomathjaxwarn{autoaligne}{}
14348
             \LWR@mathjaxwarn{autonum}
14349
                 {\tt \{MathJax\ does\ not\ support\ equation+.} \\ {\tt MessageBreak}
14350
                 You may use the warpprint and warpHTML\MessageBreak
14351
14352
                 environments to isolate the package load\MessageBreak
14353
                 and the equation+ environments}
14354
             \LWR@mathjaxwarn{bigdelim}
14355
                 {Delimiters appear only of the first line}
14356
             \LWR@nomathjaxwarn{boldtensors}{}
14357
             \LWR@mathjaxwarn{booktabs}
                 {\protect\cmidrule\space is not displayed}
14358
             \LWR@mathjaxwarn{breqn}
14359
                 {Each environment becomes an SVG image}
14360
             \LWR@mathjaxwarn{colortbl}
14361
14362
                 {Colors are ignored in MathJax.\MessageBreak
14363
                 (Text mode tabular does support colortbl.)\MessageBreak
14364
                 \LWR@forceSVGmessage{colortbl}}
             \LWR@mathjaxwarn{delarray}{\LWR@forceSVGmessage{delarray}}
14365
             \LWR@nomathjaxwarn{gauss}{\LWR@forceSVGmessage{gauss}}
14366
14367
             \LWR@mathjaxwarn{hhline}
14368
                 {A simple \protect\hline\space is used}
14369
             \LWR@mathjaxwarn{isomath}
             {\tt \{Some\ of\ the\ symbol\ font\ macros\ such\ as\ \ \ } \\ {\tt protect\ mathsfbfit\ MessageBreak}
14370
                  do not use a sans font because MathJax does not yet\MessageBreak
14371
                     have sans Greek. Tensors may look like vectors%
14372
14373
             \LWR@nomathjaxwarn{jkmath}{\LWR@forceSVGmessage{jkmath}}
14374
14375
             \LWR@mathjaxwarn{libertinust1math}
             {Some of the symbol font macros such as \protect\mathsfbfit\MessageBreak
14376
14377
                  do not use a sans font because MathJax does not yet\MessageBreak
                     have sans Greek. Tensors may look like vectors%
14378
14379
             \LWR@mathjaxwarn{mathtools}
14380
                 {See the Lwarp manual regarding the disallowspaces\MessageBreak
14381
                 and showonlyrefs options, the alignat environment, \MessageBreak
14382
                 and \protect\DeclarePairedDelimiter\space and related%
14383
14384
                 }
             \LWR@mathjaxwarn{mathspec}
14385
                 {Double quotes are removed, even inside \protect\text}
14386
             \LWR@mathjaxwarn{mismath}
14387
14388
               {MathJax does not support \cs{enumber}, \cs{inumber}, \MessageBreak
             \protect\jnumber, \protect\pinumber, \protect\MathUp, \protect\MathIt,\MessageBreak
14389
                 \protect\MathNumbers, or \protect\MathNormal.\MessageBreak
14390
             \protect\itpi\space is made available as a clone of \protect\pi.\MessageBreak
14391
                 Tensors are not sans serif%
14392
14393
14394
             \LWR@mathjaxwarn{multirow}
                 {Multirow works as expected in text mode, but\MessageBreak
14395
14396
                 limited emulation is provided for MathJax math.\MessageBreak
                \protect\multirow\space ignores all arguments except\MessageBreak
14397
14398
                 the text}
14399
             \LWR@mathjaxwarn{nicematrix}
                 {Keys/values are ignored in MathJax.\MessageBreak
14400
```

```
14401
                 \protect\Cdots, etc. do not span multiple cells.\MessageBreak
                AutoNiceMatrix, etc. are not supported for MathJax.\MessageBreak
14402
             \protect\CodeBefore, \protect\Body, and \protect\CodeAfter\MessageBreak
14403
14404
                 \space\space also are not supported for MathJax.\MessageBreak
14405
                 \LWR@forceSVGmessage{nicematrix}%
14406
            \LWR@nomathjaxwarn{pb-diagram}{\LWR@forceSVGmessage{pb-diagram}}
14407
              \LWR@mathjaxwarn{physics}
14408 %
14409 % %
                     {The third-party extension is not used.\MessageBreak
14410 %
                   {The MathJax v3 extension is used.\MessageBreak
14411 %
                   See the Lwarp manual for details}
14412
             \LWR@mathjaxwarn{siunitx}
14413
            {Place \protect\sisetup\space before \protect\begin{document}.\MessageBreak
14414
                 Many optional arguments are ignored}
14415
            \LWR@nomathjaxwarn{tensind}{}
14416
            \LWR@mathjaxwarn{unicode-math}
                 {Do not use embedded Unicode characters.\MessageBreak
14417
                 (Not all characters are encoded correctly.)\MessageBreak
14418
                 Some symbol fonts are not supported by MathJax, MessageBreak
14419
                 and are only approximated.\MessageBreak
14420
14421
            Greek macros such as \protect\alpha\space respond to the math-style\MessageBreak
14422
                 option. Latin symbols does not, per MathJax\MessageBreak
              limitations, unless placed inside \protect\symbit\space or similar}
14423
            \LWR@nomathjaxwarn{unitsdef}{}
14424
14425
            \LWR@mathjaxwarn{witharrows}
14426
                 {Arrows can only point to the next line.\MessageBreak
14427
                 Text is only placed on a single line}
14428
            \LWR@nomathjaxwarn{xy}
             {In text, xy works as-is. SVG images will be generated.\MessageBreak
14429
                 \LWR@forceSVGmessage{xy}}
14430
14431
        }{}
14432 }
```

File 2 lwarp-2in1.sty

§111 Package 2in1

2in1 (Pkg) 2in1 is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{2in1}

File 3 lwarp-2up.sty

§112 Package **2up**

2up (*Pkg*) 2up is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{2up}[2010/05/15]

2 \def\source#1#2#3{}

3 \def\target#1#2#3{}

4 \def\targetlayout#1{}

5 \newdimen\pageseplength

6 \newdimen\pagesepwidth

 $7 \neq 7$

8 \def\twoupemptypage{}

9 \def\twoupclearpage{}

10 \def\twoupeject{}

11 \def\twouparticle{}

 ${\tt 12 \backslash def \backslash twoupplain} \{\}$

13 \def\twouplegaltarget{}

14 \def\twouplandscape{}

15 \def\TwoupWrites{}

File 4 lwarp-a4.sty

§113 Package **a4**

a4 (*Pkg*) **a4** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a4}[2004/04/15]

2 \newcommand*{\WideMargins}{}

File 5 lwarp-a4wide.sty

§114 Package a4wide

a4wide (*Pkg*) a4wide is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

File 6 lwarp-a5comb.sty

§115 Package a5comb

a5comb (*Pkg*) a5comb is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a5comb}

File 7 lwarp-abstract.sty

§116 Package abstract

(Emulates or patches code by Peter Wilson.)

abstract (*Pkg*) abstract is supported and patched by lwarp.

If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

for HTML output:

memoir provides an abstract environment even though it is not an article or report class. Meanwhile, lwarp loads book to emulate memoir, but book does not have an abstract environment, so when the abstract package is loaded for emulation there is no pre-existing abstract to redefine, which would cause an error. Thus, a null abstract is provide here:

1\ProvideDocumentEnvironment{abstract}{}{}{}

Accept all options for lwarp-abstract:

```
2 \LWR@ProvidesPackagePass{abstract}[2009/06/08]
3 \AtBeginDocument{
4 \BeforeBeginEnvironment{abstract}{
5 \LWR@forcenewpage
6 \BlockClass{abstract}
7 }
8 \AfterEndEnvironment{abstract}{\endBlockClass}
9 }
11 \renewcommand{\@bsrunintitle}{%
12 \hspace*{\abstitleskip}%
13 {\abstractnamefont%
14 \InlineClass{abstractrunintitle}{\abstractname}%
15 \@bslabeldelim}%
16 }
17 \IfClassLoadedTF{memoir}
   \renewenvironment{abstract}{%
```

```
20 % %
          \titlepage
21 %
        \left| \right| \
22 %
        \@beginparpenalty\@lowpenalty
23 \setup@bstract
24
      \if@bsrunin
25
      \else
          \if@bsstyle
26 %
            \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
27 %
          \else
28 %
          \ifnumber@bs
29
            \num@bs
30
31
          \else
            \begin{\absnamepos}%
33
    \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
34 %
                 \@endparpenalty\@M
35
            \end\absnamepos%
         \vspace{\abstitleskip}%
36
          \fi
37
          \fi
38 %
39 %
          \vspace{\abstitleskip}%
      \fi
40
      \put@bsintoc%
41
      \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
42
      {\par\end{@bstr@ctlist}%\vfil\null%\endtitlepage
43
44
45 }{% not memoir
46 \if@titlepage
47 \renewenvironment{abstract}{%
48 %
        \titlepage
      \null\vfil
49
      \@beginparpenalty\@lowpenalty
50
      \if@bsrunin
51
52
      \else
        \if@bsstyle
53
          \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
54
55
        \else
          \ifnumber@bs
56
            \num@bs
57
          \else
58
            \begin{\absnamepos}%
59
    \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
60
61
              \@endparpenalty\@M
            \end\absnamepos%
62
63 %%
            \vspace{\abstitleskip}%
          \fi
64
        \fi
65
66
        \vspace{\abstitleskip}%
      \fi
67
      \put@bsintoc%
68
      \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
69
      {\par-end @bstr@ctlist}\vfil\null%\endtitlepage}
70
71
72 \else
    \renewenvironment{abstract}{%
73
      \if@bsrunin
74
      \else
75
76
        \if@bsstyle
          \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
77
        \else
78
          \ifnumber@bs
79
```

```
\num@bs
80
           \else
82 \begin{\absnamepos}%
83\ \ abstract name font \ Block Class Single \{abstract title\} \{\ abstract name\} \%
84 \end\absnamepos%
             \vspace{\abstitleskip}%
85 %%
          \fi
86
        \fi
87
        \vspace{\abstitleskip}%
88
      \fi
89
90
      \put@bsintoc%
      \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
      {\par\end{@bstr@ctlist}}
93\fi
94}% not memoir
```

File 8 lwarp-academicons.sty

§117 Package academicons

(Emulates or patches code by Diogo A. B. Fernandes.)

academicons (Pkg) academicons is patched for use by lwarp.

If \aiicon is used, the name of the icon is used in the alt tag. Otherwise, for each of the individual icon macros, a generic alt tag is used.

 $for\ HTML\ output:$

```
1 \LWR@ProvidesPackagePass{academicons}[2018/06/27]
```

```
2 \LetLtxMacro\LWR@orig@symbol\symbol
4 \let\LWR@academicons@orig@AI\AI
6 \newcommand*{\LWR@academicons@symbol}[1]{%
      \begin{lateximage}*[academicon][academicons#1]%
8
      \begingroup%
      \LWR@academicons@orig@AI%
9
      \LWR@orig@symbol{#1}%
10
      \endgroup%
11
12
      \end{lateximage}%
13 }
14
15 \renewcommand*{\AI}{%
      \LetLtxMacro\symbol\LWR@academicons@symbol%
16
17 }
18
19 \renewcommand*{\aiicon}[1]
20 {%
      \begin{lateximage}*[#1 icon][academicons#1]%
21
      \AI\csname aiicon@#1\endcsname%
23
      \end{lateximage}%
24 }
```

File 9 lwarp-accents.sty

§118 Package accents

(Emulates or patches code by Javier Bezos.)

accents (*Pkg*) accents is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{accents}[2006/05/12]

For MATHIAX:

```
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{accents}
4
5 \CustomizeMathJax{\newcommand{\ring}[1]{\mathring{#1}}}
6 \CustomizeMathJax{\newcommand{\accentset}[2]{\overset{#1{}}{#2}}}
```

As of this writing, MATHJAX v3 does not yet support groups for macros, so for \underaccent, the originals are remembered here, then they are temporarily redefined and used inside \underaccent, then restored to their originals. \LARGE gives a reasonable size, and \raise is used to adjust vertically without introducing extra line space.

```
7 \CustomizeMathJax{\let\LWRgrave\grave}
8 \CustomizeMathJax{\let\LWRacute\acute}
9 \CustomizeMathJax{\let\LWRcheck\check}
10 \CustomizeMathJax{\let\LWRbreve\breve}
11 \CustomizeMathJax{\let\LWRbar\bar}
12 \CustomizeMathJax{\let\LWRhat\hat}
13 \CustomizeMathJax{\let\LWRdot\dot}
14 \CustomizeMathJax{\let\LWRtilde\tilde}
15 \CustomizeMathJax{\let\LWRddot\ddot}
16 \CustomizeMathJax{\let\LWRvec\vec}
17 \CustomizeMathJax{\let\LWRwidetilde\widetilde}
19 \CustomizeMathJax{\newcommand{\underaccent}[2]{%
20
      \renewcommand{\grave}[1]{{\LARGE\LWRgrave{##1}}}%
21
22
      \label{lambda} $$\operatorname{LWRacute}_{1}_{{\LARGE}\LWRacute{\#1}}}%
23
      \renewcommand{\check}[1]{{\LARGE\LWRcheck{##1}}}%
24
      \label{lambdar} $$\operatorname{LWRbar}_{1}_{{\LARGE}\LWRbar}_{\#1}}% $$
25
      26
      \label{local-control} $$\operatorname{\dot}[1]_{{\LARGE\LWRdot\{\#\#1\}}}%$
27
      \renewcommand{\tilde}[1]{{\LARGE\LWRtilde{##1}}}%
28
      \renewcommand{\ddot}[1]{{\LARGE\LWRddot{##1}}}%
29
      \renewcommand{\vec}[1]{{\LARGE\LWRvec{##1}}}%
30
      \renewcommand{\widetilde}[1]{{\LARGE\LWRwidetilde{\hphantom{#2}}}}%
31
      \underset{\raise 2pt {#1{}}}{#2}%
32
33
      \let\grave\LWRgrave%
34
      \let\acute\LWRacute%
      \let\check\LWRcheck%
35
      \let\breve\LWRbreve%
36
      \let\bar\LWRbar%
37
```

```
\let\hat\LWRhat%
38
       \let\dot\LWRdot%
39
       \left\langle LWRtilde\right\rangle
       \left\langle LWRddot\right\rangle
41
42
       \let\vec\LWRvec%
       \let\widetilde\LWRwidetilde%
43
44
      }%
45 }}
47 \CustomizeMathJax{\newcommand{\undertilde}[1]{%
       \underset{\raise 3pt {\widetilde{\hphantom{#1}}}}{#1}%
48
49 }}
50 \end{warpMathJax}
```

File 10 lwarp-accessibility.sty

File 11 lwarp-accsupp.sty

File 12 lwarp-acro.sty

§ 121 Package **acro**

(Emulates or patches code by Clemens Niederberger.)

acro (*Pkg*) acro is patched for use by lwarp.

♠ formats Define acronymn formats using \textbf instead of \bfseries etc.

for HTML output: 1 \LWR@ProvidesPackagePass{acro}[2019/10/12]

\DeclareAcronym is used in the preamble, where lwarp has not yet made the dollar active, so temporarily enable lwarp math catcode just for this definition:

```
2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {
5   \acro_declare_acronym:nn {#1} {#2}
6   \catcode'\$=3% lwarp
7 }
8 \ExplSyntaxOff
9
10 \RenewDocumentCommand{\DeclareAcronym}{}{
11   \catcode'\$=\active% lwarp
12   \LWR@DeclareAcronym
13 }
```

Replace dot fill with simple dots:

```
14 \ExplSyntaxOn
15 \cs_new_protected:Npn \LWR@HTML@acro_dot_fill: {\dots\space}
16 \LWR@formatted{acro_dot_fill:}
17 \ExplSyntaxOff
```

Modified to activate the current font:

```
18 \ExplSyntaxOn
19 \IfPackageAtLeastTF{acro}{2020/04/29}%
20 {}% v3 or later
21 {% before v3
22 \IfPackageAtLeastTF{acro}{2019/09/23}%
23 {% v2.10 or later
24 \cs_gset_protected:Npn \__acro_typeset:nn #1#2
25
   {
      \mode_if_horizontal:F { \leavevmode }
26
      \group_begin:
27
28
        \use:x
29
            \bool_if:cTF {l__acro_custom_#1_format_bool}
30
              { \exp_not:v {l__acro_custom_#1_format_tl} }
31
              { \exp_not:v {l__acro_#1_format_tl} }
32
              {\exp_not:N\LWR@textcurrentfont{#2}}%
33
                                                        lwarp
34
          }
35
      \group_end:
```

```
36
  }
37
38 \cs_gset_protected:Npn \__acro_ending_format:nn #1#2
      \bool_if:NTF \l__acro_include_endings_format_bool
40
41
          \str_case:nn {#1}
42
43
            {
              {long}
44
45
               {
                 \bool_if:NTF \l__acro_custom_long_format_bool
46
47
                   { \l__acro_custom_long_format_tl }
48
                   {
49
                     \bool_if:NTF \l__acro_first_instance_bool
50
                       { \l_acro_first_long_format_tl }
                       { \l__acro_long_format_tl }
51
52
               }
53
               {short}
54
55
               {
                 \bool_if:NTF \l__acro_custom_short_format_bool
56
                   { \l__acro_custom_short_format_tl }
57
                   { \l__acro_short_format_tl }
58
               }
59
60
               {alt}
61
               {
                 \bool_if:NTF \l__acro_custom_alt_format_bool
62
                   { \l__acro_custom_alt_format_tl }
63
                   { \l__acro_alt_format_tl }
64
65
              }
             }
66
67
        }
68
        { \use:n }
69
        {\exp_not:N\LWR@textcurrentfont{#2}}% lwarp
70
    }
71 }% v2.10 or later
72 {% before v2.10
73 \cs_gset_protected:Npn \acro_write_short:nn #1#2
74
75
      \mode_if_horizontal:F { \leavevmode }
76
      \group_begin:
        \bool_if:NTF \l__acro_custom_format_bool
77
78
          { \l__acro_custom_format_tl }
          { \l__acro_short_format_tl }
79
80
        {\LWR@textcurrentfont{#2}}% lwarp
81
      \group_end:
82
83
84 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
85
      \mode_if_horizontal:F { \leavevmode }
86
      \group_begin:
87
88
        \bool_if:NTF \l__acro_custom_format_bool
          { \l__acro_custom_format_tl }
89
          { \l_acro_alt_format_tl }
90
        {\LWR@textcurrentfont{#2}}% lwarp
92
      \group_end:
    }
93
94
95 \cs_gset_protected:Npn \acro_write_long:nn #1#2
```

```
96
    {
       \mode_if_horizontal:F { \leavevmode }
97
       \group_begin:
98
99
         \bool_if:NTF \l__acro_custom_long_format_bool
100
           { \l__acro_custom_long_format_tl }
101
           { \use:n }
102
           \use:x
103
104
             {
                \exp_not:n {#1}
105
106
                {
107
                  \bool_if:NTF \l__acro_first_upper_bool
108
                    { \exp_not:N \__acro_first_upper_case:n { \exp_not:n {
109
                        \LWR@textcurrentfont{#2}% lwarp
110
                    { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
111
                }
112
              }
113
         }
114
115
       \group_end:
116
    }
117 }% before v2.10
118 }% before v3
119 \ExplSyntaxOff
```

File 13 lwarp-acronym.sty

§ 122 Package **acronym**

(Emulates or patches code by Tobias Oetiker.)

acronym (*Pkg*) acronym is patched for use by lwarp.

multiply-defined labels

\acresetall does not work with cleveref, causing multiply-defined labels. lwarp patches acronym for HTML, but not for print mode.

for HTML output: 1 \LWR@ProvidesPackagePass{acronym}[2020/04/17]

Simplifies for HTML. Unable to use \VerifyCommand here due to \csname being used.

```
2\expandafter\def\csname AC@\AC@prefix{}@acro\endcsname#1[#2]#3{%
   \ifAC@nolist%
   \else%
   \ifnum%
6
      \ifAC@printonlyused 1%
      \else\ifAC@printonlyreused 1%
      \else 0\fi\fi%
8
   =1\relax%
9
     \ifnum%
10
        \ifAC@printonlyused%
11
       \expandafter\ifx\csname acused@#1@once\endcsname\AC@used 1 \else 0 \fi%
12
        \else\ifAC@printonlyreused%
13
       \expandafter\ifx\csname acused@#1@twice\endcsname\AC@used 1 \else 0 \fi%
14
       \else 0 \fi\fi%
15
     =1\relax%
16
17
       \item[\protect\AC@hypertarget{#1}{%
```

```
\AC@hyperref[acro:#1]{\aclabelfont{#2}\hfill}%
18
        }]\AC@hyperref[acro:#1]{#3}%
19
           \ifAC@withpage%
20
21
             \expandafter\ifx\csname r@acro:#1\endcsname\relax%
22
                \PackageInfo{acronym}{%
                  Acronym #1 used in text but not spelled out in
23
                  full in text}%
24
             \else%
25
                 \nobreak\leaders\hbox{%
26 %
                     \mbox{.}\mbox{.}\mbox{.}\mbox{.}
27 %
28 %
                 }\hfill%
29 %
                 \nobreak\hb@xt@\@pnumwidth{%
30 %
                 \hfil\normalfont\normalcolor
31
                 \qquad --- %
                                lwarp
32
                 \AC@pageref{acro:#1}%
33 %
             \fi%
34
            \fi\\%
35
     \fi%
36
    \else%
37
    38
          \AC@hyperref[acro:#1]{#3}%
39
   \fi%
40
   \fi%
41
42
   \begingroup
43
     \def\acroextra##1{}%
44
      \@bsphack
45
       \ifAC@printonlyreused%
         \protected@write\@auxout{}{%
46
            \string\newacro{#1}[%
47
             \expandafter\ifx\csname acused@#1@twice\endcsname\AC@used%
48
                \string\AC@hyperlink{#1}{#2}%
49
             \else%
50
               {#2}%
51
             \fi%
52
53
           ]{#3}%
         }%
54
        \else%
55
         \protected@write\@auxout{}{%
56
            \string\newacro{#1}[\string\AC@hyperlink{#1}{#2}]{#3}%
57
         }%
58
        \fi%
59
60
      \@esphack
61
   \endgroup
   \ignorespaces}
Uses \textit instead of \itshape:
63 \renewcommand{\acfia}[1]{%
64 {\textit{\AC@acl{#1}}} (\ifAC@starred\acs*{#1}\else\acs{#1}\fi)}
Removes the mbox to allow math inside:
65 \end{Center} {\tt Command[lwarp][acronym]{\ACQacs}{\tt E2119484F7CD2A5D4B064390C6BB806F}}
66
67 \renewcommand*\AC@acs[1]{%
68 %
69 \expandafter\AC@get\csname fn@#1\endcsname\@firstoftwo{#1}}
70 % }
```

Fix for acronym labels in the captions of floats.

```
71\renewcommand{\@starttoc}[1]{%
72 \LWR@htmlelementclass{nav}{#1}
73 \LetLtxMacro\@verridelabel\@gobble
74 \LWR@orig@starttoc{#1}
75 \LWR@htmlelementclassend{nav}{#1}
76}
```

Modified for cleveref and lwarp:

```
77 \VerifyCommand[lwarp][acronym]{\AC@und@newl@bel}{661CF70DCB3E1AA8871B26E785BE7C86}
79 \renewcommand*\AC@und@newl@bel[3]{%
      \@ifundefined{#1@#3}%
80
81
82
          \global\expandafter\let\csname#2@#3\endcsname\@nnil
          \global\expandafter\let\csname#2@#3@lwarp\endcsname\@nnil% lwarp
83
          \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% lwarp
84
85
      }%
86
87
          \global\expandafter\let\csname#1@#3\endcsname\relax
88
          \global\expandafter\let\csname#1@#3@lwarp\endcsname\relax% lwarp
          \global\expandafter\let\csname#1@#3@cref\endcsname\relax% lwarp
89
      }%
90
91 }%
```

Improve paragraph handling:

```
92 \BeforeBeginEnvironment{acronym}{\LWR@stoppars}
93 \AfterEndEnvironment{acronym}{\LWR@startpars}
```

Create hyperlinks, even though hyperref is only emulated:

```
94 \AtBeginDocument{
         \LetLtxMacro\AC@hyperlink\hyperlink
96
         \LetLtxMacro\AC@hyperref\hyperref
97
         \newcommand*\AC@raisedhypertarget[2]{%
             \Hy@raisedlink{%
98 %
               \hypertarget{#1}{}%
99
100 %
              }%
             #2}%
101
         \LetLtxMacro\AC@hypertarget\AC@raisedhypertarget
102
         \def\AC@phantomsection{%
103
104 %
            \Hy@GlobalStepCount\Hy@linkcounter
105 %
            \edef\@currentHref{section*.\the \Hy@linkcounter}%
106 %
            \Hy@raisedlink{%
              \hyper@anchorstart{\@currentHref}\hyper@anchorend
107 %
            }%
108 %
109 %
            \phantomsection%
         }%
110
111 }
113 \appto\LWR@restoreorigformatting{%
         \LetLtxMacro\AC@hyperlink\@secondoftwo%
114
         \LetLtxMacro\AC@hyperref\LWR@nullify@hyperref%
115
116 }
```

File 14 lwarp-adjmulticol.sty

```
Package adjmulticol
§ 123
                                               (Emulates or patches code by Boris Veytsman.)
  adjmulticol (Pkg) adjmulticol is emulated.
                                               Emulation similar to multicols is used, with adjusted margins. If the number of
                                                columns is specified as 1, it is set so, but if two or greater are used, lwarp allows a
                                               variable number of columns up to three.
  for HTML output:
                                               1 \LWR@ProvidesPackageDrop{adjmulticol}[2012/01/20]
                                               2 \RequirePackage{multicol}
        adjmulticols *\{\langle numcols \rangle\} \{\langle left \ margi \rangle\} \{\langle right \ margin \rangle\}
                                               3 \NewDocumentEnvironment{adjmulticols}{s m m m}
                                               4 { %
                                               Compute the margins, and limit to positive only:
                                               5\setlength{\LWR@templengthone}{#3}%
                                               7\setlength{\LWR@templengthtwo}{#4}
                                                8 \inf (\WR@templengthtwo) {<} {\emptyset pt} {\Setlength} {\LWR@templengthtwo} {\emptyset pt} {} {} {\emptyset pt} {\Setlength} {\LWR@templengthtwo} {\Setlength} {\Setleng
                                               If one column is specified, use a <div> of class singlecolumn, else use multicols:
                                               9 \newcommand*{\LWR@mcolstype}{multicols}%
                                              Help avoid page overflow:
                                              11 \LWR@forcenewpage%
                                               Create the <div> with the given margin and class:
                                              12 \BlockClass[%
                                                             \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}}; %
                                                             \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}%
                                              15 ]{\LWR@mcolstype}%
                                              16 }
                                              17 {\endBlockClass}
```

File 15 lwarp-addlines.sty

§124 Package addlines

(Emulates or patches code by Will Robertson.)

addlines (Pkg) addlines is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{addlines}[2018/12/05]

2 \newcommand\addlines{\@ifstar\addlines@a\addlines@a}

3 \newcommand\addlines@a[1][1]{}

4 \let\addline\addlines

5 \newcommand\removelines{\@ifstar\removelines@a\removelines@a}

6 \newcommand\removelines@a[1][1]{}
7 \let\removeline\removelines

8 \newcommand\squeezepage[1][0]{}

File 16 lwarp-afterpage.sty

§ 125 Package afterpage

(Emulates or patches code by David Carlisle.)

afterpage (*Pkg*) afterpage is emulated.

for HTML output: Discard all options for lwarp-afterpage:

1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]

2 \newcommand{\afterpage}[1]{#1}

File 17 lwarp-algorithm2e.sty

§ 126 Package algorithm2e

($Emulates\ or\ patches\ code\ by\ Christophe\ Fiorio.$)

algorithm2e (*Pkg*) algorithm2e is patched for use by lwarp.

For print output, captions are placed according to package options, but for HTML output captions are placed where used. Therefore, to have captions appear at the top of the algorithms for both print and HTML, place each captions at the top of each algorithm.

for HTML output: 1 \LWR@ProvidesPackagePass{algorithm2e}[2017/07/18]

For the list-of entries:

 $\label{lealgocf} $$ \ \end{\left| \ena\right|} \end{\left| \end{\left| \end{\left| \end{\left| \end{\left| \end{\left| \end{\left| \end{\left| \end{$

Select the lwarp float style according to the algorithm2e style:

4

5\ifdefstring{\algocf@style}{boxed}{%

 $\label{lem:command} {\tt 6 \ lem: 6 \ l$

7 }{}

8

```
9 \ifdefstring{\algocf@style}{boxruled}{%
10 \renewcommand*{\LWR@floatstyle@algocf}{boxruled}
11 }{}
12
13 \ifdefstring{\algocf@style}{plain}{%
14 \renewcommand*{\LWR@floatstyle@algocf}{plain}
15 }{}
```

Paragraph handling to allow line numbers under certain conditions:

```
16 \renewcommand{\algocf@everypar}{%
17  \ifbool{LWR@algocf@dopars}{%
18  \ifbool{LWR@doingstartpars}{%
19  \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
20  {}%
21  {%
```

algorthm2e uses \everypar, so the open paragraph tag is generated here instead of \LWR@openparagraph:

lwarp caption handling:

```
28 \renewcommand{\algocf@makecaption}[2]{%
29 \LWR@HTML@caption@begin{algocf}%
30 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
31 \LWR@HTML@caption@end%
32 }
```

Print any caption where it is declared:

```
33 \renewcommand{\algocf@makecaption@plain}[2]{%
     \LWR@HTML@caption@begin{algocf}%
     35
36
     \LWR@HTML@caption@end%
37 }
39 \renewcommand{\algocf@makecaption@boxed}[2]{%
     \LWR@HTML@caption@begin{algocf}%
     \LWR@isolate{\algocf@captiontext{#1}{#2}}%
41
     \LWR@HTML@caption@end%
42
43 }
{\tt 45 \ lgocf@makecaption@ruled}[2]{\tt \%}
     \LWR@HTML@caption@begin{algocf}%
46
     \LWR@isolate{\algocf@captiontext{#1}{#2}}%
47
48
     \LWR@HTML@caption@end%
49 }
```

Turn off line numbering while making the caption:

```
50 \ensuremath{\mbox{long\def\algocf@latexcaption}\#1[\#2]\#3{\% original definition of caption}}
51 \boolfalse{LWR@algocf@dopars}%
53 \addcontentsline{\csname ext@#1\endcsname}{#1}%
54 {\protect\numberline{\csname the#1\endcsname}{\ignorespaces \LWR@isolate{#2}}}%
   \begingroup%
   \@parboxrestore%
57 \if@minipage%
     \@setminipage%
58
    \fi%
59
    \normalsize%
60
    \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par%
    \endgroup%
63 \booltrue{LWR@algocf@dopars}%
                                       lwarp
64 }
Line numbers are printed in a <span> of class alg2elinenumber:
65 \renewcommand{\algocf@printnl}[1]{%
      \InlineClass{alg2elinenumber}{\NlSty{#1}}~%
67 }%
While initializing an algorithm environment, locally declare the style of a regular
figure to be the same as the algorithm style, in case the figure option was used.
68 \preto\@algocf@init{%
    \edef\LWR@floatstyle@figure{\LWR@floatstyle@algocf}%
70 }
For lwarp, the algorithm is not assembled inside a box, since lateximages would
not work, so the captions are printed where declared.
71 \renewcommand{\@algocf@start}{%
   \let\@mathsemicolon=\;\def\;{\ifmmode\@mathsemicolon\else\@endalgoln\fi}%
73 %
        \raggedright%
74
      \AlFnt{}%
75
      \booltrue{LWR@algocf@dopars}% lwarp
76 }
77
78 \renewcommand{\@algocf@finish}{%
      \boolfalse{LWR@algocf@dopars}% lwarp
      \lineskip\normallineskip\setlength{\skiptotal}{\@defaultskiptotal}%
80
      \let\;=\@mathsemicolon%
81
82
      \let\]=\@emathdisplay%
83 }
Use an HTML break:
84 \renewcommand{\BlankLine}{%
85 \LWR@stoppars%
86 \LWR@htmltagc{br /}%
87 \LWR@startpars%
88 }
Simplified for HTML. The paragraph handling must be preserved.
89 \renewcommand{\SetKwInOut}[2]{%
   \algocf@newcommand{#1}[1]{%
```

\ifthenelse{\boolean{algocf@hanginginout}}%

91

```
92
           {\relax}%
           {\algocf@seteveryparhanging{\relax}}%
93
       \ifthenelse{\boolean{algocf@inoutnumbered}}%
94
95
           {\relax}%
96
           {\algocf@seteveryparnl{\relax}}%
97
       {%
               \KwSty{#2\algocf@typo:}%
98
           ~##1\par%
99
       }%
100
       \algocf@linesnumbered% reset the numbering of the lines
101
       \ifthenelse{\boolean{algocf@hanginginout}}%
102
103
           {\relax}%
104
           {\algocf@reseteveryparhanging}%
105
    }%
106 }%
107
108 \renewcommand{\ResetInOut}[1]{}%
```

Each of the following creates a <div> of a given class, and turns off line numbering while creating the <div> tags:

```
109 \renewcommand{\algocf@Vline}[1]{%
       \boolfalse{LWR@algocf@dopars}%
110
       \begin{BlockClass}{alg2evline}
111
       \booltrue{LWR@algocf@dopars}%
112
113
       \boolfalse{LWR@algocf@dopars}%
114
       \end{BlockClass}
115
116
       \booltrue{LWR@algocf@dopars}%
117 }
118 \renewcommand{\algocf@Vsline}[1]{%
       \boolfalse{LWR@algocf@dopars}%
120
       \begin{BlockClass}{alg2evsline}
121
       \booltrue{LWR@algocf@dopars}%
122
       \boolfalse{LWR@algocf@dopars}%
123
124
       \end{BlockClass}
125
       \booltrue{LWR@algocf@dopars}%
126 }
127 \renewcommand{\algocf@Noline}[1]{%
       \boolfalse{LWR@algocf@dopars}%
       \begin{BlockClass}{alg2enoline}
130
       \booltrue{LWR@algocf@dopars}%
131
       \boolfalse{LWR@algocf@dopars}%
132
       \end{BlockClass}
133
       \booltrue{LWR@algocf@dopars}%
134
135 }
```

The [H] environment is converted to a regular float, which in HTML is placed where declared. Reusing the regular float allows the [H] version to reuse the ruled and boxed options.

```
136 \LetLtxMacro\algocf@Here\algocf
137 \LetLtxMacro\endalgocf@Here\endalgocf
```

File 18 lwarp-algorithmicx.sty

§ 127 Package algorithmicx

(Emulates or patches code by Szász János.)

algorithmicx (*Pkg*) algorithmicx is supported with minor adjustments.

for HTML output: 1 \LWR@ProvidesPackagePass{algorithmicx}[2005/04/27]

Inside the algorithmic environment, level indenting is converted to a of the required length, and comments are placed inside a which is floated right.

If using \newfloat, trivfloat, and/or algorithmicx together, see section 643.1.

```
2\AtBeginEnvironment{algorithmic}{%
4 \let\origALG@doentity\ALG@doentity%
6 \renewcommand*{\ALG@doentity}{%
7\origALG@doentity%
8 \LWR@htmltagc{%
      span style=\textquotedbl{}%
         width:\LWR@printlength{\ALG@thistlm}; display:inline-block;%
10
11
      \textquotedbl%
12 }%
13 \ifbool{FormatWP}{%
15 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
16 \quad%
17 \addtolength{\LWR@templengthone}{-1em}%
18 }%
19 }{}%
20 \LWR@htmltagc{/span}%
21 }%
{\tt 23 \ let\ LWR@origComment\ Comment\%}
25 \renewcommand{\Comment}[1]{%
      \InlineClass{floatright}{\LWR@origComment{#1}}%
27 }%
28 }
30 \renewcommand\algorithmiccomment[1]{%
31 \hfill\HTMLunicode{25B7} #1% white right triangle
32 }%
```

File 19 lwarp-alltt.sty

§ 128 Package alltt

(Emulates or patches code by Johannes Braams.)

```
alltt (Pkg) alltt is patched for use by lwarp.
```

```
for HTML output: 1 \LWR@ProvidesPackagePass{alltt}[1997/06/16]

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}

4
5 \AtBeginEnvironment{alltt}{%
6 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7 {}%
8 {%
9 \LWR@forcenewpage
```

Vertical spacing changes if inside a list.

Vertical spacing changes if inside a list.

File 20 lwarp-amscdx.sty

§ 129 Package amscdx

(Emulates or patches code by Martin Vermeer.)

amscdx (*Pkg*) amscdx is used as-is for svg math.

For MathJax, a warning notes that the CD environment must be enclosed between \displaymathother and \displaymathnormal.

```
for HTML output: 1 \LWR@ProvidesPackagePass{amscdx}[2019/07/02]
```

```
13 \CustomizeMathJax{\newcommand{\CDlor}[1]{}}
14 \end{warpMathJax}
```

File 21 lwarp-amsmath.sty

```
§130 Package amsmath
```

(Emulates or patches code by American Mathematical Society, IATEX3 Project.)

amsmath (*Pkg*) amsmath is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{amsmath}[2017/09/02]

\dotso

```
An HTML text-mode version.
```

```
2 \newcommand*{\LWR@HTML@dotso}{\textellipsis\ }
3 \LWR@formatted{dotso}
```

Patches to allow \eqref inside a caption:

```
4 \def\maketag@@@#1{\text{#1}} 5 \def\tagform@#1{\maketag@@@{(\ignorespaces#1\unskip)}}
```

Patches for $\mathcal{F}_{M}S$ math \tag macro to remember the first tag:

```
6\ifbool{mathjax}{}{% not mathjax
   \label{lem:lem:lem:stable} \\ \textbf{8 \end{[warp][amsmath]{\end{[warp][amsmath]}}} \\ \textbf{8 \end{[warp][amsmath]{\end{[warp][amsmath]}}} \\ \textbf{10 \end{[warp][amsmath]}} \\ \textbf{10 \end{[warp][amsmath]} \\ \textbf{10 \end{[warp][amsmath]}} \\ \textbf{10 \end{[warp][amsmath
   9 \VerifyCommand[lwarp][amsmath]{\make@df@tag@@@}{670399C01F88B0E9B0874E9B129FA404}
11 \LetLtxMacro\LWR@origmake@df@tag@@\make@df@tag@@
12 \LetLtxMacro\LWR@origmake@df@tag@@@\make@df@tag@@@
14 \renewcommand*{\make@df@tag@@}[1]{%
                                 \LWR@remembertag{#1}%
15
                                 \LWR@origmake@df@tag@@{#1}%
16
17 }
18
19 \renewcommand*{\make@df@tag@@@}[1]{%
                                 \LWR@remembertag{#1}%
                                  \LWR@origmake@df@tag@@@{#1}%
21
22 }
24 }% not mathjax
   For nesting \mathcal{A}_{\mathcal{M}}\mathcal{S} environments:
```

```
25 \newcounter{LWR@amsmathdepth}
26 \setcounter{LWR@amsmathdepth}{0}
```

The following \mathcal{F}_{MS} environments are patched in-place:

LWR@maxfields@ (*Ctr*) A copy of maxfields@ as it was passed. This is used to generate the mandatory argument for alignat and alignat* when using MATHJAX.

```
27 \newcounter{LWR@maxfields@}
29 \ Verify Command [lwarp] [ams math] {\ start@align} {D39AF6A45F9E97A21F17EADB4D21D218} {D39AF6A45F9E97A21F17EADB4D21F17EADB4D21D21} {D39AF6A45F9E97A21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADB4D21F17EADF17EADF17EADB4D21F17EADB4D21F17EADF17EADF17EADF17EADF17EADF17EADF17EADF17
31 \xpatchcmd{\start@align}
              {\maxfields@#3\relax}
              {%
33
                         \maxfields@#3\relax%
34
                        \setcounter{LWR@maxfields@}{#3}%
35
36
              }
37
              {}
              {\LWR@patcherror{amsmath}{start@align}}
   * {\langle environment name\rangle}
 * if the environment was starred.
 Embeds the environment inside a lateximage.
\IfBooleanTF{#1}{
40
                         \begin{BlockClass}{displaymath}
41
              }{
42
                         \begin{BlockClass}{displaymathnumbered}
43
44
               \LWR@newautoidanchor%
45
              \booltrue{LWR@indisplaymathimage}%
              \begin{lateximage}[\LWR@amsmathbodynumbered{#2}]*%
47
               \LWR@applyxfakebold%
48
49 }
   * {\langle environment name\rangle}
 * if the environment was starred.
 Embeds the environment with MATHJAX or a lateximage.
50 \NewDocumentCommand{\LWR@amsmathenv@before}{s m}{%
              \ifnumequal{\value{LWR@amsmathdepth}}{0}{%
51
                        \LWR@stoppars%
52
53
                    \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
54
55
                                  \LWR@syncmathjax
                                  \boolfalse{LWR@amsmultline}
57
                                  \ifstrequal{#2}{multline}{\booltrue{LWR@amsmultline}}{}
                                  \ifstrequal{#2}{multline*}{\booltrue{LWR@amsmultline}}{}
 autonum's "+" environments are not supported by MATHJAX.
                                  \LWR@beginhideamsmath
59
60
                        }
                        {
61
                                  \IfBooleanTF{#1}{
                                            \LWR@amsmathenv@@before*{#2}
63
64
                                            \LWR@amsmathenv@@before{#2}
65
66
                        }
67
              }{}
68
               \addtocounter{LWR@amsmathdepth}{1}
69
70 }
```

\LWR@amsmathenv@@before

\LWR@amsmathenv@before

 \triangle

```
\LWR@amsmathenv@@after
                             Embeds the environment inside a lateximage.
                            71 \newcommand*{\LWR@amsmathenv@@after}{%
                                   \verb|\end{lateximage}| end{BlockClass} \\ \verb|\end{BlockClass}| \\
                            72
                            73 }
                              * {\langle environment name\rangle}
\LWR@amsmathenv@after
                             * if the environment was starred. Ignored here, only used for a consistent syntax.
                             Embeds the environment with MATHJAX or a lateximage.
                             74 \NewDocumentCommand{\LWR@amsmathenv@after}{s m}{%
                                   \ifnumequal{\value{LWR@amsmathdepth}}{1}{%
                                     \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
                            76
                            77
                                           \LWR@endhideamsmath
                            78
                                           \boolfalse{LWR@amsmultline}
                            79
                                           \LWR@addmathjax{\#2}{\the\@envbody}\%
                            80
                            81
                            82
                                       {\LWR@amsmathenv@@after}
                             Clear the single-use alt text:
                                       \gdef\LWR@ThisAltText{}%
                            84
                                   }{}
                                   \addtocounter{LWR@amsmathdepth}{-1}
                            85
                            86 }
              multline (env.)
                            87 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
                            89 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}
             multline* (env.)
                            90 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before*{multline*}}
                            92 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after*{multline*}}
                gather (env.)
                            94 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
                            96 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}
               gather* (env.)
                            97 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before*{gather*}}
```

99 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after*{gather*}}

align (env.)

```
{\tt 100 \setminus Before Begin Environment \{align\} \{ \setminus LWR@ams mathenv@before \{align\} \}}
                             102 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
    align* (env.)
                             \label{loss} \label{loss} \label{loss} \label{loss} \label{loss} \label{loss} \label{loss} $$103 \end{substitute} $$103 \end{substitute
                             \label{loss} $$ \Lambda fterEndEnvironment{align*}{\LWR@amsmathenv@after*{align*}} $$
  flalign (env.)
                             106 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
                             107
                             108 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}
flalign* (env.)
                             109 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before*{flalign*}}
                             111 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after*{flalign*}}
 alignat (env.)
                             112 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
                             114 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}
alignat* (env.)
                             115 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before*{alignat*}}
                             117 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after*{alignat*}}
                             118 \AtBeginEnvironment{subequations}{
                                            \renewcommand*{\theMathJaxsubequations}{1}
                             119
                             120
                                            \renewcommand*{\theMathJaxsection}{\theparentequation}
                                            \renewcommand*{\theMathJaxequation}{\arabic{equation}}
                             121
                             122 }
                                For MATHJAX:
                             123 \begin{warpMathJax}
                             125 \CustomizeMathJax{\let\Hat\hat}
                             126 \CustomizeMathJax{\let\Check\check}
                             127 \CustomizeMathJax{\let\Tilde\tilde}
                             128 \CustomizeMathJax{\let\Acute\acute}
                             129 \CustomizeMathJax{\let\Grave\grave}
                             130 \CustomizeMathJax{\let\Dot\dot}
                             131 \CustomizeMathJax{\let\Ddot\ddot}
                             132 \CustomizeMathJax{\let\Breve\breve}
                             133 \CustomizeMathJax{\let\Bar\bar}
                             134 \CustomizeMathJax{\let\Vec\vec}
                             135 \end{warpMathJax}
```

File 22 lwarp-amsthm.sty

§ 131 Package amsthm

(Emulates or patches code by Publications Technical Group—American Mathematical Society.)

The original source code is located in amsclass.dtx, and printed in amsclass.pdf.

amsthm (Pkg) amsthm is patched for use by lwarp.

Table 19: amsthm package — css styling of theorems and proofs

Theorem: <div> of class amsthmbody<theoremstyle>

Theorem Name: of class amsthmname<theoremtyle>

Theorem Number: of class amsthmnumber<theoremstyle>

Theorem Note: of class amsthmnote<theoremstyle>

Proof: <div> of class amsthmproof

Proof Name: of class amsthmproofname

where <theoremstyle> is plain, definition, etc.

for HTML output:

amsthm must be loaded before mdframed:

```
1 \IfPackageLoadedTF{mdframed}{
      \PackageError{lwarp}
3
          Package mdframed must be loaded after package amsthm.\MessageBreak
4
          Enter 'H' for solutions%
5
6
     }
7
     {%
          Move ''\protect\usepackage{amsthm}'' before
9
          ''\protect\usepackage{mdframed}''.\MessageBreak
10
          Package amsthm may be loaded by something else,\MessageBreak
          which must also be moved before mdframed.%
11
12
     }
13 }
14 {\relax}
```

Necessary for \text, used by \openbox, etc., below:

```
15 \RequirePackage{amsmath}
```

16 \LWR@ProvidesPackagePass{amsthm}[2017/10/31]

Storage for the style being used for new theorems:

17 \newcommand{\LWR@newtheoremstyle}{plain}

Patched to remember the style being used for new theorems:

```
18 \renewcommand{\theoremstyle}[1]{%
         \@ifundefined{th@#1}{%
              \PackageWarning{amsthm}{Unknown theoremstyle '#1'}%
20
21
              \thm@style{plain}%
22
              \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
23
              \thm@style{#1}%
24
              \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
25
26
        }%
27 }
 Patched to remember the style for this theorem type:
28 \VerifyCommand[lwarp][amsthm]{\@xnthm}{21F7FB3FB6FB0C1A0F2EECD66EE87A60}
30 \def\@xnthm#1#2{%
         \csedef{LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp
         \let\@tempa\relax
         \@xp\@ifdefinable\csname #2\endcsname{%
              \global\@xp\let\csname end#2\endcsname\@endtheorem
34
              \ifx *#1% unnumbered, need to get one more mandatory arg
35
                   \edef\@tempa##1{%
36
                        \gdef\@xp\@nx\csname#2\endcsname{%
37
38
                             \@nx\@thm{\@xp\@nx\csname th@\the\thm@style\endcsname}%
                                 {}{##1}}}%
39
40
              \else % numbered theorem, need to check for optional arg
41
                  \def\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}\ensuremath{\def}
42
              \fi
              \AtBeginEnvironment{#2}{%
43
                                                                                                                                                      lwarp
                        \edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#2}}%
44
                                                                                                                                                    lwarp
45
              }%
                                                                                                                                                      lwarp
         }%
46
47
         \@tempa%
48 }
 Patched to enclose with css:
49 \newcommand{\LWR@haveamsthmname}{
              \renewcommand{\thmname}[1]{%
51
                        \InlineClass{amsthmname\LWR@thisthmstyle}{##1}%
52
53 }
55 \newcommand{\LWR@haveamsthmnumber}{
              \renewcommand{\thmnumber}[1]{%
56
                        \InlineClass{amsthmnumber\LWR@thisthmstyle}{##1}%
57
              }
58
59 }
61 \newcommand{\LWR@haveamsthmnote}{
62
              \renewcommand{\thmnote}[1]{%
63
                        64
              }
65 }
67 \LWR@haveamsthmname
68 \LWR@haveamsthmnumber
```

69 \LWR@haveamsthmnote

Patched for css. Not using \VerifyCommand because the existing defintion depends on other packages. The following is from amsthm's own definition.

70 \def\@begintheorem#1#2[#3]{%

```
\GetTitleString{#3}%
                                                       lwarp
71
      \let\@currentlabelname\GetTitleStringResult%
72
                                                       lwarp
73
      \item[%
      \LWR@newautopagelabel{page}\LWR@orignewline%
      \deferred@thm@head{
75 %
76 %
        \the\thm@headfont \thm@indent
      \@ifempty{#1}{\let\thmname\@gobble}{\LWR@haveamsthmname}%
                                                                  lwarp
77
78
      \@ifempty{#2}{\let\thmnumber\@gobble}{\LWR@haveamsthmnumber}%
                                                                  lwarp
79
      \@ifempty{#3}{\let\thmnote\@gobble}{\LWR@haveamsthmnote}%
                                                                  lwarp
      \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
81
      \the\thm@headpunct % space
      \thmheadnl % possibly a newline.
82
      \hskip\thm@headsep
83
      }%
84 %
      1%
85
    \ignorespaces}
86
 Patched for css:
87\VerifyCommand[lwarp][amsthm]{\@thm}{2624BDB5B96C45756978B3D393430088}
89 \def\@thm#1#2#3{%
   \ifhmode\unskip\unskip\par\fi
    \normalfont
    \LWR@forcenewpage%
                                               lwarp
    \LWR@printpendingfootnotes%
                                               lwarp
    \BlockClass{amsthmbody\LWR@thisthmstyle}%
                                               lwarp
94
    \trivlist
95
96 \let\thmheadnl\relax
    \let\thm@swap\@gobble
    \thm@notefont{\fontseries\mddefault\upshape}%
    \thm@headpunct{.}% add period after heading
    \thm@headsep 5\p@ plus\p@ minus\p@\relax
100
    \thm@space@setup
101
    #1% style overrides
102
    \@topsep \thm@preskip
                                      % used by thm head
103
    \@topsepadd \thm@postskip
                                      % used by \@endparenv
104
105
    \def\ensuremath{\def}\
      106
107
      \refstepcounter{#2}%
108
109
      \fi
110
    \@tempa%
111
112 }
```

cleveref patches \@thm to do \cref@thmoptarg if an optional argument is given. lwarp then patches \cref@thmoptarg \AtBeginDocument.

```
113 \AtBeginDocument{%
\label{limiting} I is \verify Command [lwarp] [amsthm] {\cref@thmoptarg} {\cref@th
117 \def\cref@thmoptarg[#1]#2#3#4{%
              \ifhmode\unskip\unskip\par\fi%
              \normalfont%
119
              \LWR@forcenewpage%
                                                                                                              lwarp
120
121
              \LWR@printpendingfootnotes%
                                                                                                                   lwarp
              \BlockClass{amsthmbody\LWR@thisthmstyle}%
122
                                                                                                              lwarp
              \trivlist%
123
              \let\thmheadnl\relax%
124
              \let\thm@swap\@gobble%
125
              \thm@notefont{\fontseries\mddefault\upshape}%
126
              \thm@headpunct{.}% add period after heading
127
              \thm@headsep 5\p@ plus\p@ minus\p@\relax%
128
129
              \thm@space@setup%
130
              #2% style overrides
                                                                                            \% used by thm head
131
              \@topsep \thm@preskip
132
              \@topsepadd \thm@postskip
                                                                                             % used by \@endparenv
              133
                       134
               \else%
135
                       \refstepcounter[#1]{#3}% <<< cleveref modification</pre>
136
                      137
              \fi%
138
139
              \@tempa
140 }%
141 }% AtBeginDocument
142
143 \def\@endtheorem{%
              \endtrivlist%
144
          \LWR@printpendingfootnotes%
                                                                                                              lwarp
145
              \endBlockClass%
146
              \@endpefalse%
147
148 }
  Proof QED symbol:
149 \AtBeginDocument{
150 \@ifundefined{LWR@orig@openbox}{
151 \LetLtxMacro\LWR@orig@openbox\openbox
152 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
153 \LetLtxMacro\LWR@orig@Box\Box
155 \ensuremath{\mbox{\text{NTMLunicode{25A1}}}}\% \ UTF-8 \ white box
156 \def\blacksquare{\text{\HTMLunicode{220E}}}% UTF-8 end-of-proof
157 \def\Box{\text{\HTMLunicode{25A1}}}% UTF-8 white box
\LetLtxMacro\openbox\LWR@orig@openbox%
160
              \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
161
              \LetLtxMacro\Box\LWR@orig@Box%
162
163 }% appto
```

```
164 }{}% @ifundefined
165 }% AtBeginDocument
 Patched to add a <span>:
166 \DeclareRobustCommand{\qed}{%
    \ifmmode \mathqed
    \else
168
         \leavevmode\unskip\penalty9999 \hbox{}\nobreak\hfill
169 %
170 %
         \quad\hbox{\qedsymbol}%
171
           \InlineClass{theoremendmark}{\qedsymbol}%
172 \fi
173 }
 Patched for css:
174 \renewenvironment{proof}[1][\proofname]{\par
    \LWR@forcenewpage% lwarp
    \LWR@printpendingfootnotes%
                                                     lwarp
       \BlockClass{amsthmproof}% lwarp
178
       \LWR@newautopagelabel{page}%
    \pushQED{\qed}%
    \normalfont \topsep6\p@\@plus6\p@\relax
    \trivlist
181
    \item[
182
         \InlineClass{amsthmproofname}{#1\@addpunct{.}}]\ignorespaces% changes
183
184 }{%
    \popQED\endtrivlist%
185
    \LWR@printpendingfootnotes%
                                                    lwarp
    \endBlockClass% lwarp
188
    \@endpefalse
189 }
```

File 23 lwarp-anonchap.sty

§ 132 Package anonchap

(Emulates or patches code by Peter Wilson.)

anonchap (Pkg) anonchap is emulated.

tocloft(Pkg)

tocloft & other packages

If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard LATEX commands to create the titles, allowing other packages to work with it.

The code is shared by tocbibind.

for HTML output: 1 \LWR@ProvidesPackageDrop{anonchap}[2009/08/03]

```
2 \newcommand{\simplechapter}[1][\@empty]{%
      \def\@chapcntformat##1{%
          #1~\csname the##1\endcsname\simplechapterdelim\quad%
5
      }%
6 }
8 \newcommand{\restorechapter}{%
9 \let\@chapcntformat\@seccntformat%
10 }
```

File 24 lwarp-anysize.sty

Package anysize § 133

(Emulates or patches code by Michael Salzenberg, Thomas Esser.)

anysize (Pkg) anysize is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{anysize}[1994/08/13]

> 2 \def\papersize#1#2{} 3 \def\marginsize#1#2#3#4{}

File 25 lwarp-appendix.sty

Package appendix **§ 134**

(Emulates or patches code by Peter Wilson.)

appendix (Pkg) appendix is patched for use by lwarp.

incorrect TOC link During HTML conversion, the option toc without the option page results in a TOC link to whichever section was before the appendices environment. It is recommended to use both toc and also page at the same time.

for HTML output: 1 \LWR@ProvidesPackagePass{appendix}[2009/09/02]

```
2 \renewcommand*{\@chap@pppage}{%
3 \part*{\appendixpagename}
4 \if@dotoc@pp
5 \addappheadtotoc
6 \fi
7 }
9 \renewcommand*{\@sec@pppage}{%
10 \part*{\appendixpagename}
11 \if@dotoc@pp
12 \addappheadtotoc
13 \fi
14 }
```

File 26 lwarp-apxproof.sty

Package apxproof § 135

(Emulates or patches code by Pierre Senellart.)

apxproof (*Pkg*) apxproof is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{apxproof}[2022/10/14]

 ${\tt 2 VerifyCommand[lwarp][apxproof]\{\FVB@axp@VerbatimOut\}\{ADA4853FD25696EB39CD005CF44C7B5C\}\}} \\$

4 \xpatchcmd{\FVB@axp@VerbatimOut}

{\FV@Scan}

{\boolfalse{LWR@HTMLsanitize@tmpb@enable}\FV@Scan} 6

{\LWR@patcherror{apxproof}{FVB@axp@VerbatimOut}}

File 27 lwarp-ar.sty

§ 136 Package **ar**

(Emulates or patches code by Agostino De Marco.)

ar (*Pkg*) ar is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{ar}[2012/01/23]

Measure and print the width of the supplied glyph.

```
2 \newlength{\LWR@ar@width}
4 \newcommand*{\LWR@ar@printwidth}[1]{%
     \setlength{\LWR@ar@width}{\widthof{#1}}%
     \LWR@convertto{em}{\the\LWR@ar@width}em%
8 }
```

The HTML version of \AR:

9 \newrobustcmd*{\LWR@HTML@AR}{%

Start a hashed lateximage, additionally hashed by the font series, with a width depending on the given glyph:

\begin{lateximage}*[AR][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@AR}]%

For text mode, set the font series according to the HTML font series:

\ifmmode\else\csuse{LWR@orig\LWR@f@series series}\fi% 11

```
Print the original glyph using the newly set font series:
```

```
12
      \LWR@print@AR%
Done.
13
      \end{lateximage}%
14 }
Combine the print and HTML versions:
15 \LWR@formatted{AR}
16 \newrobustcmd*{\LWR@HTML@ARb}{%
      \label{lambdard} $$ \left[ a = \frac{AR}{b} \right] LWR@ar@printwidth{\LWR@print@ARb}]% $$
      \LWR@print@ARb%
19
      \end{lateximage}%
20 }
21 \LWR@formatted{ARb}
22 \newrobustcmd*{\LWR@HTML@ARss}{%
     \begin{lateximage}*[ARss][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@ARss}]%
      \ifmmode\else\csuse{LWR@orig\LWR@f@series series}\fi%
24
25
      \LWR@print@ARss%
26
      \end{lateximage}%
27 }
28 \LWR@formatted{ARss}
29 \newrobustcmd*{\LWR@HTML@ARssb}{%
      \begin{lateximage}*[AR][ssb][\LWR@ar@printwidth{\LWR@print@ARssb}]%
30
      \LWR@print@ARssb%
31
32
      \end{lateximage}%
33 }
34 \LWR@formatted{ARssb}
35 \newrobustcmd*{\LWR@HTML@ARtt}{%
      \label{lem:lateximage} $$ \left[ LWR@ar@printwidth{\LWR@print@ARtt} \right] $$
36
      \LWR@print@ARtt%
37
      \end{lateximage}%
38
40 \LWR@formatted{ARtt}
For MATHJAX:
41 \begin{warpMathJax}
\label{lem:asymptotic_state} $$43 \customizeMathJax{\newcommand{\ARb}{\boldsymbol{A\!\!R}}}$
44 \end{warpMathJax}
```

File 28 lwarp-arabicfront.sty

```
$ 137 Package arabicfront

arabicfront (Pkg) arabicfront is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]
```

File 29 lwarp-array.sty

§ 138 Package **array**

array (*Pkg*) array is used as-is for print output, and emulated for HTML.

plarray and plextarray do not affect \firsthline or \lasthline, and so are not affected by the following.

for HTML output:

If array is not yet loaded, remove the default nullfied macros:

```
1 \IfPackageLoadedTF{array}{}{%
      \let\firsthline\relax
      \let\lasthline\relax
3
4 }
6 \LWR@ProvidesPackagePass{array}[2018/12/30]
Provide simplified column types for HTML:
7 \HTMLnewcolumntype{w}[2]{#1}
8 \HTMLnewcolumntype{W}[2]{#1}
More HTML versions:
{\tt 9 \ low command * \{\ LWR@HTML@firsthline\} \{\ LWR@HTMLhline\} \}} \\
10 \LWR@expandableformatted{firsthline}
12 \newcommand*{\LWR@HTML@lasthline}{\LWR@HTMLhline}%
13 \LWR@expandableformatted{lasthline}
14 \let\tabularnewline\\
15 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}
16 \LWR@formatted{tabularnewline}
For MATHJAX:
17 \CustomizeMathJax{
```

File 30 lwarp-arydshln.sty

§139 Package arydshln

19 }

(Emulates or patches code by Hiroshi Nakashima.)

arydshln (Pkg) arydshln heavily patches tabular code, so the actual package is not used. arydshln is emulated for HTML tabular, and reverts to solid rules for svG math array and tabular in a lateximage.

css is not able to display a double-dashed border, so a single-dashed rule is displayed as a single-dashed border, and a double-dashed rule is displayed as a thicker single-dashed border.

For MathJax, limited emulation is provided for math mode.

for HTML output:

array is required to allow \newcolumn below.

```
1 \RequirePackage{array}
2 \LWR@ProvidesPackageDrop{arydshln}[2018/09/26]
```

Ignored, but included for source compatibility:

```
3 \newdimen\dashlinedash \dashlinedash4pt %
4 \newdimen\dashlinegap \dashlinegap4pt %
5 \let\hdashlinewidth\dashlinedash
6 \let\hdashlinegap\dashlinegap
7
8 \def\ADLnullwide{}
9 \def\ADLsomewide{}
10 \def\ADLsomewidehline{}
11 \def\ADLsomewidehline{}
12
13 \def\ADLactivate{}
14 \def\ADLinactivate{}
15 \newcommand*{\ADLdrawingmode}[1]{}
16 \newcommand*{\ADLnoshorthanded}{}
17 \newcommand*{\dashgapcolor}[2][]{}
18 \newcommand*{\nodashgapcolor}{}
```

In a lateximage, revert to solid vertical rules:

```
19 \appto\LWR@restoreorigformatting{%
20 \newcolumntype{:}{|}%
21 \newcolumntype{;}[1]{|}%
22 \LetLtxMacro\hdashline\hline%
23 }
```

Some of these macros are already defined as temporary placeholders in the lwarp core, so they must be redefined here.

The emulated defaults also work for an emulated print mode inside a lateximage:

```
24 \def\hdashline{
25 %
        \adl@hdashline\adl@ihdashline
      \adl@hdashline\adl@inactivehdl
28 \def\adl@hdashline#1{\noalign{\ifnum0='}\fi
            \ifadl@zwhrule \vskip-\arrayrulewidth
29 %
30 %
             \else
                 \adl@hline\adl@connect\arrayrulewidth
31 %
                   \hrule \@height \arrayrulewidth% lwarp
32
33 %
            \fi
          \@ifnextchar[%]
34
35
                        {#1}%
                        {#1[%
37 %
                               \dashlinedash/\dashlinegap
38
                           1pt/1pt
```

```
39
                      ]}}
40\% \def\adl@ihdashline[#1/#2]{\ifnum0='{\fi}%}
41 %
            42 %
            \noalign{\ifnum@=`}\fi
43 %
           \futurelet\@tempa\adl@xhline}
44 \def\adl@inactivehdl[#1/#2]{
           \ifadl@zwhrule \vskip-\arrayrulewidth \fi
45 %
          \hrule\@height\arrayrulewidth
46
          \futurelet\@tempa\adl@xhline}
48 \def\adl@xhline{\ifx\@tempa\hline \adl@ixhline\fi
          \ifx\@tempa\hdashline \adl@ixhline\fi
          \ifnum0='{\fi}}
51\def\adl@ixhline{\vskip\doublerulesep \adl@hline\relax\doublerulesep}
52 \def\adl@hline#1#2{%
53 % \@tempcnta#2
            \global\advance\adl@totalheight\@tempcnta
54 %
            \xdef\adl@rowsL{\adl@rowsL
55 %
                    (#1/\number\@tempcnta);}%
56 %
            \xdef\adl@rowsR{\adl@rowsR
57 %
58 %
                    (#1/\number\@tempcnta);}
59 }
60
61 \def\cdashline#1{\noalign{\ifnum0='}\fi
         \@ifnextchar[%]
63 %
                         {\adl@cdline[#1]}%
64 %
                         {\adl@cdline[#1][\dashlinedash/\dashlinegap]}
65
                       {\adl@inactivecdl[#1]}%
                       {\adl@inactivecdl[#1][\dashlinedash/\dashlinegap]}
66
67 }
68
69 \def\adl@inactivecdl[#1-#2][#3]{\ifnum0='{\fi}\cline{#1-#2}}
70 \begin{warpMathJax}
71 \CustomizeMathJax{\newcommand{\firsthdashline}[1][]{\hdashline}}
72 \CustomizeMathJax{\let\lasthdashline\firsthdashline}
73 \CustomizeMathJax{\let\cdashline\cline}
74 \end{warpMathJax}
```

File 31 lwarp-asymptote.sty

§ 140 Package asymptote

(Emulates or patches code by Andy Hammerlindl, John Bowman, Tom Prince.)

asymptote (Pkg) asymptote is patched for use by lwarp.

```
To compile:
                       pdflatex project.tex
                       asy project-*.asy
                       pdflatex project.tex
                       lwarpmk print
                       asy project-*.asy
                       lwarpmk print1
                       lwarpmk print1
                       lwarpmk html
                       asy project_html-*.asy
                       lwarpmk html1
                       lwarpmk html1
                       lwarpmk limages
for HTML output:
                   1 \LWR@ProvidesPackagePass{asymptote}[2016/11/26]
                   2\BeforeBeginEnvironment{asy}{%
                        \begin{lateximage}[-asymptote-~\PackageDiagramAltText]%
                   4 }
                   5 \AfterEndEnvironment{asy}{\end{lateximage}}
                   7\VerifyCommand[lwarp][asymptote]{\asyinclude}{A4F9DF668FC457768E7DFB83FAF7B343}
                   9 \xpatchcmd{\asyinclude}
                        {\begingroup}
                  10
                        {\begin{lateximage}[-asymptote-~\PackageDiagramAltText]}
                  11
                  12
                        {\LWR@patcherror{asymptote}{asyinclude-begingroup}}
                  13
                  14
                  15 \xpatchcmd{\asyinclude}
                        {\endgroup}
                  16
                        {\end{lateximage}}
                  17
                  19
                        {\LWR@patcherror{asymptote}{asyinclude-endgroup}}
          File 32 lwarp-atbegshi.sty
         Package atbegshi
$141
                   (Emulates or patches code by Heiko Oberdiek.)
   atbegshi (Pkg)
                  atbegshi is ignored.
                   Discard all options for lwarp-atbegshi:
for HTML output:
                   1 \LWR@ProvidesPackageDrop{atbegshi}[2011/10/05]
                   2 \let\AtBeginShipout\relax
                   3 \let\AtBeginShipoutNext\relax
                   4 \let\AtBeginShipoutFirst\relax
                   5 \let\AtBeginShipoutDiscard\relax
                   6 \let\AtBeginShipoutInit\relax
                   7 \let\AtBeginShipoutAddToBox\relax
```

```
8 \let\AtBeginShipoutAddToBoxForeground\relax
9 \let\AtBeginShipoutUpperLeft\relax
10 \let\AtBeginShipoutUpperLeftForeground\relax
11 \let\AtBeginShipoutOriginalShipout\relax
13 \newcommand*{\AtBeginShipout}[1]{}
14 \newbox\AtBeginShipoutBox
15 \newcommand*{\AtBeginShipoutNext}[1]{}
16 \newcommand*{\AtBeginShipoutFirst}[1]{}
17 \newcommand*{\AtBeginShipoutDiscard}{}
18 \newcommand*{\AtBeginShipoutInit}{}
19 \newcommand*{\AtBeginShipoutAddToBox}[1]{}
20 \newcommand*{\AtBeginShipoutAddToBoxForeground}[1]{}
21 \newcommand*{\AtBeginShipoutUpperLeft}[1]{}
22 \newcommand*{\AtBeginShipoutUpperLeftForeground}[1]{}
23 \newcommand*{\AtBeginShipoutOriginalShipout}[1]{}
24 \def\AtBeginShipoutBoxWidth{0pt}
25 \def\AtBeginShipoutBoxHeight{0pt}
26 \def\AtBeginShipoutBoxDepth{0pt}
```

File 33 lwarp-attachfile.sty

§ 142 Package attachfile

(Emulates or patches code by Scott Pakin.)

attachfile (Pkg) attachfile is patched for use by lwarp.

Metadata is ignored for now.

for HTML output: 1 \LWR@ProvidesPackagePass{attachfile}[2016/09/18]

Encloses each icon:

```
2 \newenvironment*{LWR@attachfile@icon}
3 {
      \begin{lateximage}*%
4
          [-attachfile-]%
5
6
              \detokenize\expandafter{\atfi@icon@icon}-%
8
              \detokenize\expandafter{\atfi@color@rgb}%
          ]%
9
10 }
11 {
      \end{lateximage}
12
13 }
```

Each icon is enclosed inside a LWR@attachfile@icon environment:

```
14 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
15 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
16
17 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
18 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
19
20 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
21 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
```

```
23 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
                  {\tt 24 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}}
                   Disable PDF file embedding:
                   25 \DeclareRobustCommand{\atfi@embedfile}[1]{}
                   The displayed output for an \attachfile reference:
                  26 \newcommand*{\LWR@attachfile@appearance}{}
                  28 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
                         \def\LWR@attachfile@appearance{#1}%
                  30 }
                   A file annotation becomes a reference:
                  31 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
                         \LWR@href@partsanitized{#1}{\LWR@attachfile@appearance}%
                  33 }
           File 34 lwarp-attachfile2.sty
         Package attachfile2
§ 143
                   (Emulates or patches code by Heiko Oberdiek.)
attachfile2 (Pkg) attachfile2 is patched for use by lwarp.
            \triangle
                   Metadata is ignored for now.
for HTML output:
                   1 \LWR@ProvidesPackagePass{attachfile2}[2016/05/16]
                   Adds memory of the selected color:
                   2 \def\LWR@attachfiletwo@color{}%
                   4 \define@key{AtFi}{color}{%
                         \def\LWR@attachfiletwo@color{#1}%
                                                             lwarp
                      \HyColor@AttachfileColor{#1}%
                               \atfi@color@tex\atfi@color@inline\atfi@color@annot
                               {attachfile2}{color}%
                   9 }
                   Encloses each icon:
                   10 \newenvironment*{LWR@attachfile@icon}
                  11 {
                         \begin{lateximage}*%
                   12
                             [-attachfile-]%
                   13
                             Γ%
                   14
                                 \detokenize\expandafter{\atfi@icon@icon}-%
                   15
                                 \detokenize\expandafter{\LWR@attachfiletwo@color}%
                   16
                             ]%
                   17
                   18 }
```

```
19 {
              \end{lateximage}
20
21 }
 Each icon is enclosed inside a LWR@attachfile@icon environment:
{\tt 22 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}}{\tt 22 \xpretocmd{\atfi@acroGraph}{\cite{Attachfile@icon}{}}{\tt 22 \xpretocmd{\atfi@acroGraph}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{}}{\tt 22 \xpretocmd{\atfi@acroGraph}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\cite{Attachfile@icon}{\c
23 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
25 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
26\xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
28 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
29 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
31 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
32 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}
 Disable PDF file embedding:
33 \DeclareRobustCommand{\atfi@embedfile}[1]{}
 The displayed output for an \attachfile reference:
34 \newcommand*{\LWR@attachfile@appearance}{}
36 \def\atfi@set@appearance@icon{%
               \atfi@set@appearance{\csname atfi@acro\atfi@icon@icon\endcsname}%
37
38 }
41
              \def\LWR@attachfile@appearance{#1}%
42 }
 A file annotation becomes a reference:
43 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
              \LWR@href@partsanitized{#1}{\LWR@attachfile@appearance}%
44
45 }
 Modified for text color:
46 \VerifyCommand[lwarp][attachfile2]{\notextattachfile}{CE78259EFC576D4A15920EADF824D7EF}
48 \DeclareRobustCommand{\notextattachfile}[2][]{%
49
         \begingroup
50
              \atfi@setup{#1}%
              \ifatfi@print
51
52
                  \leavevmode
                   \begingroup
53
                        \HyColor@UseColor\atfi@color@tex
54
                        \LWR@textcurrentcolor{#2}%
                                                                                                   lwarp
55
56% \strut
                   \endgroup
57
58 %
                   \else
                        \sbox\ltx@zero{#2\strut}%
59 %
                        \mbox[\wd0]{}%
60 %
              \fi
61
         \endgroup
62
```

63 }

Modified to draw the icon:

```
64 \VerifyCommand[lwarp][attachfile2]{\noattachfile}{CE78259EFC576D4A15920EADF824D7EF}
66 \DeclareRobustCommand{\noattachfile}[1][]{%
67
    \begingroup
      \atfi@setup{#1}%
68
      \atfi@set@appearance@icon
69
      \ifatfi@print
70
71
          \LWR@attachfile@appearance%
                                            lwarp
72 %
          \expandafter
          \atfi@refxform\csname atfi@appobj@\atfi@icon@icon\endcsname
73 %
74 %
75 %
          \makebox[\atfi@appearancewidth]{}%
      \fi
76
77
    \endgroup
78 }
```

File 35 lwarp-authblk.sty

§ 144

Package authblk

(Emulates or patches code by Patrick W. Daly.)

authblk (Pkg) authblk is patched for HTML.

package support ⚠ load order lwarp supports the native LATEX titling commands, and also supports the packages authblk and titling. If both are used, authblk should be loaded before titling.

\published and \subtitle

If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubtitlePublished in the preamble. See section 69.8.

(Emulates or patches code by Patrick W. Daly.)

for HTML output:

Require that authblk be loaded before titling:

```
1 \IfPackageLoadedTF{titling}{
2
     \PackageError{lwarp-authblk}
         {Package authblk must be loaded before titling}
3
4
5
             Titling appends authblk's author macro,
             so authblk must be loaded first.%
6
         }
7
8 }
9{\relax}
```

Load authblk:

10 \LWR@ProvidesPackagePass{authblk}[2001/02/27]

Patch to add a class for the affiliation:

```
11 \LetLtxMacro\LWRAB@affil\affil
13 \renewcommand{\affil}[2][]{%
```

```
14 \LWRAB@affil[#1]{\protect\InlineClass{affiliation}{#2}}
15 }
Create an HTML break for an \authorcr:
```

16 \renewcommand*{\authorcr}{\protect\LWR@newlinebr}

File 36 lwarp-autobreak.sty

§ 145 Package autobreak

(Emulates or patches code by Takahiro Ueda.)

autobreak (*Pkg*) autobreak is used as-is for svg math, and nullified for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{autobreak}[2017/02/23]

For MathJax. The modified align environment is used for svG math, but is reverted to its original for MathJax. (Extraneous commas were appearing in the result.)

```
2 \begin{warpMathJax}
3 \renewenvironment{autobreak}{\newcommand{\MoveEqLeft}[1]{}}{}
4 \let\start@align\@autobreak@oldstart@align
5 \let\endalign\@autobreak@oldendalign
6 \CustomizeMathJax{\newenvironment{autobreak}{}{}}
7 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1][]{}}
8 \CustomizeMathJax{\newcommand{\everybeforeautobreak}[1]{}}
9 \CustomizeMathJax{\newcommand{\everyafterautobreak}[1]{}}
10 \end{\warpMathJax}
```

File 37 lwarp-autonum.sty

§ 146 Package autonum

autonum (Pkg) autonum is ignored.

numbering, + All equations are numbered in HTML output. MATHJAX does not support the "+" environments.

for HTML output: 1 \LWR@ProvidesPackageDrop{autonum}[2015/01/18]

```
2 \RequirePackage{amsmath}
3
4
5 \newenvironment{equation+}{\equation}{\endequation}
6
7
8 \newenvironment{gather+}{\gather}{\endgather}
9
10 \BeforeBeginEnvironment{gather+}{\LWR@amsmathenv@@before{gather+}}
11
12 \AfterEndEnvironment{gather+}{\LWR@amsmathenv@@after}
13
```

```
15 \newenvironment{multline+}{\multline}{\endmultline}
{\tt 17 \setminus Before Begin Environment \{ multline+\} \{ \setminus LWR@ams mathenv@@before \{ multline+\} \} }
19 \AfterEndEnvironment{multline+}{\LWR@amsmathenv@@after}
20 \newenvironment{flalign+}{\flalign}{\endflalign}
22 \BeforeBeginEnvironment{flalign+}{\LWR@amsmathenv@@before{flalign+}}
24 \AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
27 \newenvironment{align+}{\align}{\endalign}
{\tt 29 \setminus Before Begin Environment \{align+\}\{\setminus LWR@ams mathenv@@before \{aline+\}\}}
{\tt 31 \ After End Environment \{align+\} \{LWR@ams mathenv@@after\} } \\
32
33
34 \newenvironment{alignat+}{\alignat}{\endalignat}
{\tt 36 \backslash Before Begin Environment \{alignat+\}\{\backslash LWR@ams mathenv@@before \{alineat+\}\}\}}
{\tt 38 \ After End Environment \{alignat+\} \{LWR@ams mathenv@@after\}}\\
39
40
41 \newenvironment{split+}{\split}{\endsplit}
```

File 38 lwarp-awesomebox.sty

```
§ 147 Package awesomebox
```

```
(Emulates or patches code by Étienne Deparis.)
```

awesomebox (*Pkg*) awesomebox is patched for use by lwarp.

```
for HTML output:
                  1 \LWR@ProvidesPackagePass{awesomebox}[2019/07/27]
                  2 \newcommand*{\LWR@awesomebox@boxborders}{}%
                  3 \newcommand*{\LWR@awesomebox@contentsborders}{}%
                  5 \newcommand*{\LWR@awesomebox@ruleborders}{%
                        border-top: 1px solid black;
                        border-bottom: 1px solid black%
                  7
                  8 }
                  10% \awesomebox[1:vrulecolor][2:hrule][3:title]{4:vrulewidth}{5:icon}{6:iconcolor}{7:content}
                  11 \RenewDocumentCommand \awesomebox { O\{abvrulecolor\} O\{\} o m m m + m \}\{\%\}
                        \begin{awesomeblock}[#1][#2][#3]{#4}{#5}{#6}
                  12
                  13
                  14
                        \end{awesomeblock}
                  15 }
```

17% \begin{awesomeblock}[1:vrulecolor][2:hrule][3:title]{4:vrulewidth}{5:icon}{6:iconcolor}

```
18 % <contents>
19 % \end{awesomeblock}
20 \RenewDocumentEnvironment{awesomeblock}{ O{abvrulecolor} O{} o m m m }
22
      \LWR@forceminwidth{#4}%
      \convertcolorspec{named}{#1}{HTML}\LWR@tempcolor%
23
      \renewcommand*{\LWR@awesomebox@boxborders}{}%
24
      \renewcommand*{\LWR@awesomebox@contentsborders}{}%
25
      \ifdefstrequal{\abShortLine}{#2}{%
26
       \renewcommand*{\LWR@awesomebox@contentsborders}{\LWR@awesomebox@ruleborders}%
27
28
29
      \ifdefstrequal{\abLongLine}{#2}{%
30
       \renewcommand*{\LWR@awesomebox@boxborders}{\LWR@awesomebox@ruleborders}%
31
32
      \begin{BlockClass}[\LWR@awesomebox@boxborders]{awesomebox}
      \begin{BlockClass}[%
33
          margin-left: 2\%;
34
          vertical-align: top
35
      ]{minipage}
36
          \color{#6}\Huge #5
37
      \end{BlockClass}
38
39
      \begin{BlockClass}[%
          width:75\%;
40
          vertical-align: top ;
41
42
          padding-left: 1em ;
43
          \LWR@awesomebox@contentsborders;
44
          border-left: \LWR@printlength{\LWR@atleastonept} %
              solid \LWR@origpound\LWR@tempcolor%
45
46
      ]{minipage}
          \label{lem:lift} $$ \IfValueTF{#3}{#3}newline}{} $$
47
48 }
49 {%
      \end{BlockClass}
50
      \end{BlockClass}
51
52 }
```

File 39 lwarp-axessibility.sty

§ 148 Package axessibility

axessibility (Pkg) axessibility is ignored.

```
for HTML output:

1 \PackageInfo{lwarp}{Using the lwarp version of package 'axessibility'.}%
2 \ProvidesPackage{lwarp-axessibility}% no date is declared by the original
3
4 \newif\iftagpdfopt
5
6 \DeclareOption{accsupp}{
7 \tagpdfoptfalse
8 }
9
10 \DeclareOption{tagpdf}{
11 \tagpdfopttrue
12 }
13
14 \ProcessOptions\relax
```

```
16 \iftagpdfopt
                                                      \RequirePackage{tagpdf}
                                      19
                                                      \RequirePackage{accsupp}
                                      20∖fi
                                      21 \long\def\wrap#1{}
                                      22 \long\def\wrapml#1{}
                                      23 \lceil \sqrt{4} 
                                      24 \long\def\wrapmlalt#1{}
                                        For MathJax. These usually will not be needed.
                                      25 \begin{warpMathJax}
                                      26 \CustomizeMathJax{\newcommand{\wrap}[1]{}}
                                      {\tt 28 \CustomizeMathJax{\newcommand{\wrapmlstar}[1]{\}}}
                                      29 \CustomizeMathJax{\newcommand{\wrapmlalt}[1]{}}
                                      30 \end{warpMathJax}
                  File 40 lwarp-axodraw2.sty
             Package axodraw2
                                        (Emulates or patches code by John C. Collins, J.A.M. Vermaseren.)
axodraw2 (Pkg)
                                     axodraw2 is patched for use by lwarp.
                                        1 \LWR@ProvidesPackagePass{axodraw2}[2018/02/15]
                                        2 \BeforeBeginEnvironment{axopicture}{%
                                                      \begin{lateximage}[-axopicture-~\PackageDiagramAltText]%
                                        4 }
                                        \label{lateximage} \begin{tabular}{ll} 6 \label{lateximage} \label{lateximage} \end{tabular} \begin{tabular}{ll} 4 \label{lateximage} \begin{tabular}{ll} 4 \l
                  File 41 lwarp-backnaur.sty
                                      backnaur
              Package
                                        (Emulates or patches code by Adrian P. Robson.)
                                        backnaur is patched for use by lwarp, and emulated for MATHJAX.
backnaur (Pkg)
                                        1 \LWR@ProvidesPackagePass{backnaur}[2019/06/18]
                                        2\renewenvironment{bnf}{\eqnarray}{\endegnarray}
                                        3 \renewenvironment{bnf*}{\csuse{eqnarray*}}{\csuse{endeqnarray*}}
                                        For MATHJAX:
                                        4 \begin{warpMathJax}
```

 $\label{lem:continuous} 5 \customizeMathJax{\newcommand{\bnfpn}[1]{\langle \text{\textrm{#1}} \ \rangle}}$

§ 149

§ 150

for HTML output:

for HTML output:

```
6 \CustomizeMathJax{\newcommand{\bnfor}{\; \mid \;}}
  7 \CustomizeMathJax{\newcommand{\bnfsp}{\;}}
  8 \IfPackageLoadedWithOptionsTF{backnaur}{perp}{
                \label{lem:customizeMathJax{\newcommand{\bnfes}{\perp}}} $$ \column{2cm} \column{2cm} \colum
10 }{
                \IfPackageLoadedWithOptionsTF{backnaur}{epsilon}{
11
                           \CustomizeMathJax{\newcommand{\bnfes}{\epsilon}}
12
13
                }{
                           \label{lem:customizeMathJax{newcommand{\bnfes}{\lambda}}} $$ \CustomizeMathJax{newcommand{\bnfes}{\lambda}} $$
14
15
                }
16 }
17 \IfPackageLoadedWithOptionsTF{backnaur}{tsrm}{
18
                \CustomizeMathJax{\newcommand{\bnfts}[1]{\text{#1}}}
19 }{
20
                \colone{CustomizeMathJax{\newcommand{\bnfts}[1]{\text{\texttt{#1}}}}
21 }
22 \CustomizeMathJax{\newcommand{\bnftd}[1]{\text{$textit{#1}}}}
23 \CustomizeMathJax{\newcommand{\bnfsk}{\dots}}
24 \IfPackageLoadedWithOptionsTF{backnaur}{altpo}{
                \CustomizeMathJax{\newcommand{\bnfpo}{::=}}
26 }{
                \CustomizeMathJax{\newcommand{\bnfpo}{\models}}
27
29 \CustomizeMathJax{\newcommand{\bnfprod}}{\ifstar{\LWRbnfprodnn}}{\LWRbnfprodyn}}}
30 \CustomizeMathJax{\newcommand{\LWRbnfprodyn}[2]{\bnfpn{#1} & \bnfpo & #2}}
31 \CustomizeMathJax{\newcommand{\LWRbnfprodnn}[2]{\nonumber \bnfpn{#1} & \bnfpo & #2}}
32 \CustomizeMathJax{\newcommand{\bnfmore}{\ifstar{\LWRbnfmorenn}{\LWRbnfmoreyn}}}
33 \CustomizeMathJax{\newcommand{\LWRbnfmoreyn}[1]{ & & #1}}
{\tt 34 \CustomizeMathJax{\newcommand{\LWRbnfmorenn}[1]{\nonumber \& & \#1}}}
35 \end{warpMathJax}
```

File 42 lwarp-backref.sty

§151 Package backref

(Emulates or patches code by David Carlisle and Sebastian Rahtz.)

backref (*Pkg*) backref is patched for use by lwarp.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \LWR@ProvidesPackagePass{backref}[2016/05/21] \end{tabular}$

Force the hyperref option:

```
2 \def\backref{}
3
4 \long\def\hyper@section@backref#1#2#3{%
5 \LWR@refwithsection{#3}%
6 }
7
8 \let\backrefxxx\hyper@section@backref
```

File 43 lwarp-balance.sty

Salance (Emulates or patches code by PATRICK W. DALY.) balance (Pkg) balance is ignored. Discard all options for lwarp-balance: 1 \LWR@ProvidesPackageDrop{balance}[1999/02/23] 2 \newcommand*{\balance}{} 3 \newcommand*{\nobalance}{}

File 44 lwarp-bbding.sty

§ 153 Package bbding

(Emulates or patches code by Karel Horak, Peter Møller Neergaard.)

bbding (Pkg) bbding is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{bbding}[1999/04/15]
```

```
2 \newcommand*{\LWR@bbdingsymbol}[2]{\HTMLunicode{#2}}
 {\tt 4 \ less cissorRightBrokenBottom} \{ \tt LWR@bbdingsymbol \{000\} \} \\
                                                                                                                                                           {2701}}
 5 \newcommand{\LWR@HTML@ScissorRight}{\LWR@bbdingsymbol{001}
                                                                                                                                                     {2702}}
 6\newcommand{\LWR@HTML@ScissorRightBrokenTop}{\LWR@bbdingsymbol{002}
                                                                                                                                                           {2703}}
 7 \newcommand{\LWR@HTML@ScissorLeftBrokenBottom}{\LWR@bbdingsymbol{003}
                                                                                                                                                            {2701}}
 8 \newcommand{\LWR@HTML@ScissorLeft}{\LWR@bbdingsymbol{004}
                                                                                                                                                     {2702}}
 9 \newcommand{\LWR@HTML@ScissorLeftBrokenTop}{\LWR@bbdingsymbol{005}
                                                                                                                                                          {2703}}
                                                                                                                                                         {2704}}
10 \newcommand{\LWR@HTML@ScissorHollowRight}{\LWR@bbdingsymbol{006}
                                                                                                                                                        {2704}}
11 \newcommand{\LWR@HTML@ScissorHollowLeft}{\LWR@bbdingsymbol{007}
12 \newcommand{\LWR@HTML@Phone}{\LWR@bbdingsymbol{010}
                                                                                                                                                     {260E}}
13 \newcommand{\LWR@HTML@PhoneHandset}{\LWR@bbdingsymbol{011}
                                                                                                                                                     {2706}}
14 \newcommand{\LWR@HTML@Tape}{\LWR@bbdingsymbol{012}
                                                                                                                                                     {2707}}
15 \newcommand{\LWR@HTML@Plane}{\LWR@bbdingsymbol{013}
                                                                                                                                                     {2708}}
16 \newcommand{\LWR@HTML@Envelope}{\LWR@bbdingsymbol{014}
                                                                                                                                                     {2709}}
{261B}}
{261A}}
{\tt 19 \ lew command \{\ LWR@HTML@HandCuffRightUp\} \{\ LWR@bbdingsymbol \{017\} \} }
                                                                                                                                                       {261D}}
{\tt 20 \ leftUp} \{ \tt LWR@HTML@HandCuffLeftUp} \{ \tt LWR@bbdingsymbol \{ 020 \} \} \} \\
                                                                                                                                                      {261F}}
21 \newcommand{\LWR@HTML@HandRight}{\LWR@bbdingsymbol{021}
                                                                                                                                                     {261E}}
22 \newcommand{\LWR@HTML@HandLeft}{\LWR@bbdingsymbol{022}
                                                                                                                                                     {261C}}
23 \newcommand{\LWR@HTML@HandRightUp}{\LWR@bbdingsymbol{023}
                                                                                                                                                     {261D}}
24 \newcommand{\LWR@HTML@HandLeftUp}{\LWR@bbdingsymbol{024}}
                                                                                                                                                     {261F}}
25 \newcommand{\LWR@HTML@Peace}{\LWR@bbdingsymbol{025}
                                                                                                                                                     {270C}}
{\tt 26 \ left} \{ \tt LWR@HTML@HandPencilLeft} \{ \tt LWR@bbdingsymbol \{026\} \} \} \\
                                                                                                                                                      {270D}}
27 \newcommand{\LWR@HTML@PencilRight}{\LWR@bbdingsymbol{027}
                                                                                                                                                     {270F}}
28 \end{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\c
                                                                                                                                                     {270F}}
{\tt 29 \ low command \{\ LWR@HTML@PencilRightUp\} \{\ LWR@bbdingsymbol \{031\} \} }
                                                                                                                                                     {2710}}
```

```
{\tt 30 \ left Up} {\tt LWR@html@PencilLeft Up} {\tt LWR@bbdingsymbol \{032\}} \\
                                                                           {2710}}
31 \newcommand{\LWR@HTML@PencilRightDown}{\LWR@bbdingsymbol{033}
                                                                             {270E}}
{\tt 32 \ leftDown} \{ \tt LWR@hTML@PencilLeftDown} \{ \tt LWR@bbdingsymbol \{ 034 \} \} \} \\
                                                                            {270E}}
{\tt 33 \ lewcommand \{LWR@HTML@NibRight\}\{LWR@bbdingsymbol\{035\}\}}\\
                                                                            {2711}}
34 \newcommand{\LWR@HTML@NibLeft}{\LWR@bbdingsymbol{036}
                                                                            {2711}}
35 \newcommand{\LWR@HTML@NibSolidRight}{\LWR@bbdingsymbol{037}
                                                                            {2712}}
36 \newcommand{\LWR@HTML@NibSolidLeft}{\LWR@bbdingsymbol{040}
                                                                            {2712}}
{\tt 37 \ hewcommand \ LWR@HTML@Checkmark} \{ \tt LWR@bbdingsymbol \{041\} \\
                                                                            {2713}}
{\tt 38 \ le CheckmarkBold} {\tt LWR@hTML@CheckmarkBold} {\tt LWR@bbdingsymbol \{042\} } \\
                                                                            {2714}}
39 \newcommand{\LWR@HTML@XSolid}{\LWR@bbdingsymbol{043}
                                                                            {2715}}
{\tt 40 \ le KCMR@HTML@XSolidBold} \{ \tt LWR@bbdingsymbol \{044\} \} \\
                                                                            {2716}}
41 \newcommand{\LWR@HTML@XSolidBrush}{\LWR@bbdingsymbol{045}
                                                                            {2717}}
42 \newcommand{\LWR@HTML@PlusOutline}{\LWR@bbdingsymbol{046}
                                                                            {2719}}
{\tt 43 \ lewcommand \{\ LWR@HTML@Plus\} \{\ LWR@bbdingsymbol \{047\} \} \}} \\
                                                                            {271A}}
44 \newcommand{\LWR@HTML@PlusCenterOpen}{\LWR@bbdingsymbol{050}
                                                                            {271C}}
45 \newcommand \{\LWR@HTML@PlusThinCenterOpen\} \{\LWR@bbdingsymbol \{051\}\} \} 
                                                                              {271B}}
46 \newcommand{\LWR@HTML@Cross}{\LWR@bbdingsymbol{052}
                                                                            {271D}}
47 \newcommand{\LWR@HTML@CrossOpenShadow}{\LWR@bbdingsymbol{053}
                                                                             {271E}}
48 \newcommand \{\LWR@HTML@CrossOutline\} \{\LWR@bbdingsymbol \{\emptyset 54\}\} \} 
                                                                            {271F}}
49 \newcommand{\LWR@HTML@CrossBoldOutline}{\LWR@bbdingsymbol{055}
                                                                             {271F}}
{\tt 50 \ less Maltese} \{ \tt LWR@bbdingsymbol \{056\} \} \\
                                                                            {2720}}
51 \newcommand{\LWR@HTML@DavidStarSolid}{\LWR@bbdingsymbol{057}
                                                                            {2721}}
52 \newcommand{\LWR@HTML@DavidStar}{\LWR@bbdingsymbol{060}
                                                                            {2721}}
53 \newcommand{\LWR@HTML@FourAsterisk}{\LWR@bbdingsymbol{061}
                                                                            {2722}}
54 \newcommand{\LWR@HTML@JackStar}{\LWR@bbdingsymbol{062}
                                                                            {2723}}
55 \newcommand{\LWR@HTML@JackStarBold}{\LWR@bbdingsymbol{063}
                                                                            {2724}}
56 \newcommand{\LWR@HTML@CrossClowerTips}{\LWR@bbdingsymbol{064}
                                                                             {2725}}
57 \newcommand{\LWR@HTML@FourStar}{\LWR@bbdingsymbol{065}
                                                                            {2726}}
58 \newcommand{\LWR@HTML@FourStarOpen}{\LWR@bbdingsymbol{066}
                                                                            {2727}}
59 \newcommand{\LWR@HTML@FiveStarLines}{\LWR@bbdingsymbol{067}
                                                                            {2729}}
60 \newcommand{\LWR@HTML@FiveStar}{\LWR@bbdingsymbol{070}
                                                                            {2605}}
61 \newcommand{\LWR@HTML@FiveStarOpen}{\LWR@bbdingsymbol{071}
                                                                            {2729}}
62 \newcommand{\LWR@HTML@FiveStarOpenCircled}{\LWR@bbdingsymbol{072}
                                                                              {272A}}
63 \newcommand{\LWR@HTML@FiveStarCenterOpen}{\LWR@bbdingsymbol{073}
                                                                              {272B}}
64 \newcommand{\LWR@HTML@FiveStarOpenDotted}{\LWR@bbdingsymbol{074}
                                                                              {272C}}
65 \newcommand{\LWR@HTML@FiveStarOutline}{\LWR@bbdingsymbol{075}
                                                                             {272D}}
66 \newcommand{\LWR@HTML@FiveStarOutlineHeavy}{\LWR@bbdingsymbol{076}
                                                                               {272E}}
67 \newcommand{\LWR@HTML@FiveStarConvex}{\LWR@bbdingsymbol{077}
                                                                            {272F}}
68 \newcommand{\LWR@HTML@FiveStarShadow}{\LWR@bbdingsymbol{100}
                                                                            {2730}}
69 \newcommand{\LWR@HTML@AsteriskBold}{\LWR@bbdingsymbol{101}
                                                                            {2731}}
70 \newcommand{\LWR@HTML@AsteriskCenterOpen}{\LWR@bbdingsymbol{102}
                                                                              {2732}}
71 \newcommand{\LWR@HTML@AsteriskThin}{\LWR@bbdingsymbol{103}
                                                                            {273B}}
72 \newcommand{\LWR@HTML@AsteriskThinCenterOpen}{\LWR@bbdingsymbol{104}
                                                                               {273C}}
73 \newcommand{\LWR@HTML@EightStarTaper}{\LWR@bbdingsymbol{105}
                                                                            {2733}}
74 \newcommand{\LWR@HTML@EightStarConvex}{\LWR@bbdingsymbol{106}
                                                                             {2735}}
75 \newcommand{\LWR@HTML@SixStar}{\LWR@bbdingsymbol{107}
                                                                            {2736}}
76 \newcommand{\LWR@HTML@EightStar}{\LWR@bbdingsymbol{110}
                                                                            {2737}}
77 \newcommand{\LWR@HTML@EightStarBold}{\LWR@bbdingsymbol{111}
                                                                            {2738}}
78 \newcommand{\LWR@HTML@TwelweStar}{\LWR@bbdingsymbol{112}
                                                                            {2739}}
79 \newcommand{\LWR@HTML@SixteenStarLight}{\LWR@bbdingsymbol{113}
                                                                             {273A}}
{273B}}
{\tt 81 \ lower Open Center} \\ {\tt LWR@HTML@SixFlower Open Center} \\ {\tt LWR@bbdingsymbol \{115\}} \\
                                                                              {273C}}
82 \newcommand{\LWR@HTML@Asterisk}{\LWR@bbdingsymbol{116}
                                                                            {273D}}
83 \newcommand{\LWR@HTML@SixFlowerAlternate}{\LWR@bbdingsymbol{117}
                                                                              {273E}}
84 \newcommand{\LWR@HTML@FiveFlowerPetal}{\LWR@bbdingsymbol{120}
                                                                             {273F}}
85 \newcommand{\LWR@HTML@SixFlowerPetalDotted}{\LWR@bbdingsymbol{121}
                                                                              {2740}}
86 \newcommand{\LWR@HTML@FiveFlowerOpen}{\LWR@bbdingsymbol{122}
                                                                            {2740}}
87 \newcommand{\LWR@HTML@EightFlowerPetal}{\LWR@bbdingsymbol{123}
                                                                             {2741}}
88 \ left and {\tt LWR@HTML@SunshineOpenCircled} {\tt LWR@bbdingsymbol \{124\} } \\
                                                                              {2742}}
89 \newcommand{\LWR@HTML@SixFlowerAltPetal}{\LWR@bbdingsymbol{125}
                                                                             {2743}}
```

```
90 \newcommand{\LWR@HTML@FourClowerOpen}{\LWR@bbdingsymbol{126}
                                                                     {273F}}
91 \newcommand{\LWR@HTML@FourClowerSolid}{\LWR@bbdingsymbol{127}
                                                                     {273F}}
92 \newcommand{\LWR@HTML@AsteriskRoundedEnds}{\LWR@bbdingsymbol{130}
                                                                      {2749}}
{274A}}
94 \newcommand{\LWR@HTML@EightAsterisk}{\LWR@bbdingsymbol{132}
                                                                    {274B}}
95\newcommand{\LWR@HTML@SixFlowerRemovedOpenPetal}{\LWR@bbdingsymbol{133} {2740}}
96 \newcommand{\LWR@HTML@SparkleBold}{\LWR@bbdingsymbol{134}
                                                                    {2748}}
97 \newcommand{\LWR@HTML@Sparkle}{\LWR@bbdingsymbol{135}
                                                                    {2747}}
98 \newcommand{\LWR@HTML@SnowflakeChevron}{\LWR@bbdingsymbol{136}}
                                                                     {2744}}
99 \newcommand{\LWR@HTML@SnowflakeChevronBold}{\LWR@bbdingsymbol{137}
                                                                      {2746}}
{2744}}
101 \newcommand{\LWR@HTML@CircleSolid}{\LWR@bbdingsymbol{141}
                                                                    {25CF}}
102 \newcommand{\LWR@HTML@Ellipse}{\LWR@bbdingsymbol{142}
                                                                    {274D}}
{25CF}}
104 \newcommand{\LWR@HTML@CircleShadow}{\LWR@bbdingsymbol{144}
                                                                    {274D}}
\label{lipseShadow} $$ \operatorname{LWR@HTML@EllipseShadow}_{\LWR@bbdingsymbol{145}} $$
                                                                     {274D}}
106 \newcommand{\LWR@HTML@Square}{\LWR@bbdingsymbol{146}
                                                                    {25A1}}
107 \newcommand{\LWR@HTML@SquareSolid}{\LWR@bbdingsymbol{147}
                                                                    {25A0}}
{2751}}
109 \newcommand{\LWR@HTML@SquareShadowTopRight}{\LWR@bbdingsymbol{151}
                                                                      {2752}}
{\tt 110 \ lowcommand \{\ LWR@HTML@SquareShadowTopLeft\} \{\ LWR@bbdingsymbol \{152\} \} }
                                                                      {2752}}
111 \newcommand{\LWR@HTML@SquareCastShadowBottomRight}{\LWR@bbdingsymbol{153} {2751}}
112 \newcommand{\LWR@HTML@SquareCastShadowTopRight}{\LWR@bbdingsymbol{154}
                                                                        {2752}}
{\tt 113 \ newcommand \{LWR@HTML@SquareCastShadowTopLeft\}\{LWR@bbdingsymbol\{155\}\}}
                                                                        {2752}}
114 \newcommand{\LWR@HTML@TriangleUp}{\LWR@bbdingsymbol{156}
                                                                    {25B2}}
115 \newcommand{\LWR@HTML@TriangleDown}{\LWR@bbdingsymbol{157}
                                                                    {25BC}}
116 \newcommand{\LWR@HTML@DiamondSolid}{\LWR@bbdingsymbol{160}
                                                                    {25C6}}
117 \newcommand{\LWR@HTML@OrnamentDiamondSolid}{\LWR@bbdingsymbol{161}
                                                                       {2756}}
118 \newcommand{\LWR@HTML@HalfCircleRight}{\LWR@bbdingsymbol{162}
                                                                     {25D7}}
119 \newcommand{\LWR@HTML@HalfCircleLeft}{\LWR@bbdingsymbol{163}
                                                                     {25D6}}
{\tt 120 \ \ leaver mand \{LWR@HTML@RectangleThin\} \{LWR@bbdingsymbol \{164\} \}}
                                                                    {2758}}
121 \newcommand{\LWR@HTML@Rectangle}{\LWR@bbdingsymbol{165}
                                                                    {2759}}
122 \newcommand{\LWR@HTML@RectangleBold}{\LWR@bbdingsymbol{166}
                                                                    {275A}}
123 \newcommand{\LWR@HTML@ArrowBoldRightStrobe}{\LWR@bbdingsymbol{167}
                                                                      {27A0}}
124 \newcommand{\LWR@HTML@ArrowBoldUpRight}{\LWR@bbdingsymbol{170}
                                                                     {27A6}}
125 \newcommand{\LWR@HTML@ArrowBoldDownRight}{\LWR@bbdingsymbol{171}
                                                                      {27A5}}
{27A7}}
127 \newcommand{\LWR@HTML@ArrowBoldRightCircled}{\LWR@bbdingsymbol{173}
                                                                       {27B2}}
130 \LWR@formatted{ScissorRightBrokenBottom}
131 \LWR@formatted{ScissorRight}
132 \LWR@formatted{ScissorRightBrokenTop}
133 \LWR@formatted{ScissorLeftBrokenBottom}
134 \LWR@formatted{ScissorLeft}
135 \LWR@formatted{ScissorLeftBrokenTop}
136 \LWR@formatted{ScissorHollowRight}
137 \LWR@formatted{ScissorHollowLeft}
138 \LWR@formatted{Phone}
139 \LWR@formatted{PhoneHandset}
140 \LWR@formatted{Tape}
141 \LWR@formatted{Plane}
142 \LWR@formatted{Envelope}
143 \LWR@formatted{HandCuffRight}
144 \LWR@formatted{HandCuffLeft}
145 \LWR@formatted{HandCuffRightUp}
146 \LWR@formatted{HandCuffLeftUp}
147 \LWR@formatted{HandRight}
148 \LWR@formatted{HandLeft}
149 \LWR@formatted{HandRightUp}
```

```
150 \LWR@formatted{HandLeftUp}
151 \LWR@formatted{Peace}
152 \LWR@formatted{HandPencilLeft}
153 \LWR@formatted{PencilRight}
154 \LWR@formatted{PencilLeft}
155 \LWR@formatted{PencilRightUp}
156 \LWR@formatted{PencilLeftUp}
157 \LWR@formatted{PencilRightDown}
158 \LWR@formatted{PencilLeftDown}
159 \LWR@formatted{NibRight}
160 \LWR@formatted{NibLeft}
161 \LWR@formatted{NibSolidRight}
162 \LWR@formatted{NibSolidLeft}
163 \LWR@formatted{Checkmark}
164 \LWR@formatted{CheckmarkBold}
165 \LWR@formatted{XSolid}
166 \LWR@formatted{XSolidBold}
167 \LWR@formatted{XSolidBrush}
168 \LWR@formatted{PlusOutline}
169 \LWR@formatted{Plus}
170 \LWR@formatted{PlusCenterOpen}
171 \LWR@formatted{PlusThinCenterOpen}
172 \LWR@formatted{Cross}
173 \LWR@formatted{CrossOpenShadow}
174 \LWR@formatted{CrossOutline}
175 \LWR@formatted{CrossBoldOutline}
176 \LWR@formatted{CrossMaltese}
177 \LWR@formatted{DavidStarSolid}
178 \LWR@formatted{DavidStar}
179 \LWR@formatted{FourAsterisk}
180 \LWR@formatted{JackStar}
181 \LWR@formatted{JackStarBold}
182 \LWR@formatted{CrossClowerTips}
183 \LWR@formatted{FourStar}
184 \LWR@formatted{FourStarOpen}
185 \LWR@formatted{FiveStarLines}
186 \LWR@formatted{FiveStar}
187 \LWR@formatted{FiveStarOpen}
188 \LWR@formatted{FiveStarOpenCircled}
189 \LWR@formatted{FiveStarCenterOpen}
190 \LWR@formatted{FiveStarOpenDotted}
191 \LWR@formatted{FiveStarOutline}
192 \LWR@formatted{FiveStarOutlineHeavy}
193 \LWR@formatted{FiveStarConvex}
194 \LWR@formatted{FiveStarShadow}
195 \LWR@formatted{AsteriskBold}
196 \LWR@formatted{AsteriskCenterOpen}
197 \LWR@formatted{AsteriskThin}
198 \LWR@formatted{AsteriskThinCenterOpen}
199 \LWR@formatted{EightStarTaper}
200 \LWR@formatted{EightStarConvex}
201 \LWR@formatted{SixStar}
202 \LWR@formatted{EightStar}
203 \LWR@formatted{EightStarBold}
204 \LWR@formatted{TwelweStar}
205 \LWR@formatted{SixteenStarLight}
206 \LWR@formatted{SixFlowerPetalRemoved}
207 \LWR@formatted{SixFlowerOpenCenter}
208 \LWR@formatted{Asterisk}
```

209 \LWR@formatted{SixFlowerAlternate}

```
210 \LWR@formatted{FiveFlowerPetal}
        211 \LWR@formatted{SixFlowerPetalDotted}
        212 \LWR@formatted{FiveFlowerOpen}
        213 \LWR@formatted{EightFlowerPetal}
        214 \LWR@formatted{SunshineOpenCircled}
        215 \LWR@formatted{SixFlowerAltPetal}
        216 \LWR@formatted{FourClowerOpen}
        217 \LWR@formatted{FourClowerSolid}
        218 \LWR@formatted{AsteriskRoundedEnds}
        219 \LWR@formatted{EightFlowerPetalRemoved}
        220 \LWR@formatted{EightAsterisk}
        221 \LWR@formatted{SixFlowerRemovedOpenPetal}
        222 \LWR@formatted{SparkleBold}
        223 \LWR@formatted{Sparkle}
        224 \LWR@formatted{SnowflakeChevron}
        225 \LWR@formatted{SnowflakeChevronBold}
        226 \LWR@formatted{Snowflake}
        227 \LWR@formatted{CircleSolid}
        228 \LWR@formatted{Ellipse}
        229 \LWR@formatted{EllipseSolid}
        230 \LWR@formatted{CircleShadow}
        231 \LWR@formatted{EllipseShadow}
        232 \LWR@formatted{Square}
        233 \LWR@formatted{SquareSolid}
        234 \LWR@formatted{SquareShadowBottomRight}
        235 \LWR@formatted{SquareShadowTopRight}
        236 \LWR@formatted{SquareShadowTopLeft}
        237 \LWR@formatted{SquareCastShadowBottomRight}
        238 \LWR@formatted{SquareCastShadowTopRight}
        239 \LWR@formatted{SquareCastShadowTopLeft}
        240 \LWR@formatted{TriangleUp}
        241 \LWR@formatted{TriangleDown}
        242 \LWR@formatted{DiamondSolid}
        243 \LWR@formatted{OrnamentDiamondSolid}
        244 \LWR@formatted{HalfCircleRight}
        245 \LWR@formatted{HalfCircleLeft}
        246 \LWR@formatted{RectangleThin}
        247 \LWR@formatted{Rectangle}
        248 \LWR@formatted{RectangleBold}
        249 \LWR@formatted{ArrowBoldRightStrobe}
        250 \LWR@formatted{ArrowBoldUpRight}
        251 \LWR@formatted{ArrowBoldDownRight}
        252 \LWR@formatted{ArrowBoldRightShort}
        253 \LWR@formatted{ArrowBoldRightCircled}
 File 45 lwarp-beamerarticle.sty
Package beamerarticle
```

(Emulates or patches code by Till Tantau, Vedran Miletić, Louis Stuart, Joseph Wright.) beamerarticle (*Pkg*) beamerarticle is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{beamerarticle}[2021/05/26]

2 \renewcommand<>{\textcolor}{\only#1{\beameroriginal{\textcolor}}}

§ 154

```
4 \AtBeginDocument{
6 \renewcommand<>{\LWR@listitem}{%
      \only#1{%
           \beameroriginal{\LWR@listitem}%
8
9
      }%
10 }
11
12 \renewcommand<>{\LWR@itemizeitem}{%
      \only#1{%
13
           \beameroriginal{\LWR@itemizeitem}%
14
15
16 }
17
18 \renewcommand<>{\LWR@descitem}{%
      \only#1{%
          \beameroriginal{\LWR@descitem}%
20
21
22 }
23
24 \renewcommand<>{\abstract}{%
      \only#1{%
25
           \beameroriginal{\abstract}%
26
27
28 }
29
30 \renewcommand<>{\LWR@includegraphicsb}{%
31
      \only#1{%
           \beameroriginal{\LWR@includegraphicsb}%
32
      }%
33
34 }
35
36 \xpretocmd\frame
37
      {
               \LWR@forcenewpage
38
39
               \BlockClass{beamerframe}%
40
      {}
41
      {\LWR@patcherror{beamerarticle}{frame}}
42
43
44 \xapptocmd\beamer@endframe
      {\endBlockClass}
45
46
      {}
      {\LWR@patcherror{beamerarticle}{beamer@endframe}}
```

An example in the beamer docs for \include{a} shows the use of \line{a} frame.

```
48 \xpretocmd\beamer@article@startframe
      {\LWR@nulllistfills}
49
50
      {}
      {\LWR@patcherror{beamerarticle}{beamer@article@startframe}}
51
52
53 }% AtBeginDocument
55 \let\beamer@@tmpop@frametitle@default\relax
56 \defbeamertemplate<article>*{frametitle}{default}{%
      \paragraph*{\insertframetitle}\ \par%
57
      \ifdefempty{\insertframesubtitle}{}{%
58
          \noindent\emph{\insertframesubtitle}\par%
59
```

```
60
       }%
61 }
62
63
64 \NewDocumentCommand{\LWR@beamer@itemize}{o}{%
       \LWR@itemizestart\LWR@origitemize%
66 }%
67 \NewDocumentCommand{\LWR@beamer@description}{o o}{\%}
       \LWR@descriptionstart\LWR@origdescription%
68
69 }%
70
71 \xapptocmd{\LWR@patchlists}
72
       {%
73
           \LetLtxMacro\itemize\LWR@beamer@itemize%
74
           \LetLtxMacro\description\LWR@beamer@description%
75
       }
76
       {}
       {\LWR@patcherror{beamerarticle}{LWR@patchlists}}
77
78
79
80 \LetLtxMacro\maketitle\LWR@maketitle
81
82 \renewcommand{\subtitle}[2][]{
       \gdef\@subtitle{#2}
84
       \def\insertsubtitle{#2}
85 }
 Add subtitle if not already present:
86 \AtBeginDocument{
87 \IfPackageLoadedTF{lwarp-scrextend}
       {}% komascript already has subtitle
89
       {% not komascript
90
           \xpatchcmd{\@maketitle}
91
                    \LWR@htmltag{\LWR@tagtitleend}%
92
                    \LWR@startpars%
93
               }%
94
                {%
95
                    \LWR@htmltag{\LWR@tagtitleend}%
96
97
                    \ifdefvoid{\@subtitle}{}{%
                        \begin{BlockClass}{subtitle}%
                        \@subtitle%
100
                        \end{BlockClass}%
101
                    \LWR@startpars%
102
                }%
103
                {}
104
                {\LWR@patcherror{beamerarticle}{@maketitle}}
105
106
       }% not komascript
107 }
109 \RequirePackage{fancyvrb}
{\tt 110 \setminus Define VerbatimEnvironment \{ semiverbatim \} \{ verbatim \} \{ command chars = \tt \ \ \ \} \}}
```

File 46 lwarp-biblatex.sty

§ 155 Package

Package biblatex

(Emulates or patches code by Philipp Lehman.)

biblatex (*Pkg*) When biblatex is used, modifications from newfloat may have to be undone.

for HTML output:

- 1. lwarp uses newfloat.
- 2. For classes with chapters which newfloat does not know about, such as CT_EX-related classes, newfloat may modify \addtocontents.
- 3. biblatex, though, wants to patch \addtocontents, which causes an error if \addtocontents has been changed.
- 4. Therefore, \addtocontents is restored to its original here, since biblatex is about to be loaded.
- 5. This means that the **newfloat**'s chapterlistsgaps option may no longer work.

```
1 \ifdef{\newfloat@addtocontents@ORI}{
2     \let\addtocontents\newfloat@addtocontents@ORI
3 }{}
```

hyperref emulation is loaded \AtBeginDocument to avoid an options clash.

```
4 \AtBeginDocument{\RequirePackage{hyperref}}
5
6 \LWR@ProvidesPackagePass{biblatex}[2018/03/04]
```

The following create hyperlinks to the references. The original code to use hyperref is recreated here, because hyperref is emulated.

```
7 \AfterPreamble{
```

Not using \VerifyCommand because this may be defined several ways.

```
8 \let\blx@anchors\@empty
9 \protected\def\blx@anchor{%
      \xifinlist{\the\c@refsection @\abx@field@entrykey}{\blx@anchors}
10
11
          {\listxadd\blx@anchors{\the\c@refsection @\abx@field@entrykey}%
12
13
          \hypertarget{cite.\the\c@refsection @\abx@field@entrykey}{}}}
15 \protected\def\blx@imc@bibhyperref{%
      \@ifnextchar[%]
16
        {\blx@bibhyperref}
17
        {\blx@bibhyperref[\abx@field@entrykey]}}%
18
19
20 \long\def\blx@bibhyperref[#1]#2{%
           \blx@sfsave
21 %
          \hyperlink{cite.\the\c@refsection @#1}{%
22
```

```
23 %
                 \blx@sfrest
           #2%
24
25 %
           \blx@sfsave
26
          }%
27% \blx@sfrest%
28 }%% \def\blx@nohyperref[#1]#2{#2}%
30 \protected\long\def\blx@imc@bibhyperlink#1#2{%
           \blx@sfsave
31 %
          \hyperlink{cite.\the\c@refsection:#1}{%
32
33 %
            \blx@sfrest
34
            #2%
35 %
            \blx@sfsave
          }%
37 %
            \blx@sfrest%
38 }%
40 \protected\long\def\blx@imc@bibhypertarget#1#2{%
            \blx@sfsave%
41 %
           \hypertarget{cite.\the\c@refsection:#1}{%
42
            \blx@sfrest
43 %
            #2%
44
45 %
           \blx@sfsave%
          }%
46
47~\%
             \blx@sfrest%
48 }
50 \let\blx@imc@ifhyperref\@firstoftwo
```

Ensure that an autopage reference is current where each \cite is used, although this is nullified inside footnotes since they now use a LATEX box.

```
51\xpretocmd{\blx@citecmdinit}
52 {\LWR@newautopagelabel{page}}%
53 {}
54 {\LWR@patcherror{biblatex}{blx@citecmdinit}}
```

Ensure that an autopage reference is current for each backref. If the citation is in a footnote, the backref will point to whatever preceded the footnotes.

```
55 \end{C820E8B12CF2904906644302E07EBE88} \end{C820E8B12CF290A1906644302E07EBE88} \end{C820E8B12CF290A19066444502E07EBE88} \end{C820E8B12CF290A1906644502E07EBE88} \end{C820E8B12CF290A190664502E07EBE88} \end{C820E8B12CF290A190
57 \xpatchcmd{\blx@addbackref@i}
58
                                 {\thepage}
                                  {\theLWR@previousautopagelabel}% ref to the most recent object
59
60
                                  {\LWR@patcherror{biblatex}{blx@addbackref@i A}}
63 \xpatchcmd{\blx@addbackref@i}
64
                                  {\c@page}
                                  65
66
                                  {\LWR@patcherror{biblatex}{blx@addbackref@i B}}
67
```

The following patches are for back page references.

```
68 \DeclareListFormat{pageref}{%
69 \ifnumless{\abx@pagerefstyle}{0}
70 {\usebibmacro{list:plain}%
```

```
71
          {%
72
73 %
                 \hyperlink{page.#1}{#1}%
74
               \LWR@refwithsection{\BaseJobname-autopage-#1}% lwarp
75
76
          {#1}}
       {\ifnumequal{\value{listcount}}{1}
77
          {\usebibmacro{pageref:init}}
78
79
          {}%
        \usebibmacro{pageref:comp}{#1}%
80
        \ifnumequal{\value{listcount}}{\value{liststop}}
81
82
          {\usebibmacro{pageref:dump}}
83
          {}}}
85\expandafter\VerifyCommand\expandafter{\csname abx@macro@pageref:comp\endcsname}
      {019E018D2EBB4F3D02578439F03128D8}
87
88 \renewbibmacro*{pageref:comp}[1]{%
    \numdef\abx@range@prev{\abx@range@prev+1}%
89
    \ifinteger{#1}
90
      {\def\abx@range@num{#1}%
91
        \def\abx@range@this{1}%
92
        \ifnumequal{\abx@range@this}{\abx@range@last}
93
94
          {}
95
          {\def\abx@range@prev{-1}}}
96
      {\ifrmnum{#1}
97
          {\numdef\abx@range@num{\rmntonum{\#1}}}\%
98
           \def\abx@range@this{2}%
           \ifnumequal{\abx@range@this}{\abx@range@last}
99
100
             {}
             {\def\abx@range@prev{-1}}}
101
          {\undef\abx@range@num
102
103
           \def\abx@range@this{0}%
           \def\abx@range@prev{-1}}}%
104
     \ifdef\abx@range@num
105
      {\ifnumequal{\abx@range@num}{\abx@range@prev}
106
107
          {\def\abx@range@hold{#1}%
           \numdef\abx@range@diff{\abx@range@diff+1}}
108
          {\usebibmacro{pageref:dump}%
109
           \ifnumgreater{\abx@range@last}{-1}
110
111
             {\printdelim{multilistdelim}}
             {}%
112
           \ifhyperref
113
114 %
               {\hyperlink{page.#1}{#1}}
             {\LWR@refwithsection{\BaseJobname-autopage-#1}}% lwarp
115
             {#1}}%
116
        \edef\abx@range@prev{\abx@range@num}}
117
118
       {\usebibmacro{pageref:dump}%
        \ifnumgreater{\abx@range@last}{-1}
119
          {\printdelim{multilistdelim}}
120
121
          {}%
        122
123 %
            {\hyperlink{page.#1}{#1}}
124
          {\LWR@refwithsection{\BaseJobname-autopage-#1}}% lwarp
        \def\abx@range@prev{-1}}%
126
127
    \edef\abx@range@last{\abx@range@this}}
128
129 \expandafter\VerifyCommand\expandafter{\csname abx@macro@pageref:dump\endcsname}
      {9BD1165E771053A5DA8957BE4E2E7B9E}
130
```

```
131
132 \renewbibmacro*{pageref:dump}{%
         \ifnumgreater{\abx@range@diff}{0}
              {\ifcase\abx@pagerefstyle\relax % two
                    \bibrangedash
135
136
                    \ifhyperref
                            {\hyperlink{page.\abx@range@hold}{\abx@range@hold}}
137 %
                     {\tt \LWR@refwithsection{\tt \BaseJobname-autopage-\abx@range@hold}} \\ {\tt \Lwarp}
138
                        {\absellet} {\absellet} {\absellet}
139
                \or % three
140
                    \ifnumless{\abx@range@diff}{2}
141
                        {\printdelim{multilistdelim}}
142
                        {\bibrangedash}%
143
                    \ifhyperref
144
145~\%
                            {\hyperlink{page.\abx@range@hold}{\abx@range@hold}}
                     {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% lwarp
147
                        {\abx@range@hold}%
                \or % two+
148
                    \ifnumless{\abx@range@diff}{2}
149
                        {\sqspace
150
                          \ifhyperref
151
                                  {\hyperlink{page.\abx@range@hold}{\bibstring{sequens}}}
152 %
                      {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% lwarp
153
154
                              {\bibstring{sequens}}}
                        {\bibrangedash
                          \ifhyperref
156
                                  {\hyperlink{page.\abx@range@hold}{\hyperlink{page.\abx@range@hold}}}
157 %
158
                      {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% lwarp
159
                              {\abx@range@hold}}%
                \or % three+
160
                    \ifnumless{\abx@range@diff}{2}
161
                        {\sqspace
162
                          \ifhyperref
163
                                   {\hyperlink{page.\abx@range@hold}{\bibstring{sequens}}}
164 %
                      {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% lwarp
165
                              {\bibstring{sequens}}}
                        {\ifnumless{\abx@range@diff}{3}
168
                              {\sqspace
                                 \ifhyperref
169
                                         {\hyperlink{page.\abx@range@hold}{\bibstring{sequentes}}}
170 %
                          {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% lwarp
171
                                    {\bibstring{sequentes}}}
172
                              {\bibrangedash
173
                                 \ifhyperref
174
                                         {\hyperlink{page.\abx@range@hold}{\abx@range@hold}}
175 %
                          {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% lwarp
176
                                    {\abx@range@hold}}}%
                \else % all+
178
                    \ifnumless{\abx@range@diff}{2}
179
180
                        {\sqspace
                          \ifhyperref
181
                                  {\hyperlink{page.\abx@range@hold}{\bibstring{sequens}}}
182 %
                      {\lower-autopage-\abx@range@hold}} % lwarp {\lower-autopage-\abx@r
183
184
                              {\bibstring{sequens}}}
185
                        {\sqspace
                          \ifhyperref
186
                                  {\hyperlink{page.\abx@range@hold}{\bibstring{sequentes}}}
187 %
                      {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% lwarp
188
189
                              {\bibstring{sequentes}}}%
                \fi
190
```

File 47 lwarp-bibunits.sty

§ 156 Package

bibunits

(Emulates or patches code by Thorsten Hansen.)

bibunits (*Pkg*) bibunits is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{bibunits}[2004/05/12]

2 \def\bu@bibdata{\BaseJobname}

File 48 lwarp-bigdelim.sty

§ 157 Package

Package bigdelim

(Emulates or patches code by Piet van Oostrum, Øystein Bache, Jerry Leichter.)

bigdelim (Pkg) bigdelim is used as-is for print or lateximage, and patched for HTML.

The delimiters are displayed in HTML by printing the delimiter, the text, and a thick border across the side of the \multirow which indicates the actual height of the delimiter. The delimiter character is given a class of ldelim or rdelim, and the default css sets this to font-size: 200%

\ldelim and \rdelim use \multirow, so \mrowcell must be used in the proper number of empty cells in the same column below \ldelim or \rdelim, but not in cells which are above or below the delimiter:

```
\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\{}{3}{.25in}[left ] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}
<-> a b

left { e f
    g h
    <-> i j
```

For MathJax, limited emulation is provided which merely prints the delimter and optional text in the first row.

for HTML output:

First, remove the temporary definitions of \ldelim and \rdelim, which were previously defined for tabular scanning in case bigdelim was not loaded:

```
1 \let\ldelim\relax
2 \let\rdelim\relax
```

Next, load the package's new definitions:

```
3 \LWR@ProvidesPackagePass{bigdelim}[2021/03/15]
```

Limited emulation for MATHJAX. The delimiter is printed on the first row, along with any optional text.

```
17 \begin{warpMathJax}
18 % \ldelim ( {n}{width}[text]
19 \CustomizeMathJax{\newcommand{\LWRldelimtwo}[1][]{\text{#1}~\LWRbigdelim}}
20 \CustomizeMathJax{\newcommand{\LWRldelimone}[2][]{\LWRldelimtwo}}
21 \CustomizeMathJax{\def\ldelim#1#2{\def\LWRbigdelim{#1}\LWRldelimone}}
22 % \rdelim ) {n}{width}[text]
23 \CustomizeMathJax{\newcommand{\LWRrdelimtwo}[1][]{\LWRbigdelim~\text{#1}}}}
24 \CustomizeMathJax{\newcommand{\LWRrdelimtone}[2][]{\LWRrdelimtwo}}
25 \CustomizeMathJax{\def\rdelim#1#2{\def\LWRbigdelim{#1}\LWRrdelimone}}
26 \end{\warpMathJax}
```

File 49 lwarp-bigfoot.sty

```
§ 158 Package bigfoot
```

bigfoot (Pkg) bigfoot is emulated.

14 } 15

16 \LWR@formatted{rdelim}

```
for HTML output: 1 \LWR@ProvidesPackageDrop{bigfoot}[2015/08/30]

2 \RequirePackage{manyfoot}
3 \RequirePackage{perpage}
4
5 \def\RestyleFootnote#1#2{}
6 \def\FootnoteSpecific#1{}
7 \def\DefineFootnoteStack#1{}
8 \def\PushFootnoteMark#1{}
```

9 \def\PopFootnoteMark#1{}

```
10 \def\hfootfraction{0.9}
11 \def\vtypefraction{0.7}
12 \def\FootnoteMinimum{1sp}
13 \def\FootnoteMainMinimum{0pt}
14 \newcount\bigfoottolerance
15 \bigfoottolerance=100
16 \providecommand\footnotecarryratio{2}
```

File 50 lwarp-bigstrut.sty

§ 159 Package bigstrut

(Emulates or patches code by Piet van Oostrum, Øystein Bache, Jerry Leichter.)

bigstrut (*Pkg*) bigstrut is used as-is for print or lateximage, and patched for HTML.

```
for HTML output: 1 \LWR@ProvidesPackagePass{bigstrut}[2018/08/03]

2 \LetLtxMacro\LWR@origbigstrut\bigstrut
3
4 \renewcommand\bigstrut[1][x]{}
5
6 \appto\LWR@restoreorigformatting{%
7 \LetLtxMacro\bigstrut\LWR@origbigstrut%
8 }
9

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\bigstrut}[1][]{}}
12 \end{warpMathJax}
```

File 51 lwarp-bitpattern.sty

§ 160 Package bitpattern

($Emulates\ or\ patches\ code\ by\ Jean-Marc\ Bourguet.$)

bitpattern (Pkg) bitpattern is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{bitpattern}[2015/12/11]
2 \VerifyCommand[lwarp][bitpattern]{\bitpattern}{379A39416C9C5E48DBCEEF730D51C5BF}
3
```

```
3
4 \xpatchcmd{\bitpattern}
5     {\begingroup}
6     {\begin{lateximage}[-bitpattern-~\PackageDiagramAltText]}
7     {}
8     {\LWR@patcherror{bitpattern}{bitpattern}}
9
10 \VerifyCommand[lwarp][bitpattern]{\bp@Done}{4F2F6DDB41FE31051ACA3CA9F58E3395}
11
12 \xpatchcmd{\bp@Done}
13     {\endgroup}
```

```
14 {\end{lateximage}}
15 {}
16 {\LWR@patcherror{bitpattern}{bp@Done}}
```

File 52 lwarp-blowup.sty

§ 161 Package blowup

blowup (Pkg) blowup is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]

2 \newcommand*\blowUp[1]{}

File 53 lwarp-bm.sty

§ 162 Package **bm**

(Emulates or patches code by David Carlisle, Frank Mittelbach.)

bm(Pkg) bm is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{bm}[2019/07/24]

\DeclareBoldMathCommand must only be used in the preamble, since it adds to the MathJax setup code.

```
2 \begin{warpMathJax}
3 \LetLtxMacro\LWR@orig@DeclareBoldMathCommand\DeclareBoldMathCommand
4
5 \renewcommand\DeclareBoldMathCommand[3][bold]{%
6 \LWR@orig@DeclareBoldMathCommand[#1]{#2}{#3}%
7 \CustomizeMathJax{\newcommand{#2}{\boldsymbol{#3}}}%
8 }
9
10 \@onlypreamble\DeclareBoldMathCommand
11
12 \CustomizeMathJax{\newcommand{\bm}[1]{\boldsymbol{#1}}}
13 \end{warpMathJax}
```

File 54 lwarp-booklet.sty

§ 163 Package booklet

(Emulates or patches code by Peter Wilson.)

booklet (Pkg) booklet is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{booklet}[2009/09/02]

```
2 \newdimen\pageseplength
3 \newdimen\pagesepwidth
4 \newdimen\pagesepoffset
5 \newif\ifsidebyside
                          \sidebysidetrue
6 \newif\ifuselandscape \uselandscapefalse
7 \newif\ifprintoption
                          \printoptionfalse
8 \newcommand*{\pagespersignature}[1]{}
9 \def\magstepminus#1{}
10 \newcommand*{\target}[3]{}
11 \newcommand*{\source}[3]{}
12 \newcommand*{\setpdftargetpages}{}
13 \newcommand*{\setdvipstargetpages}{}
14 \newcommand*{\targettopbottom}{}
15 \newcommand*{\twoupemptypage}{}
16 \newcommand*{\twoupclearpage}{}
17 \newcommand*{\checkforlandscape}{}
```

File 55 lwarp-bookmark.sty

§ 164 Package bookmark

(Emulates or patches code by Heiko Oberdiek.)

bookmark (Pkg) bookmark is ignored.

for HTML output: Discard all options for lwarp-bookmark:

1 \LWR@ProvidesPackageDrop{bookmark}[2016/05/17]

2 \newcommand*{\bookmarksetup}[1]{}

3 \newcommand*{\bookmarksetupnext}[1]{}

4 \newcommand*{\bookmark}[2][]{}

5 \newcommand*{\bookmarkdefinestyle}[2]{}

6 \newcommand*{\bookmarkget}[1]{}

7 \newcommand{\BookmarkAtEnd}[1]{}

File 56 lwarp-booktabs.sty

§ 165 Package booktabs

for HTML output:

(Emulates or patches code by Simon Fear.)

booktabs (*Pkg*) booktabs is emulated during HTML output, and used as-is during print output and inside an HTML lateximage.

removed before loading the actual booktabs definitions.

\tag{Cmidrule} For MathJax, emulation is provided in math mode, but \cmidrule trim must not be used.

If booktabs has already been loaded before lwarp, such as by memoir, use it as-is. If not, the lwarp core will have placed some dummy macros which should be

1 \IfPackageLoadedTF{booktabs}{}{

- 2 \LetLtxMacro\toprule\relax
- 3 \LetLtxMacro\midrule\relax

```
\LetLtxMacro\cmidrule\cline
4
      \LetLtxMacro\bottomrule\relax
5
      \LetLtxMacro\addlinespace\relax
      \LetLtxMacro\morecmidrules\relax
8
      \LetLtxMacro\specialrule\relax
9 }
Next, load the booktabs package:
10 \LWR@ProvidesPackagePass{booktabs}[2019/10/08]
Adjust to work even if xltabular is loaded:
11 % \def\LWR@HTML@@BLTrule{\@BTnormal}
12 %
13 % \LWR@formatted{@BLTrule}
14 \LetLtxMacro\@BLTrule\@BTnormal
15 \DeclareDocumentCommand{\LWR@HTML@toprule}{o d()}%
16
      {%
17
          \IfValueTF{#1}%
               {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
18
19
                   \ifbool{FormatWP}%
20
                   {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
21
                       {\booltrue{LWR@doingtbrule}}%
22
               }%
23
      \LWR@getmynexttoken}
24
25
26 \LWR@expandableformatted{toprule}
28 \DeclareDocumentCommand{\LWR@HTML@midrule}{o d()}%
29
          \IfValueTF{#1}%
30
               {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
31
32
               {%
                   \ifbool{FormatWP}%
33
                   {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
34
                       {\defaddtocounter{LWR@hlines}{1}}%
35
36
               }%
      \LWR@getmynexttoken}
37
39 \LWR@expandableformatted{midrule}
{\tt 41 \backslash Declare Document Command \{\backslash LWR@HTML@cmidrule\} \{0\{\backslash LWR@cmidrulewidth\}\ d()\ m\} \{\%\} \}}
      \LWR@docmidrule[#1](#2){#3}%
42
      \LWR@getmynexttoken%
43
44 }%
45
46 \LWR@expandableformatted{cmidrule}
48 \DeclareDocumentCommand{\LWR@HTML@bottomrule}{o d()}{%
      \IfValueTF{#1}%
          {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
50
51
          {%
               \ifbool{FormatWP}%
52
                   {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
53
                   {\booltrue{LWR@doingtbrule}}%
54
```

55

}%

```
56
                     \LWR@getmynexttoken%
                57 }%
                59 \LWR@expandableformatted{bottomrule}
                63 \LWR@expandableformatted{addlinespace}
                65 \DeclareDocumentCommand{\LWR@HTML@morecmidrules}{}{}%
                67 \LWR@expandableformatted{morecmidrules}
                69 \DeclareDocumentCommand{\LWR@HTML@specialrule}{m m m d()}%
                    {\LWR@docmidrule[#1]()_{1-\arabic}LWR@tabletotalLaTeXcols}}\LWR@getmynexttoken}
                72 \LWR@expandableformatted{specialrule}
                For MATHJAX:
                73 \begin{warpMathJax}
                74 \CustomizeMathJax{\newcommand{\toprule}[1][]{\hline}}
                75 \CustomizeMathJax{\let\midrule\toprule}
                76 \CustomizeMathJax{\let\bottomrule\toprule}
                77 \CustomizeMathJax{\def\LWRbooktabscmidruleparen(#1)#2{}}
                78 \CustomizeMathJax{\newcommand{\LWRbooktabscmidrulenoparen}[1]{}}
                79 \CustomizeMathJax{\newcommand{\cmidrule}[1][]{%
                     81 }}
                82 \CustomizeMathJax{\newcommand{\morecmidrules}{}}
                83 \CustomizeMathJax{\newcommand{\specialrule}[3]{\hline}}
                84 \CustomizeMathJax{\newcommand{\addlinespace}[1][]{}}
                85 \end{warpMathJax}
         File 57 lwarp-bophook.sty
       Package bophook
   bophook (Pkg) bophook is ignored.
for HTML output:
                1 \LWR@ProvidesPackageDrop{bophook}[2001/03/29]
                2 \newcommand*{\AtBeginPage}[1]{}
                3 \newcommand*{\PageLayout}[1]{}
         File 58 lwarp-bounddvi.sty
       Package bounddvi
  bounddvi (Pkg) bounddvi is ignored.
for HTML output:
                1 \LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]
```

§ 166

§ 167

File 59 lwarp-boxedminipage.sty

§ 168 Package boxedminipage

(Emulates or patches code by Scott Pakin.)

boxedminipage (Pkg) boxedminipage is emulated for HTML, and used as-is for lateximages.

for HTML output: 1 \LWR@ProvidesPackagePass{boxedminipage}[2020/04/19]

```
2 \newenvironment{LWR@HTML@boxedminipage}{%
```

```
3 \LWR@stoppars%
```

- 4 \begin{BlockClass}{framebox}%
- 5 \minipage%

6 }

7 {%

- 8 \endminipage%
- 9 \end{BlockClass}%
- 10 \LWR@startpars%

11 }

12 \LWR@formattedenv{boxedminipage}

File 60 lwarp-boxedminipage2e.sty

§ 169 Package boxedminipage 2e

(Emulates or patches code by Scott Pakin.)

boxedminipage2e (Pkg) boxedminipage2e has been renamed boxedminipage by the author.

for HTML output: Automatically loads boxedminipage:

1 \LWR@ProvidesPackagePass{boxedminipage2e}

File 61 lwarp-braket.sty

§170 Package braket

(Emulates or patches code by Donald Arseneau.)

braket (*Pkg*) braket works as-is for HTML with svG math. For MATHJAX, the MATHJAX extension

is used.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \times \mathbb{R}^{0} \end{tabular} & 1 \times \mathbb{R}^{0} \end{tabular} \begin{tabular}{ll} \textbf{file.} \end{tabular}$

```
{\tt 2 \backslash begin\{warpMathJax\}}
```

- 3 \CustomizeMathJax{\require{braket}}
- 4 \end{warpMathJax}

File 62 lwarp-breakurl.sty

§171 Package breakurl

(Emulates or patches code by Vilar Camara Neto.)

breakurl (Pkg) breakurl is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{breakurl}[2013/04/10]

```
2 \LetLtxMacro\burl\LWR@url
3
4 \NewDocumentCommand{\LWR@burlaltb}{0{} +m m}{%
5 \LWR@ensuredoingapar%
6 \LWR@subhyperref{#2}%
```

If use $\LWR@subhyperreftext@sanitized$ here, some forms of text may not expand correctly, and thus break.

```
7  \LWR@subhyperreftext@unsanitized{#3}%
8  \endgroup% restore catcodes
9 }
10
11 \newrobustcmd*{\burlalt}{%
12  \begingroup%
13  \LWR@linkcatcodes%
14  \LWR@burlaltb%
15 }
16
17 \LetLtxMacro\urlalt\burlalt
```

File 63 lwarp-breqn.sty

§ 172 Package breqn

(Emulates or patches code by Michael J. Downes, Morten Høgholm.)

\begin{BlockClass}{displaymathnumbered}

breqn (*Pkg*) breqn is patched for use by lwarp.

darray darray is not supported, and in fact does not work in the print version either.

While using MathJax, breqn objects are converted to svg images.

```
for HTML output: 1 \LWR@ProvidesPackagePass{breqn}[2017/01/27]

2 \setkeys{breqn}{spread={5pt}}

3
4 \def\eqnumside{R}
5% \def\eqnumplace{T}
6
7 \BeforeBeginEnvironment{dmath}{
```

```
9
      \LWR@newautoidanchor%
      \booltrue{LWR@indisplaymathimage}%
10
      \begin{lateximage}[-breqn dmath- \MathImageAltText]
11
12 }
14 \AfterEndEnvironment{dmath}{
      \end{lateximage}\end{BlockClass}
15
16 }
17
18 \BeforeBeginEnvironment{dmath*}{
      \begin{BlockClass}{displaymath}
19
20
      \LWR@newautoidanchor%
21
      \booltrue{LWR@indisplaymathimage}%
22
      \begin{lateximage}[-breqn dmath*- \MathImageAltText]
23 }
25 \AfterEndEnvironment{dmath*}{
      \end{lateximage}\end{BlockClass}
27 }
28
29 \BeforeBeginEnvironment{dseries}{
      \begin{BlockClass}{displaymathnumbered}
30
      \LWR@newautoidanchor%
31
      \booltrue{LWR@indisplaymathimage}%
32
33
      \begin{lateximage}[-breqn dseries- \MathImageAltText]
34 }
35
36 \AfterEndEnvironment{dseries}{
      \end{lateximage}\end{BlockClass}
37
38 }
39
40 \BeforeBeginEnvironment{dseries*}{
      \begin{BlockClass}{displaymath}
41
42
      \LWR@newautoidanchor%
43
      \booltrue{LWR@indisplaymathimage}%
      \begin{lateximage}[-breqn dseries*- \MathImageAltText]
44
45 }
46
47 \AfterEndEnvironment{dseries*}{
      \end{lateximage}\end{BlockClass}
48
49 }
50
51 \BeforeBeginEnvironment{dgroup}{
      \begin{BlockClass}{displaymath}
      \LWR@newautoidanchor%
53
54
      \booltrue{LWR@indisplaymathimage}%
55
      \begin{lateximage}[-breqn dgroup- \MathImageAltText]
56 }
57
58 \AfterEndEnvironment{dgroup}{
      \end{lateximage}\end{BlockClass}
59
60 }
61
62 \BeforeBeginEnvironment{dgroup*}{
      \begin{BlockClass}{displaymath}
      \LWR@newautoidanchor%
65
      \booltrue{LWR@indisplaymathimage}%
      \begin{lateximage}[-breqn dgroup*- \MathImageAltText]
66
67 }
68
```

```
69 \AfterEndEnvironment{dgroup*}{
70 \end{lateximage}\end{BlockClass}
71 }
```

File 64 lwarp-bsheaders.sty

§ 173 Package bsheaders

bsheaders (*Pkg*) bsheaders is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

File 65 lwarp-bussproofs.sty

§ 174 Package bussproofs

(Emulates or patches code by Samuel R. Buss.)

bussproofs (Pkg) bussproofs is used as-is for HTML, and emulated by MATHJAX's extension.

If not using MathJax, inline proofs with \DisplayMath must be placed inside a math expression.

If using MathJax, only the prooftree environment may be used, not \DisplayProof.

for HTML output: 1 \LWR@ProvidesPackagePass{bussproofs}% no date in file

```
2 \ifbool{mathjax}{
      \CustomizeMathJax{\require{bussproofs}}
      \NewEnviron{LWR@HTML@prooftree}%
5
6
          {%
              \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
              \LWR@doequation{\BODY}{prooftree}%
8
9
          [\LWR@doendequation{prooftree}]
10
      \LWR@formattedenv{prooftree}
11
12 }{% SVG HTML
13
      \BeforeBeginEnvironment{prooftree}{%
          \begin{lateximage}[-bussproofs-~\PackageDiagramAltText]%
14
15
      \AfterEndEnvironment{prooftree}{\end{lateximage}}
16
17 }
```

File 66 lwarp-bxpapersize.sty

§ 175 Package bxpapersize

bxpapersize (*Pkg*) bxpapersize is ignored.

 $\label{local_continuity} \textbf{for HTML output:} \qquad 1 \texttt{\LWR@ProvidesPackageDrop\{bxpapersize\}[2017/10/08]}$

```
2\providecommand*\papersizesetup{\bxpapersizesetup}
                 3 \newcommand*\bxpapersizesetup[1]{}
        File 67 lwarp-bytefield.sty
       Package bytefield
                 (Emulates or patches code by Scott Pakin.)
bytefield (Pkg)
                 bytefield is patched for use by lwarp.
                 1 \LWR@ProvidesPackagePass{bytefield}[2017/09/15]
                 2 \BeforeBeginEnvironment{bytefield}{%
                       \begin{lateximage}[-bytefield-~\PackageDiagramAltText]%
                 4 }
                 6 \AfterEndEnvironment{bytefield}{\end{lateximage}}
        File 68 lwarp-cancel.sty
       Package cancel
   cancel (Pkg) cancel is used as-is for svg math, and emulated for HTML text output.
                 1 \LWR@origRequirePackage{lwarp-xcolor}% for \convertcolorspec
                 2 \LWR@ProvidesPackagePass{cancel}[2013/04/12]
                  \cancelto is math-only, so is used as-is.
                   \{\langle text \rangle\} \{\langle color \rangle\} \{\langle class \rangle\} \{\langle colorstyle \rangle\} \{\langle FormatWPstyle \rangle\}
                 Add colors if not empty:
                 3 \newcommand{\LWR@cancelcolor}[5]{%
                 4 \ifcsempty{#2}%
                 5{\InlineClass(#5){#3}{#1}}%
                 6 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}%
                 7 }
                   \{\langle text \rangle\}
                 8 \DeclareRobustCommand{\LWR@HTML@cancel}[1]{%
                 9 \begingroup%
                 10 \CancelColor%
                 11 \LWR@findcurrenttextcolor%
                 12 \color{black}%
                 13 \LWR@cancelcolor{#1}{LWR@tempcolor}{sout}{text-decoration-color}%
                       {text-decoration:line-through}%
                 14
                 15 \endgroup%
                 16 }
                 17 \LWR@formatted{cancel}%
```

19 \LetLtxMacro\bcancel\cancel 20 \LetLtxMacro\xcancel\cancel

§ 176

§ 177

\LWR@cancelcolor

\cancel

for HTML output:

for HTML output:

For MATHJAX: 21 \begin{warpMathJax} 22 \PackageNoteNoLine{lwarp, cancel}{The MathJax v3 extension will be used} 23 \CustomizeMathJax{\require{cancel}} 24 \end{warpMathJax} File 69 lwarp-canoniclayout.sty Package canoniclayout § 178 canoniclayout (Pkg)canoniclayout is ignored. &\LWR@ProvidesPackageDrop{canoniclayout}[2011/11/05] for HTML output: 2 \newcommand*{\currentfontletters}{} 3 \newcommand*{\charactersperpage}{} File 70 lwarp-caption.sty Package caption §179 (Emulates or patches code by AXEL SOMMERFELDT.) caption (*Pkg*) caption is patched for use by lwarp. for HTML output: 1 \typeout{---} 2\typeout{Packages lwarp and caption:} $\verb| 3 typeout{If a ``Missing \protect\begin\protect{document\protect}'' error occurs here,}| \\$ 4 \typeout{try using: \space \protect\usepackage\protect{caption\protect}\space% \protect\captionsetup{options}} 6\typeout{instead of: \protect\usepackage[options]\protect{caption\protect}.} 7 \typeout{---} 9 \LWR@ProvidesPackagePass{caption}[2023/08/05] 10 \VerifyCommand[lwarp][caption]{\caption@iibox@}{AD79C5FACDA9F8F9977188D922E8AC12} 11 12 \long\def\caption@iibox@#1#2#3#4{% \setbox\@tempboxa\hbox{#4}% 13 % 14 \caption@iiibox{#1}{#2}{#3}% 15 % [\wd\@tempboxa]% 16 lwarp 17 [\captionbox@innerpos@default]% {\unhbox\@tempboxa}% 18 % {{#4}}% lwarp 19 20 } 21 \VerifyCommand[lwarp][caption]{\caption@iiibox}{62FC9237FCA80F5A607BF02D88C61601} 23 \long\def\caption@iiiibox#1#2#3#4#5[#6][#7]#8{% \begingroup #1*% set \caption@position

\caption@iftop{%

\endgroup

26

27

```
28
                \minipagefullwidth%
                                                                                                                   lwarp
                 \parbox[t]{\linewidth}{%
29
                      #1\relax
30
31
                      \color{l} \caption@setposition t%
32 %
33
                                      {\caption#4{#5}}%
                            \captionbox@hrule
34 %
                            \csname caption@justification@#7\endcsname
35 %
                      #8%
36
                }%
37
           }{%
38
39
                \endgroup
40 %
                      \parbox[b]{#6}{%
41
                \minipagefullwidth%
                                                                                                                   lwarp
42
                 \parbox[b]{\linewidth}{%
                                                                                                                   lwarp
43
                      #1\relax
                      \caption@setposition b%
44
45 %
                            \csname caption@justification@#7\endcsname
46
47 %
                            \captionbox@hrule
48 %
49
                                       {\caption#4{#5}}%
50
                }%
51
           }%
52 }
53 \VerifyCommand[lwarp][caption]{\caption@makecaption}{9E0A92DF71E248B2C7A3B4BB5190A2C5}
54
55 \long\def\caption@makecaption#1#2{%
                \caption@make@above
         \caption@@make{#1}{#2}%
58 %
                \caption@make@below
59 }
60
61 \AtBeginDocument{
                \let\@makecaption\caption@makecaption
62
63 }
  Appended to look ahead to the next token for \centering, etc:
64 \AtBeginDocument{
65 \xapptocmd{\@xfloat}
                {\LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment}
66
67
                {\LWR@patcherror{caption}{@xfloat}}
68
69
70 \xapptocmd{\@xdblfloat}
                {\LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment}
71
72
                {\LWR@patcherror{caption}{@xdblfloat}}
73
74 }
75 \end{C72} \label{lem:caption} $$ \end{C7253081E4F8EA695FF193E21855AA0A} $$ \end{C7253081E455AA0A} $$ \end{C7253081E455AA0A} $$ \end{C7253081E455AA0A} $
77 \long\def\caption@@text#1#2#3[#4]#5{%
```

lwarp

\begin{BlockClass}{figurecaption}%

\caption@makecaption

```
79
                   \begingroup
                     #3{\csname c@#1\endcsname #4\relax}%
               80
                     #2{\caption@fnum{#1}}{#5}%
               82
                   \endgroup%
               83
                     \end{BlockClass}%
                                                                lwarp
               84 }
               Updates for late patches for scrextend:
               85 \caption@AtBeginDocument{
               86 \IfPackageLoadedTF{lwarp-scrextend}{
                     \LetLtxMacro\captionbelow\caption
                     \LetLtxMacro\captionabove\caption
               89
                     \LetLtxMacro\captionofbelow\captionof
               90
                     \LetLtxMacro\captionofabove\captionof
               91 }{}
               92 }
       File 71 lwarp-caption3.sty
     Package caption3
               (Emulates or patches code by AXEL SOMMERFELDT.)
caption3 (Pkg) caption3 is patched for use by lwarp.
                1 \LWR@ProvidesPackagePass{caption3}[2023/07/31]
                 \{\langle caption \ label \rangle\} \{\langle caption \ text \rangle\}
               2 \IfPackageAtLeastTF{caption3}{2020/08/23}{
               3 %
               4 \VerifyCommand[lwarp][caption3]{\caption@@@make}{F09A9BB05CE4EDF5A477D3CC2AE04F81}
               6 \renewcommand\caption@@@make[2]{%
               7 \LWR@traceinfo{caption@@@make}%
               8
                     \LWR@stoppars%
                                                                    lwarp
                    \ifx\caption@fmt\@undefined\caption@format\fi
                   \let\caption@lfmt\caption@labelformat
                    \global\def\caption@tempa{gobbletwo}%
               12 %
                    \global\def\caption@tempb{}%
               13 % \sbox\@tempboxa{%
               14 %
                      \let\caption@ignorespaces\ignorespaces
               15 %
                      \def\ignorespaces{%
               16 %
                         \global\def\caption@tempb{two}% "gobble" -> "gobbletwo"
               17 %
                                          % if \ignorespaces is used addtionally
               18 %
                         \caption@ignorespaces}%
               19 %
               20 %
                         {\global\let\caption@tempa\@undefined\aftergroup\@gobble}%
               21 %
                         {\global\def\caption@tempa{gobble\caption@tempb}}}%
               22 %
                    \ifdim\wd\@tempboxa=\z@
               23 %
                      \gdef\caption@tempa{none}%
                    \fi
```

§ 180

\caption@@@make

for HTML output:

24 %

25 % 26 %

\ifx\caption@tempa\@undefined \else

\@expandtwoargs\caption@set{labelseparator}{\caption@tempa}%

```
27% \fi
   \caption@ifempty{#2}{%
28
29
      \caption@set{labelseparator}{none}%
30
      \caption@set{textformat}{simple}%
31
    \caption@labelseparator % defines \caption@iflabelfont,
32
          \caption@labelsep@name
33 %
          (the latter is needed by \caption@fmt)
34 %
35 %
      \@setpar{\@@par\caption@@par}\caption@@par
36 %
    \caption@applyfont
\caption@fmt with plain format is defined as {#1#2#3\par}:
      \caption@fmt
38 %
      {\ifcaption@star\else
39
         \begingroup
40
           \captionlabelfont
41
42
           \LWR@isolate{#1}%
                                                   lwarp
         \endgroup
43
       \fi}%
44
45
      {\ifcaption@star\else
46
         \begingroup
           \caption@iflabelfont\captionlabelfont
47
           \relax\caption@labelsep
48
         \endgroup
49
50
       \fi}%
      {{\captiontextfont
51
52
          \let\\\newline%
                                                   lwarp
53 %
        \caption@textstart
54
          \caption@ifstrut
55 %
56 %
            {\vrule\@height\ht\strutbox\@width\z@}%
57 %
            {}%
          \nobreak\hskip\z@skip % enable hyphenation
58 %
        \LWR@isolate{\caption@textformat{#2}}%
59
          \caption@ifstrut
60 %
61 %
            {\ifhmode\@finalstrut\strutbox\fi}%
62 %
            {}%
        \caption@textend}}%
63
      \LWR@startpars%
                                                     lwarp
65 \LWR@traceinfo{caption@@@make done}%
66 }
67}% later than 2020/08/23
68 {% earlier than 2020/08/23
69 \renewcommand\caption@@@make[2]{%
70 \LWR@traceinfo{caption@@@make}%
71
      \LWR@stoppars%
                                                   lwarp
      \sbox\@tempboxa{#1}%
72 %
73 %
      \ifdim\wd\@tempboxa=\z@
74 %
        \let\caption@lsep\relax
      \fi
75 %
   \caption@ifempty{#2}{%
76
      \let\caption@lsep\@empty
77
      \let\caption@tfmt\@firstofone
78
   }%
79
```

```
\@setpar{\@@par\caption@@par}\caption@@par
                             \caption@applyfont
                          \caption@fmt with plain format is defined as {#1#2#3\par}:
                          82 %
                                  \caption@fmt
                               {\ifcaption@star\else
                          83
                          84
                                   \begingroup
                                   \captionlabelfont
                          85
                          86
                                    \LWR@isolate{#1}%
                                                                          lwarp
                          87
                                   \endgroup
                          88
                                \fi}%
                                {\ifcaption@star\else
                          89
                                   \begingroup
                          90
                                    \caption@iflf\captionlabelfont
                          91
                                    \relax
                          92
                          93
                                   \caption@lsep
                                  \endgroup
                          94
                                \fi}%
                          95
                          96
                               {{%
                          97
                                   \captiontextfont
                          98
                                   \let\\\newline%
                                                                          lwarp
                          99 %
                                   \caption@ifstrut
                                     {\tt \{vrule \ @height \ ht \ strutbox \ @width \ z@}\%}
                         100 %
                         101 %
                                     {}%
                                   \nobreak\hskip\z@skip % enable hyphenation
                         102 %
                                   \LWR@isolate{\caption@tfmt{#2}}%
                         103
                                                                          lwarp
                         104 %
                                   \caption@ifstrut
                         105 %
                                     {\ifhmode\@finalstrut\strutbox\fi}%
                         106 %
                                     {}%
                                 }}%
                               \LWR@startpars%
                                                                           lwarp
                         109 \LWR@traceinfo{caption@@@make done}%
                         110 }
                         111 }% earlier than 2020/08/23
                            \{\langle\rangle\}\{\langle\rangle\}
\caption@@make@
                         113 %
                         114 \renewcommand{\caption@@make@}[2]{%
                         115 \caption@stepthecounter%
                         116
                             \caption@beginhook%
                               \caption@box\hsize{%
                         117~\%
                         118 %
                                119 %
                                 \caption@calcmargin
                         120~\%
                                  \caption@make@leftmargin
                                  \caption@make@parbox{%
                         121 %
                                   \caption@make@indention
                         122 %
                                 \verb|\caption@@make{#1}{#2}||
                         123
                         124 %
                         125 %
                                 \caption@make@rightmargin
                         126 %
                               }%
                         127
                              \caption@endhook%
                         128 }
                         129 \DeclareCaptionBox{none}{#2}
                         130 \DeclareCaptionBox{parbox}{%
                         131
                               #2%
                         132 }
```

```
133 \DeclareCaptionBox{colorbox}{%
134 #2%
135 }
```

File 72 lwarp-cases.sty

§ 181 Package Cases

(Emulates or patches code by Donald Arseneau.)

cases (Pkg) cases is patched for use by lwarp.

While using MathJax, cases objects are converted to svg math images. The Math-Jax 3.2 cases package does not yet work with lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{cases}[2020/03/29]

```
2 \BeforeBeginEnvironment{numcases}{
      \begin{BlockClass}{displaymathnumbered}
      \LWR@newautoidanchor%
      \booltrue{LWR@indisplaymathimage}%
5
      \begin{lateximage}[-cases- \MathImageAltText]
6
7 }
9 \AfterEndEnvironment{numcases}{
      \end{lateximage}\end{BlockClass}
10
11 }
13 \BeforeBeginEnvironment{subnumcases}{
      \begin{BlockClass}{displaymathnumbered}
15
      \LWR@newautoidanchor%
16
      \booltrue{LWR@indisplaymathimage}%
      \begin{lateximage}[-cases- \MathImageAltText]
17
18 }
19
20 \AfterEndEnvironment{subnumcases}{
      \end{lateximage}\end{BlockClass}
21
22 }
```

File 73 lwarp-ccicons.sty

§ 182 Package CCiCONS

(Emulates or patches code by Michael Ummels.)

ccicons (Pkg) ccicons is used as svG images for HTML.

for HTML output: Discard all options for lwarp-ccicons:

1 \LWR@ProvidesPackagePass{ccicons}[2017/10/30]

```
5 \renewcommand{\ccicons@logo}{\LWR@ccicons{ccLogo}{0}}
                   6 \renewcommand{\ccicons@by}{\LWR@ccicons{ccAttribution}{1}}
                   7 \renewcommand{\ccicons@sa}{\LWR@ccicons{ccShareAlike}{2}}
                   9 \renewcommand{\ccicons@nc}{\LWR@ccicons{ccNonCommercial}{4}}
                   10 \renewcommand{\ccicons@nceu}{\LWR@ccicons{ccNonCommercialEU}{5}}
                   11 \renewcommand{\ccicons@ncjp}{\LWR@ccicons{ccNonCommercialJP}{6}}
                   13 \renewcommand{\ccicons@zero}{\LWR@ccicons{ccZero}{8}}
                   14 \renewcommand{\ccicons@sampling}{\LWR@ccicons{ccSampling}{9}}
                   15 \renewcommand{\ccicons@share}{\LWR@ccicons{ccShare}{10}}
                   16 \renewcommand{\ccicons@remix}{\LWR@ccicons{ccRemix}{11}}
                   17 \renewcommand{\ccicons@copy}{\LWR@ccicons{ccCopy}{12}}
                   18 \renewcommand{\ccicons@pdalt}{\LWR@ccicons{ccPublicDomainAlt}{13}}
            File 74 lwarp-centerlastline.sty
          Package centerlastline
centerlastline (Pkg) centerlastline is ignored.
                   1 \LWR@ProvidesPackageDrop{centerlastline}[2020/10/12]
                   2\providecommand{\centerlastline}{}
                   3 \def\endcenterlastline{\par}
            File 75 lwarp-centernot.sty
          Package centernot
                   (Emulates or patches code by Heiko Oberdiek.)
    centernot (Pkg) centernot is used as-is for svg math, and emulated for MATHJAX.
                   1 \LWR@ProvidesPackagePass{centernot}[2016/05/16]
                   2 \begin{warpMathJax}
                   3 \CustomizeMathJax{\require{centernot}}
                   4 \end{warpMathJax}
            File 76 lwarp-changebar.sty
          Package changebar
    changebar (Pkg) changebar is ignored.
                   1 \LWR@ProvidesPackageDrop{changebar}[2018/03/09]
                   2 \newcommand*{\cbstart}{}
                   3 \newcommand*{\cbend}{}
```

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§ 184

§ 185

for HTML output:

for HTML output:

for HTML output:

4\newenvironment*{\changebar}{}{}

```
5 \newcommand*{\cbdelete}{}
6 \newcommand*{\nochnagebars}{}
7 \newcommand*{\cbcolor}[1]{}
8 \newlength{\changebarwidth}
9 \newlength{\deletebarwidth}
10 \newlength{\changebarsep}
11 \newcounter{changebargrey}
```

File 77 lwarp-changelayout.sty

§ 186 Package changelayout

(Emulates or patches code by AHMED MUSA.)

changelayout (Pkg) changelayout is patched for use by lwarp.

```
\begin{tabular}{ll} \textbf{for HTML output:} & 1 \LWR@ProvidesPackagePass { change layout } [2009/10/07] \end{tabular}
```

```
2 \renewrobustcmd\cpl@backtodefaults{}
4\renewrobustcmd\cpl@checkifoddpage{%
   \cpl@oddpagefalse%
6 }
8\renewrobustcmd\changepagelayout[1]{%
   \setkeys[KV]{changelay}{#1}%
10 }
11
12 \renewrobustcmd{\changetextlayout}[1]{\changepagelayout{#1}}
13
14 \renewrobustcmd\adjustpagelayout[1]{%
   \setkeys[KV@X]{changelay}{#1}%
15
16 }
17
18 \renewrobustcmd{\adjusttextlayout}[1]{\adjustpagelayout{#1}}
20 \renewrobustcmd\adjusttextwidth[1]{%
   \setkeys[KV]{changelay}{#1}%
    \begin{BlockClass}[color:\LWR@colorstyle{named}{\cpl@textcolor}]{changelayout}
          \color{\cpl@textcolor}%
23
          \cpl@content
24
      \end{BlockClass}
25
26 }
```

File 78 lwarp-changepage.sty

§ 187 Package changepage

(Emulates or patches code by Peter Wilson.)

changepage (*Pkg*) changepage is ignored.

for HTML output: Discard all options for lwarp-changepage:

1 \LWR@ProvidesPackageDrop{changepage}[2009/10/20]

```
2 \newif\ifoddpage
3 \DeclareRobustCommand{\checkoddpage}{\oddpagetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changepage}[9]{}
6
7 \@ifundefined{adjustwidth}{
8 \newenvironment{adjustwidth}[2]{}{}
9 \newenvironment{adjustwidth*}[2]{}{}
10 }{
11 \renewenvironment{adjustwidth}[2]{}{}
12 \renewenvironment{adjustwidth*}[2]{}{}
13 }

14 \DeclareDocumentCommand{\strictpagecheck}{}{}
15 \DeclareDocumentCommand{\easypagecheck}{}{}
```

File 79 lwarp-changes.sty

§ 188 Package changes

(Emulates or patches code by Ekkart Kleinod.)

changes (Pkg) changes is patched for use by lwarp.

♠ \comment

Use commandnameprefix=ifneeded to avoid a conflict with the \comment command when using lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{changes}[2021/07/15]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
2\renewcommand{\ChangesListline}[4]{%
      \IfIsInList{#1}{\Changes@loc@show}{%
4
          \LWR@startpars%
5
          #2: #3 \qquad
6
          \nameref{\BaseJobname-autopage-#4}%
7
          \LWR@stoppars%
8
      }{}%
9 }
10
11 \VerifyCommand[lwarp][changes]{\listofchanges}{CDE77F21854A8C807FDF2CF756286B55}
13 \renewcommand{\listofchanges}[1][\@empty]{%
14 \setkeys{Changes@loc}{#1}%
15 \ifbool{Changes@optiondraft}%
17 \IfIsInList{\Changes@loc@style}{list|summary|compactsummary}%
18 { }%
19 { %
20 \PackageWarning{changes}{Wrong style for list of changes:%
      '\Changes@loc@style', using 'list' instead.}%
22 \def\Changes@loc@style{}%
24 \IfIsEmpty{\Changes@loc@style}%
25 {\def\Changes@loc@style{list}}%
26 { }%
```

```
27 \IfStrEq{\Changes@loc@show}{all}%
28 {\def\Changes@loc@show{added|deleted|replaced|highlight|comment}}%
{\tt 30 \ lisinList{\ Changes@loc@show}{added|deleted|replaced|highlight|comment}}{\tt \%}
31 { }%
32 {%
33 \PackageWarning{changes}{Wrong show-value for list of changes: '\Changes@loc@show', using 'all' instead
34 \def\Changes@loc@show{}%
35 }%
36 \IfIsEmpty{\Changes@loc@show}%
{\tt 37 \{\def\Changes@loc@show{added|deleted|replaced|highlight|comment}\}\%}
38 { }%
39 \IfIsEmpty{\Changes@loc@title}%
40 {%
41 \IfStrEq{\Changes@loc@style}{list}%
42 {\def\Changes@heading{\listofchangesname}}{}%
43 \IfStrEq{\Changes@loc@style}{summary}%
44 {\def\Changes@heading{\summaryofchangesname}}{}%
45 \IfStrEq{\Changes@loc@style}{compactsummary}%
46 {\def\Changes@heading{\compactsummaryofchangesname}}{}%
48 {\def\Changes@heading{\Changes@loc@title}}%
49 \section*{\Changes@heading}
50 \IfIsInList{\Changes@loc@style}{list}%
51 {%
52 \IfFileExists{\jobname.\Changes@locextension}%
53 {%
54 \newread\Changes@InFile%
55 \openin\Changes@InFile=\jobname.\Changes@locextension%
56 \loop\unless\ifeof\Changes@InFile%
57\read\Changes@InFile to \Changes@Line%
58 \ifeof\Changes@InFile\else%
59 \Changes@Line%
60\fi
61 \repeat
62 \closein\Changes@InFile%
63 }{%
64 \emph{\changesnoloc}%
65 \PackageWarning{changes}{LaTeX rerun needed for list of changes}%
66 }%
67 }{}%
68 \IfIsInList{\Changes@loc@style}{summary|compactsummary}%
69 {%
70 \IfFileExists{\jobname.\Changes@socextension}%
72 \newread\Changes@InFile%
73 \openin\Changes@InFile = \jobname.\Changes@socextension%
74 \loop\unless\ifeof\Changes@InFile%
75 \read\Changes@InFile to \Changes@Line%
76\ifeof\Changes@InFile\else%
77 \expandafter\changes@chopline\Changes@Line\\%
78 \textbf{%
79 \IfIsColored%
80 {\color{\Changes@Incolor}}%
82 \IfIsAnonymous{\Changes@Inid}%
83 {%
84
      \LWR@textcurrentcolor{%
          \changesauthorname: \changesanonymousname%
85
      }% lwarp
86
```

```
87 }%
88 {%
       \LWR@textcurrentcolor{%
                                    lwarp
90 \changesauthorname: \Changes@Inid%
      }% lwarp
92 \IfIsEmpty{\Changes@Inname}%
93 { }%
94 { %
       \LWR@textcurrentcolor{%
95
                                    lwarp
96 (\Changes@Inname)%
97
      }% lwarp
98 }%
99 }%
100 }\\%
101 \numdef{\Changes@InSum}{0}%
102 \renewcommand*{\do}[1]{%
103 \numdef{\Changes@InSum}{\Changes@InSum + \csuse{Changes@In#######1}}%
104 }%
105 \expandafter\dopsvlist\expandafter{\Changes@loc@show}%
106 \ifnumcomp{\Changes@InSum}{=}{0}%
108% \parbox{\Changes@summary@width}{% lwarp
      \changesnochanges%
109
110 % }%
           lwarp
111 % \\[1ex]%
                 lwarp
112
      \par% \lwarp
113 }%
114 {%
115 \numdef{\Changes@InCount}{0}%
116 \renewcommand*{\do}[1]{%
117 \numdef{\Changes@InCount}{\Changes@InCount + \csuse{Changes@In######1}}%
118 \ifboolexpr{%
119 not test {\IfStrEq{\Changes@loc@style}{compactsummary}} or%
120 test {\ifnumgreater{\csuse{Changes@In#######1}}{0}}%
121 }%
122 {%
123 % \parbox{\Changes@summary@width}{% lwarp
124 \csuse{changes######1name}~%
125% \let\cleaders\leaders\dotfill~% lwarp
126 \dotfill~% \lwarp
127 \csuse{Changes@In######1}%
128 % }%
           lwarp
129% \ifnumless{\Changes@InCount}{\Changes@InSum}%
                                                         lwarp
130 { \ \ }%
131 % {\\[1ex]}%
                   lwarp
132 }%
133 { }%
135 \expandafter\dopsvlist\expandafter{\Changes@loc@show}%
136
       \par% lwarp
137 }%
138 \fi%
139 \repeat
140 \closein\Changes@InFile%
141 }{%
142 \emph{\changesnosoc}%
143 \PackageWarning{changes}{LaTeX rerun needed for summary of changes}%
144 }%
145 }{}%
146 }{}%
```

```
147 }
149 \ Verify Command [lwarp] [changes] \ (Changes@Markup@comment) \ \{23057A40141C9D1A0A173DCF1BD5DE55\} \ (Changes@Markup@comment) \ \{23057A40141C9D1A0A173DCF1BD5DE55\} \ (Changes@Markup@comment) \ \{23057A40141C9D1A0A173DCF1BD5DE55\} \ (Changes@Markup@comment) \ \{23057A40141C9D1A0A173DCF1BD5DE55\} \ (Changes@Markup@comment) \ (Changes@Markup@com
151 \renewcommand{\Changes@Markup@comment}[3]{%
152 \IfStrEq{\Changes@optioncommentmarkup}{todo}%
153 {%
154 \IfIsColored%
155 {\colorlet{Changes@todocolor}{authorcolor}}%
156 {\colorlet{Changes@todocolor}{black}}%
157 \todo[color=Changes@todocolor!10, bordercolor=Changes@todocolor, linecolor=Changes@todocolor!70, nol:
158 }{}%
159 \IfStrEq{\Changes@optioncommentmarkup}{margin}%
160 {%
161 \marginpar{%
162 \IfIsColored%
163 {\leavevmode\color{authorcolor}}%
164 { }%
               \LWR@textcurrentcolor{%
                                                                                lwarp
166 \text{$166 $$ \text{Changes@commentCount#2}}:} #1\%
               }% lwarp
167
168 }%
169 }{}%
170 \IfStrEq{\Changes@optioncommentmarkup}{footnote}%
171 {%
172 \footnote{%
               \LWR@textcurrentcolor{%
                                                                                 lwarp
174\textbf{[\IfIsAnonymous{#2}{}{#3~}\arabic{Changes@commentCount#2}]:} #1%
175
               }% lwarp
176 }%
177 }{ }%
178 \IfStrEq{\Changes@optioncommentmarkup}{uwave}%
179 {%
180 {%
181 \IfIsColored%
182 {\color{authorcolor}}%
183 { }%
184 \allowbreak%
185 \uwave{%
187 }%
188 }%
189 }{ }%
190 }
192 \VerifyCommand[lwarp][changes]{\Changes@output}{BD1ACDECB4BBA2D9181885F9EDC87F77}
194 \renewrobustcmd{\Changes@output}[7]{%
195 \ifbool{Changes@optiondraft}%
196 {%
197 \Changes@check@author{#2}%
198 \Changes@set@color{#2}%
199 {%
200 \IfIsInList{#1}{added|deleted|replaced|highlight}%
201 {%
202 \IfIsEmpty{#5}%
203 {%
204 \IfIsAuthorEmptyAtPosition{#2}{left}%
205 {}%
206 { { %
```

```
207 \IfIsColored%
208 {\color{authorcolor}}%
209 { }%
                  \LWR@textcurrentcolor{%
                                                                                         lwarp
211 \Changes@Markup@author{\Changes@output@author@position{#2}{left}}%
                  }% lwarp
213 }}%
214 }{}%
215 {%
216 \IfStrEq{#1}{highlight}%
217 { }{%
218 \IfIsColored%
219 {\color{authorcolor}}%
221 }%
222
                  \LWR@textcurrentcolor{%
223 \IfStrEq{#1}{added}{\Changes@Markup@added{#3}}{}%
224 \IfStrEq{#1}{deleted}{\Changes@Markup@deleted{#4}}{}%
225 \ LfStrEq{\#1}{replaced}{{\Changes@Markup@added{\#3}}}\ allowbreak\Changes@Markup@deleted{\#4}}{}% allowbreak\Changes@Markup@deleted{\#4}}% allowbreak\Changes@Markup@deleted{\#4}}% allowbreak\Changes@Markup@deleted{\#4}}% allowbreak\Changes@Markup@deleted{\#4}}% allowbreak\Changes@Markup@deleted{\#4}% allowbreak\Changes@Mark
226 \footnote{1}{highlight}{\Changes@Markup@highlight{#3}}{}\%
                 }% lwarp
228 }%
229 \IfIsEmpty{#5}%
231 \IfIsAuthorEmptyAtPosition{#2}{right}%
232 { }%
233 {{%
234 \IfIsColored%
235 {\color{authorcolor}}%
236 {}%
                  \LWR@textcurrentcolor{%
237
                                                                                         lwarp
239
                 }% lwarp
240 }}%
241 }{}%
242 \stepcounter{Changes@#1Count#2}%
243 }{ }%
244 \IfIsEmpty{#5}%
245 {}%
246 {%
247\stepcounter{Changes@commentCount#2}%
248 \Changes@set@commentcount{#2}%
249 \Changes@Markup@comment%
250 {#5}%
251 {#2}%
252 {\Changes@output@author{#2}}%
253 }%
254 }%
255 \IfIsEmpty{#2}%
256 {\left\{ \begin{array}{c} 256 \end{array} \right.} 
257 {\def\Changes@locid{~(#2)}}%
258 \ add to contents {\ Changes@locextension} {\ protect\ ChangesListline $$\#1} $$\#6\ Changes@locid $$\#7} $$ \ the page $$
259 }%
260 {%
261 \IfIsEmpty{#3}%
262 {\@bsphack\@esphack}%
263 {#3}%
264 }%
265 }
```

File 80 lwarp-chappg.sty

§ 189 Package chappg

(Emulates or patches code by Robin Fairbairns.)

chappg (Pkg) chappg is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{chappg}[2006/05/09]

2\renewcommand{\pagenumbering}[2][]{}
3\providecommand{\chappgsep}{--}

File 81 lwarp-chapterbib.sty

§ 190 Package chapterbib

(Emulates or patches code by Donald Arseneau.)

chapterbib (*Pkg*) chapterbib is patched for use by lwarp.

 $\textbf{for HTML output:} \qquad 1 \texttt{\LWR@ProvidesPackagePass\{chapterbib\}[2010/09/18]}$

2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname

File 82 lwarp-chemfig.sty

§ 191 Package chemfig

(Emulates or patches code by Christian Tellechea.)

chemfig (Pkg) chemfig is patched for use by lwarp.

If using \polymerdelim to add delimiters to a \chemfig, wrap both inside a single lateximage:

```
\begin{lateximage}[-chemfig-~\PackageDiagramAltText]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

The images are not hashed because they depend on external settings which may be changed at any time, and are unlikely to be reused inline anyhow.

```
for HTML output: 1 \LWR@ProvidesPackagePass{chemfig}[2021/02/28]
```

```
2 \catcode'\_=11
3
4 \IfPackageAtLeastTF{chemfig}{2020/03/05}
```

```
5 {
      \xpretocmd\charge{\begin{lateximage}[-chemfig-~\PackageDiagramAltText]}
6
          {}{\LWR@patcherror{chemfig}{charge}}
      \xpretocmd\Charge{\begin{lateximage}[-chemfig-~\PackageDiagramAltText]}
8
          {}{\LWR@patcherror{chemfig}{Charge}}
9
10
      \xapptocmd\charge_c{\end{lateximage}}
          {}{\LWR@patcherror{chemfig}{charge_c}}
11
12 }{}
13
14 \IfPackageAtLeastTF{chemfig}{2019/04/18}%
15 {% 2019/04/18 or newer
      \xpretocmd{\CF_chemfiga}
16
          {\begin{lateximage}[-chemfig-~\PackageDiagramAltText]}
17
18
          {}{\LWR@patcherror{chemfig}{CF_chemfiga}}
19
     \VerifyCommand[lwarp][chemfig]{\CF_chemfigb}{7B199210755F37B1BCD036567614BA34}
20
21
      \xpatchcmd{\CF_chemfigb}
22
23
          {\let\CF_flipstate\CF_zero}
          {\end{lateximage}\let\cF_flipstate\cF_zero}
24
25
          {}{\LWR@patcherror{chemfig}{CF_chemfigb}}
26
      \GlobalLetLtxMacro\LWR@chemfig@origCF_lewisc\CF_lewisc
27
      \gdef\CF_lewisc#1,#2\_nil{%}
29
      \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
30
      \LWR@chemfig@origCF_lewisc#1,#2\_nil
      \end{lateximage}
31
32
      }
33
      \gpreto{\schemestart}{%
34
          \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
35
36
37
      \gappto{\CF_schemestop}{\end{lateximage}}
39 }% 2019/04/18 or newer
40 {% older than 2019/04/18
      \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
42
43
      \DeclareDocumentCommand\chemfig{s O{} o{} m}{%
44
          \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
45
          \IfBooleanTF{#1}{%
46
              \LWR@chemfig@origchemfig*[#2][#3]{#4}%
47
48
              \LWR@chemfig@origchemfig[#2][#3]{#4}%
49
50
          \end{lateximage}%
51
52
      }
53
      \verb|\LetLtxMacro| LWR@chemfig@origCF@lewis@b| CF@lewis@b|
54
55
      \def\CF@lewis@b#1#2{%
56
      \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
57
      \LWR@chemfig@origCF@lewis@b{#1}{#2}%
58
      \end{lateximage}%
60
61
62
      \preto{\schemestart}{%
          \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
63
```

```
64
      \appto{\CF@schemestop}{\end{lateximage}}
65
67}% older than 2019/04/18
69 \catcode '\_=8%
70
71
73 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
75 \def\chemleft#1#2\chemright#3{%
76 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
77 \LWR@chemfig@origchemleft#1#2\chemright#3%
78 \end{lateximage}%
79 }
81 \LetLtxMacro\LWR@chemfig@origchemup\chemup
83 \def\chemup#1#2\chemdown#3{%
84 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
85 \LWR@chemfig@origchemup#1#2\chemdown#3%
86 \end{lateximage}%
87 }
```

File 83 lwarp-chemformula.sty

§ 192 Package

chemformula

(Emulates or patches code by Clemens Niederberger.)

chemformula (Pkg)

chemformula is patched for use by lwarp.

The svG images are hashed according to contents and local options. Global options are assumed to be constant document-wide.

chemformula with MATHJAX

chemformula works best without MathJax. If MathJax is used, \displaymathother must be used before array, and then \displaymathnormal may be used after. (The chemformula package adapts to array, but does not know about MathJax, and MathJax does not know about chemformula.)

While using Mathjax, \displaymathother may also be used for other forms of display and inline math which contain chemformula expressions.

for HTML output:

```
1 \LWR@ProvidesPackagePass{chemformula}[2022/01/23]
```

2 \ExplSyntaxOn

\ch

Enclose in an inline svg image or MathJax. The alt tag is is the contents of the \ch expression. The filename is hashed, and also has additional hashing information based on the local options.

To work inside align with \displaymathother, a simple version must be used to work with chemformula's adaptation to align.

```
7 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
8 {
9 \chemformula_ch:nn {#1} {#2}% original
10 }
```

If used as the outer level, must temporarily ensure MATHJAX is disabled:

```
11 {
12 \begingroup%
13 \boolfalse{mathjax}%
```

An inline image is used, adjusted for the baseline:

```
\LWR@subsingledollar*{% lwarp
14
15
               \textbackslash{}%
16
               ch%
17
                   \LWR@HTMLsanitizedetokenized{\detokenize{#2}}%
18
19
               \}% alt text
           }{%
20
              \protect\LWR@HTMLsanitizedetokenized{%
21
                   \detokenize\expandafter{#1}%
22
               }% add'l hashing
23
           }%
24
25
           {%
               \chemformula_ch:nn {#1} {#2}%
26
27
           }%
28
           \endgroup%
29
      }
30
    }
```

\chcpd

Similar to \ch.

```
31 \IfPackageAtLeastTF{chemformula}{2019/10/13}{
33 \VerifyCommand[lwarp][chemformula]{\chemformula_chcpd:nn}
      {C1E882F2C1137D429AE4F789C84E7428}
34
35
36 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
37
    {
38
      \begingroup%
39
      \boolfalse{mathjax}%
40
      \LWR@subsingledollar*{% lwarp
41
          \textbackslash{}%
42
          chcpd%
          \{%
43
               \LWR@HTMLsanitizedetokenized{\detokenize{#2}}%
44
          \}%
45
46
      }{%
          \protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{#1}}%
47
      }{% original
48
49
      \group_begin:
        \tl_if_blank:nF {#2}
50
51
             \keys_set:nn {chemformula} {#1}
52
             \__chemformula_save_catcodes:
53
             \__chemformula_sanitize:Nn
54
               \l__chemformula_chemformula_tmpa_tl
55
               {#2}
56
```

```
57
             \__chemformula_input_compound_no_check:NV
               \l__chemformula_compound_tl
58
               \l__chemformula_chemformula_tmpa_tl
60
             \__chemformula_prepare_output:NV
61
               \l__chemformula_compound_tl
62
               \l__chemformula_catcodes_tl
             \chemformula_write:V \l__chemformula_compound_tl
63
           }
64
65
       \group_end:
66
       }
67
       \endgroup
68
    }
69 }% later than 2019/10/13
70 {% earlier than 2019/10/13
71\% \changes{v0.903}{2021/12/18}{\pkg{chemformula}: Improved alt tag sanitization.}
72 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
73
       \begingroup%
74
       \boolfalse{mathjax}%
75
       \LWR@subsingledollar*{% lwarp
76
77
           \textbackslash{}%
78
           chcpd%
79
           \{%
80
               \LWR@HTMLsanitizedetokenized{\detokenize{#2}}%
81
           \}%
82
       }{%
83
           \protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{#1}}%
       }{% original
84
       \group_begin:
85
         \tl_if_blank:nF {#2}
86
87
           {
             \keys_set:nn {chemformula} {#1}
88
             \__chemformula_save_catcodes:
89
             \__chemformula_sanitize:Nn
90
               \l__chemformula_chemformula_tmpa_tl
91
92
               {#2}
93
             \__chemformula_input_compound_no_check:NV
               \l__chemformula_compound_tl
94
               \l__chemformula_chemformula_tmpa_tl
95
             \__chemformula_prepare_output:N \l__chemformula_compound_tl
96
             \chemformula_write:V \l__chemformula_compound_tl
97
98
           }
99
       \group_end:
100
       }
       \endgroup
101
102
103 }% earlier than 2019/10/13
  If standalone, appears in a regular lateximage.
104 \VerifyCommand[lwarp][chemformula]{\charrow}
       {31D2B3405541C0B128504C94C5046713}
105
106
107 \RenewDocumentCommand \charrow { mO{}0{} }
108 {
109
       \begin{lateximage}[-chemformula- charrow]
110
       \group_begin:
         \__chemformula_draw_arrow:nnn {#1} {#2} {#3}
111
112
       \group_end:
```

\charrow

113

\end{lateximage}

114 }

\chname

If standalone, appears in a regular lateximage, hashed according to contents.

```
115 \VerifyCommand[lwarp][chemformula]{\chname}
       {3C697C09415EE601DE035EEDD6D3BA4D}
117
118 \RenewDocumentCommand \chname { R(){}R(){} }
119
       \begin{lateximage}*[%
120
121
           \textbackslash{}%
122
           chname%
           (\LWR@HTMLsanitizedetokenized{\detokenize{#1}})%
123
           (\LWR@HTMLsanitizedetokenized{\detokenize{#2}})%
124
125
           \chemformula_chwritebelow:nn {#1} {#2}
126
       \end{lateximage}
127
128
    }
```

\chlewis

Placed inline, hashed according to contents and options.

```
129 \VerifyCommand[lwarp][chemformula]{\chlewis}
      {371F2DD32AA98170F43CFDA71177226B}
130
131
132 \RenewDocumentCommand \chlewis { O{}mm }
133
      \begingroup%
134
135
      \boolfalse{mathjax}%
      136
137
         \protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{#1}}%
138
139
      }{
         \chemformula_lewis:nnn {#1} {#2} {#3}
140
141
      }
142
      \endgroup%
```

lwarp redefines the \$ character, so special handling is required to escape math expressions inside \ch.

This boolean tracks a new kind of escaped math:

```
144 \bool_new:N \l__chemformula_first_last_LWRdollar_bool
```

\chemformula_input_escape_math

Adds additional escaping for the new dollar definition:

```
145 \VerifyCommand[lwarp][chemformula]{\__chemformula_input_escape_math:n}
       {5318E84E9168C2F123781D2EA8CFA871}
146
147
148 \cs_gset_protected:Npn \__chemformula_input_escape_math:n #1
149
    {
         __chemformula_first_last_math:n {#1}
150
       \bool_if:NT \l__chemformula_first_last_dollar_bool
151
152
         {
           \bool_set_true:N \l__chemformula_first_last_math_bool
153
           \__chemformula_read_escape_dollar:w #1 \q_nil
154
         }
155
```

```
156
       \bool_if:NT \l__chemformula_first_last_mathbraces_bool
157
           \bool_set_true:N \l__chemformula_first_last_math_bool
158
159
           \__chemformula_read_escape_mathbraces:w #1 \q_nil
160
         }
 Added by lwarp:
161
       \bool_if:NT \l__chemformula_first_last_LWRdollar_bool%
                                                                      lwarp
162
           \bool_set_true:N \l__chemformula_first_last_math_bool%
163
                                                                      lwarp
           \__chemformula_read_escape_LWRdollar:w #1 \q_nil%
164
                                                                      lwarp
         }
165
166
    }
```

\chemformula_read_escape_LWRdollar

The following parses the contents inside the new dollars.

lwarp keeps the dollar as its original math shift until the document starts. While chemmacros is being patched, the dollar must temporarily be set to its new meaning during the following definition.

```
167 \begingroup
168 \catcode '\$=\active
169
170 \cs_new_protected:Npn \__chemformula_read_escape_LWRdollar:w $#1$ \q_nil
171 {
172  \__chemformula_read_escape_math:n {#1}
173 }
174
175 \endgroup
```

\chemformula_bool_set_if_first_last

The following looks at the first and last tokens for delimiters to escape math inside \ch. The original definition is modified to look for the control sequences which are used by the new meaning of \$.

```
176 \cs_new_protected:Npn \__chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
177 {
178   \int_zero:N \l__chemformula_tmpa_int
179   \int_zero:N \l__chemformula_tmpb_int
180   \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
181   \tl_map_inline:nn {#2}
182   {
183    \int_incr:N \l__chemformula_tmpb_int
184    \int_compare:nT { \l_chemformula_tmpb_int = 1 }
185   {
```

At the start, the cs_ version compares control sequences:

At the end, compare more control sequences:

```
\int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
192
193
                \ifdefstrequal{##1}{#4}
194
195
                     {}
196
                     {
197
                         \bool_set_false:N #1
198
                     }
199
              }
          }
200
201
    }
```

\chemformula_first_last_math

Modified to check for the new meaning of \$ at first/last:

```
202 \VerifyCommand[lwarp][chemformula]{\__chemformula_first_last_math:n}
203
       {B464BC6E81CAC84BE00FEE988970CE96}
204
205 \cs_gset_protected:Npn \__chemformula_first_last_math:n #1
206
    {
207
       \bool_set_false:N \l__chemformula_first_last_math_bool
208
       \bool_set_false:N \l__chemformula_first_last_dollar_bool
209
       \bool_set_false:N \l__chemformula_first_last_LWRdollar_bool%
                                                                          lwarp
       \bool_set_false:N \l__chemformula_first_last_mathbraces_bool
210
211
       \__chemformula_bool_set_if_first_last:Nnnn
212
         \l__chemformula_first_last_dollar_bool
         {#1}
213
         { $ } { $ }
214
       \bool_if:NF \l__chemformula_first_last_dollar_bool
215
216
           \__chemformula_bool_set_if_first_last:Nnnn
217
             \verb|\l_chemformula_first_last_mathbraces_bool|
218
219
             {#1}
220
             { \( } { \) }
 Added by lwarp:
221
             \bool_if:NF \l__chemformula_first_last_mathbraces_bool%
                                                                          lwarp
222
                    \__chemformula_bool_cs_set_if_first_last:NnNN
                   \l__chemformula_first_last_LWRdollar_bool
225
                   { \LWR@newsingledollar } { \LWR@newsingledollar }
226
               }% lwarp
227
         }
228
    }
229
230 \ExplSyntaxOff
```

File 84 lwarp-chemgreek.sty

§ 193 Package chemgreek

(Emulates or patches code by Clemens Niederberger.)

chemgreek (*Pkg*) chemgreek is patched for use by lwarp.

Greek symbols To use text-mode symbols, use packages textalpha or textgreek. Using the other

packages supported by chemgreek will result in math-mode greek characters, which will result in svG images being used. These images will be hashed.

↑ Xalalex.

XqIATEX, LuaIATEX If using XqIATEX or LuaIATEX, select the fontspec mapping:

\selectchemgreekmapping{fontspec}

for HTML output: 1 \LWF

1 \LWR@ProvidesPackagePass{chemgreek}[2020/01/16]

```
2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemgreek_text:n #1
5 { \text {#1} } }
6
7 \appto\LWR@restoreorigformatting{%
8 \cs_set_protected:Npn \chemgreek_text:n #1%
9 { \ensuremath { \text {#1} } }%
10 }
11
12 \ExplSyntaxOff
```

File 85 lwarp-chemmacros.sty

§ 194 Package

chemmacros

(Emulates or patches code by Clemens Niederberger.)

chemmacros (Pkg)

chemmacros is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{chemmacros}[2022/02/13]

svg file hashing assumes that the relevent options are constant for the entire document.

§ 194.1 Changes to the user's document

When using \makepolymerdelims, enclose the entire expression inside a polymerdelims environment, such as (from the chemmacros manual):

Redox reactions must be enclosed inside a redoxreaction environment. For print output, extra space must be included above and/or below the result, so they are declared as arguments to the environment, instead of being manually entered as per the chemmacros manual. For HTML output, the extra space is ignored and a lateximage is used instead.

§ 194.2 **Code**

2 \ExplSyntaxOn

§ 194.3 Loading packages

Also accept the lwarp version. \VerifyCommand not used here because it doesn't work with the conditional.

```
3\prg_set_conditional:Npnn \chemmacros_if_package_loaded:n #1 {p,T,F,TF}
4
   {
      \cs_if_exist:cTF {ver@#1.sty}
5
        { \prg_return_true: }
6
7
8
          \cs_if_exist:cTF {ver@lwarp-#1.sty}
9
              { \prg_return_true: }
              { \prg_return_false: }
10
        }
11
   }
12
```

Nullify hyperref detection:

```
13 \hook_gput_code:nnn {begindocument/end} {chemmacros}
14     {
15         \bool_set_false:N \l__chemmacros_hyperref_bool
16     }
```

§ 194.4 Loading modules

Patching chemmacros modules must be done \AtBeginDocument, since modules are invoked by the user in the preamble, and each patch is only done if the module is loaded.

§ 194.5 New environments

\makepolymerdelims and redox reactions must be enclosed in a lateximage during HTML output. These environments are provided here in HTML mode, and in the lwarp core in print mode, as a high-level semantic syntax which automatically embeds the contents in a lateximage with an appropriate alt tag.

nv polymerdelims

```
17 \DeclareDocumentEnvironment{polymerdelims}{}
18 {\begin{lateximage}[-chemmacros- polymer]}
19 {\end{lateximage}}
```

 ${\langle space \ above \rangle} {\langle space \ below \rangle}$

nv redoxreaction

For HTML output, the above and below space is ignored, and a lateximage is used instead. For the print output version, see section 90.

```
20 \DeclareDocumentEnvironment{redoxreaction}{m m}
21 {\begin{lateximage}[-chemmacros- redoxreaction]}
22 {\end{lateximage}}
```

§ 194.6 Acid-base

```
23 \AtBeginDocument{
24 \chemmacros_module_if_loaded:nTF{{acid-base}}{
25 \PackageInfo{lwarp}{Patching~chemmacros~module~acid-base}
27 \VerifyCommand[lwarp][chemmacros]{\chemmacros_p:n}
      {D95080E9783CB80E34C51221236CF370}
30 \cs_gset_protected:Npn \chemmacros_p:n #1
31
32
      \begingroup
      \boolfalse{mathjax}
33
      \LWR@subsingledollar*{
34
          \textbackslash{}%
35
          p%
36
37
          \{%
              \LWR@HTMLsanitizedetokenized{\detokenize{#1}}%
39
          \}
40
      }{
41
          chemmacrosp%
          \verb|\protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{\#1}}|
42
43
      }{
      \group_begin:
44
        \mbox
45
46
            \chemmacros_p_style:n {p}
47
48
            \ensuremath {#1}
49
50
      \group_end:
51
      }
      \endgroup
52
    }
53
54
55 \VerifyCommand[lwarp][chemmacros]{\pH}
      {89B9008750937C7614F2A5204D5DDD16}
56
57
58 \RenewDocumentCommand \pH {} {
      \begingroup
60
      \boolfalse{mathjax}
      61
62
          \chemmacros_p:n { \chemmacros_formula:n {H} }
63
      \ensuremath{\mbox{\sc holds}}
64
65 }
67 \VerifyCommand[lwarp][chemmacros]{\pOH}
      {3193E23422822579C0D2B2C10371BF84}
70 \RenewDocumentCommand \pOH {} {
      \begingroup
72
      \boolfalse{mathjax}
      \LWR@subsingledollar*{\textbackslash{}pOH}{chemmacros}{
73
          \chemmacros_p:n { \chemmacros_formula:n {OH} }
74
75
      \endgroup
76
77 }
79 \VerifyCommand[lwarp][chemmacros]{\pKa}
      {C4141E480C360A8EDAE38B65F71F5B1F}
```

```
81
82 \RenewDocumentCommand \pKa {0{}}
83
84
       \begingroup
85
       \boolfalse{mathjax}
       \LWR@subsingledollar*{\textbackslash{}pKa{[]#1{]}}{chemmacros #1}{
86
           \chemmacros_p:n
87
88
           {
               \Ka \ifblank {#1} {}
89
               { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
90
           }
91
92
      }
       \endgroup
93
94
    }
95
96 \VerifyCommand[lwarp][chemmacros]{\pKb}
       {00A20E25465C2E0D2E3731634F39B0FA}
97
98
99 \RenewDocumentCommand \pKb {O{}}
100
       \begingroup
101
       \boolfalse{mathjax}
102
       \LWR@subsingledollar*{\textbackslash{}pKb{[]#1{]}}{chemmacros #1}{
103
           \chemmacros_p:n
104
105
106
               \Kb \ifblank {#1} {}
107
               { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
108
           }
109
      }
110
       \endgroup
111
     }
112
113 \LetLtxMacro\LWR@chemmacros@origKa\Ka
114 \renewcommand*{\Ka}{%
       \begingroup
115
116
       \boolfalse{mathjax}
       \LWR@subsingledollar*{\textbackslash{}Ka}{chemmacros}{%
117
           \LWR@chemmacros@origKa%
118
       }%
119
       \endgroup
120
121 }
123 \LetLtxMacro\LWR@chemmacros@origKb\Kb
124 \renewcommand*{\Kb}{%
       \begingroup
126
       \boolfalse{mathjax}
       \LWR@subsingledollar*{\textbackslash{}Kb}{chemmacros}{%
127
128
           \LWR@chemmacros@origKb%
       }%
129
       \endgroup
130
131 }
133 \LetLtxMacro\LWR@chemmacros@origKw\Kw
134 \renewcommand*{\Kw}{%
       \begingroup
       \boolfalse(mathjax)
136
137
       \LWR@subsingledollar*{\textbackslash{}Kw}{chemmacros}{
138
           \LWR@chemmacros@origKw
139
140
       \endgroup
```

```
141 }
142
143 }{}% module loaded
144 }% AtBeginDocument
```

§ 194.7 **Charges**

```
145 \AtBeginDocument{
146 \chemmacros_module_if_loaded:nTF{{charges}}{
147 \PackageInfo{lwarp}{Patching~chemmacros~module~charges}
149 \VerifyCommand[lwarp][chemmacros]{\fplus}
       {F6F7137115BC798D4CA779782DCCEB6D}
150
151
152 \cs_gset_protected:Npn \fplus {
       \begingroup
153
       \boolfalse{mathjax}
154
       \LWR@subsingledollar*{\textbackslash{}fplus}{chemmacros}
155
       { \LWR@origensuredmath{\chemformula_fplus:} }
156
157
158 }
159
160 \VerifyCommand[lwarp][chemmacros]{\fminus}
       {A7ED8520C49A794F33AA6122E2411746}
162
163 \verb|\cs_gset_protected:Npn \verb|\fminus|| \{
       \begingroup
164
       \boolfalse{mathjax}
165
       \LWR@subsingledollar*{\textbackslash{}fminus}{chemmacros}
166
       { \LWR@origensuredmath{\chemformula_fminus:} }
168
       \endgroup
169 }
171 }{}% Module loaded.
172 }% AtBeginDocument
```

§ 194.8 Nomenclature

192

```
173 AtBeginDocument{}
177 \VerifyCommand[lwarp][chemmacros]{\chemmacros_charge:n}
    {258D97BF6FF3FA5C995D4FDCC44B0E63}
178
179
180 \cs_gset_protected:Npn \chemmacros_charge:n #1
181
182
    \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
183
    {\operatorname{n} { } { }}
184
       \ifmmode
185
          186
       \else
187
          { \textsuperscript{\ensuremath{#1}} }
188
189
190
    }
191
   }
```

```
193 \hook_gput_code:nnn {begindocument/end} {chemmacros}
195 \protected\def\LWR@HTML@chemprime { \HTMLunicode{2032} }
196 \LWR@formatted{chemprime}
197 }
198 \VerifyCommand[lwarp][chemmacros]{\chemmacros_cip:n}
                 {EEF7D8AF4D975C2D11D879A77ABDFF88}
200
201 \cs_gset_protected:Npn \__chemmacros_cip:n #1
202
                 \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
203
                 \int \int d^2 x dx
204
205
206
                           \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
                               {##1}
207
                                { { \l__chemmacros_cip_number_tl ##1} }
208
                     }
209
210
211
                           \l__chemmacros_cip_inner_tl
212
                           \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
213
                                    \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
                           }}% lwarp
214
215
                }
216
217 \VerifyCommand[lwarp][chemmacros]{\Sconf}
218
                 {D7A87543D1C944168CBAC59E9F45DF9A}
220 \RenewDocumentCommand \Sconf { O{S} } {
221 \begin{lateximage}[\textbackslash{}Sconf{[]#1{]}]*
                 \chemmacros_sconf:n {#1}
223 \end{lateximage}
224 }
225
226 \VerifyCommand[lwarp][chemmacros]{\Rconf}
                 {AB922016338B2F2C2635E6104311DAF2}
228
229 \RenewDocumentCommand \Rconf { O{R} } {
230 \begin{lateximage}[\textbackslash{}Rconf{[]#1{]}]*
                \chemmacros_rconf:n {#1}
232 \end{lateximage}
233 }
234 \VerifyCommand[lwarp][chemmacros]{\chemmacros_hapto:n}
                 {FCEEDAB3292A95E65B69F4F8C8849B26}
236
237 \cs_gset_protected:Npn \chemmacros_hapto:n #1
238
           {
239
                 \begingroup
                 \boolfalse{mathjax}
240
                 \LWR@subsingledollar*{\textbackslash{}hapto\{#1\}}{chemmacros}{
241
                           \chemmacros_coordination_symbol:nnnn
242
                           { \l__chemmacros_coord_use_hyphen_bool }
243
244
                          {
                                    { \c_true_bool }
245
247
                           { \chemeta }
248
                           {#1}
                }
249
```

```
250
       \endgroup
251
     }
253 \VerifyCommand[lwarp][chemmacros]{\chemmacros_dento:n}
       {E85BBDEF5A35F37215EBAD87AFCB99E8}
254
255
256 \cs_gset_protected:Npn \chemmacros_dento:n #1
257
258
       \begingroup
       \boolfalse{mathjax}
259
       \LWR@subsingledollar*{\textbackslash{}dento\{#1\}}{chemmacros}{
260
261
           \chemmacros_coordination_symbol:nnnn
262
           { \l__chemmacros_coord_use_hyphen_bool }
263
           {
264
                { \c_true_bool }
265
           { \chemkappa }
266
           {#1}
267
       }
268
       \endgroup
269
270
     }
271
272 \VerifyCommand[lwarp][chemmacros]{\chemmacros_bridge:n}
       {5E5D0EA9045A41FF30D4AB315E547B25}
274
275 \cs_gset_protected:Npn \chemmacros_bridge:n #1
276
    {
277
       \begingroup
       \boolfalse{mathjax}
278
       \LWR@subsingledollar*{\textbackslash{}bridge\{#1\}}{chemmacros}{
279
           \chemmacros_coordination_symbol:nnnn
280
           { \l__chemmacros_coord_use_hyphen_bool }
281
           { \l__chemmacros_bridge_super_bool }
282
           { \chemmu }
283
           {#1}
284
285
286
       \endgroup
287
288 }{}% Module loaded.
289 }% AtBeginDocument
```

§ 194.9 Particles

```
290 \AtBeginDocument{
291 \chemmacros_module_if_loaded:nTF{{particles}}{
292 \PackageInfo{lwarp}{Patching~chemmacros~module~particles}
293
294 \VerifyCommand[lwarp][chemmacros]{\chemmacros_declare_nucleophile:Nn}
       {ED9AA7471C8638CEF0757A10A2E3935E}
295
296
297 \cs_gset_protected:Npn \chemmacros_declare_nucleophile:Nn #1#2
298
    {
299
       \cs_set_protected:cpn {__chemmacros_ \chemmacros_remove_backslash:N #1:}
300
           \bool_if:NTF \l__chemmacros_nucleophile_elpair_bool
301
302
             {
               \chemmacros_elpair:n { #2 }
303
                 { \skip_horizontal:N \l__chemmacros_nucleophile_dim }
304
               \chemmacros_formula:n { {}^{-}} }
305
             }
306
```

```
307
                      { \chemmacros_formula:n { #2^{-} } }
                 }
        308
               \DeclareDocumentCommand #1 {o}
        309
        310
                 {%
        311
                    \begin{lateximage}%
        312
                    \group_begin:%
                      \IfNoValueF {##1}%
        313
                        { \chemmacros_set_keys:nn {particles} {##1} }%
        314
                      \use:c {__chemmacros_ \chemmacros_remove_backslash:N #1:}%
        315
                    \group_end:%
        316
                    \end{lateximage}%
        317
        318
                 }
        319
             }
        321 \RenewChemNucleophile \Nuc {Nu}
        322 \RenewChemNucleophile \ba {ba}
        324 }{}% Module loaded.
        325 }% AtBeginDocument
§ 194.10 Phases
        326 \AtBeginDocument{
        327 \chemmacros_module_if_loaded:nTF{{phases}}{
        328 \PackageInfo{lwarp}{Patching~chemmacros~module~phases}
        330 \VerifyCommand[lwarp][chemmacros]{\chemmacros_phase:n}
               {83788F1FCBEDA21B495E919E36DD90A5}
        331
        332
        333 \cs_undefine:N \chemmacros_phase:n
        334 \cs_new_protected:Npn \chemmacros_phase:n #1
               \mode_leave_vertical:
        336
        337
               \bool_if:NTF \l__chemmacros_phases_sub_bool
        338
        339
                    \ifnumequal{\value{LWR@lateximagedepth}}{0}
        340
                    {
                        \textsubscript{ (#1) }
        341
                    }
        342
        343
                    {
                        \chemformula_subscript:n { (#1) }
        344
                    }
        345
        346
        347
                    \skip_horizontal:N \l__chemmacros_phases_space_dim
        349
                    \chemmacros_text:n { (#1) }
                  }
        350
             }
        351
        353 }{}% Module loaded.
        354}% AtBeginDocument
§ 194.11 Mechanisms
        355 \AtBeginDocument{
        356 \chemmacros_module_if_loaded:nTF{{mechanisms}}{
        357 \PackageInfo{lwarp}{Patching~chemmacros~module~mechanisms}
```

358

```
359 \chemmacros_define_keys:nn {textmechanisms}
360
                  .choice: ,
361
       type
362
       type /
                  .code:n
363
         {
           \__chemmacros_set_mechanisms:nnn { S }
364
             {
365
                  \textsubscript{N}
366
             }
367
             { }
368
         } ,
369
       type / 1 .code:n
370
371
         {
372
           \__chemmacros_set_mechanisms:nnn { S }
373
                  \textsubscript{N}
374
375
             }
376
             { }
377
         } ,
378
       type / 2 .code:n
379
380
           \__chemmacros_set_mechanisms:nnn { S }
381
382
383
                  \textsubscript{N}
384
385
              }
              { }
386
         } ,
387
       type / se .code:n
388
389
           \__chemmacros_set_mechanisms:nnn { S }
390
391
             {
392
                  \textsubscript{E}
393
             }
394
             { }
         } ,
395
       type / 1e .code:n
396
397
           \__chemmacros_set_mechanisms:nnn { S }
398
399
             {
                  \textsubscript{E}
400
401
             }
402
403
             { }
         } ,
404
405
       type / 2e .code:n
406
           \__chemmacros_set_mechanisms:nnn { S }
407
408
             {
409
                  \textsubscript{E}
410
411
             }
412
             { }
         } ,
413
414
       type / ar .code:n
415
           \__chemmacros_set_mechanisms:nnn { S }
416
417
                  \textsubscript{E}
418
```

```
419
             }
             { Ar - }
420
         } ,
422
       type / e .code:n
423
         { \__chemmacros_set_mechanisms:nnn { E } { } { } } ,
424
       type / e1 .code:n
         { \_chemmacros_set_mechanisms:nnn { E } { 1 } { } } ,
425
       type / e2 .code:n
426
         { \ \ \ }  { \__chemmacros_set_mechanisms:nnn { E } { 2 } { } } } ,
427
       type / cb .code:n
428
429
430
           \__chemmacros_set_mechanisms:nnn { E }
431
             {
432
433
                  \textsubscript{cb}
434
             }
             { }
435
         } ,
436
                  .default:n =
437
       type
     }
438
439
440 \VerifyCommand[lwarp][chemmacros]{\chemmacros_mechanisms:n}
       {2CF049E0C61235166A36565979D79933}
441
442
443 \cs_gset_protected:Npn \chemmacros_mechanisms:n #1
444
445
       \tl_if_blank:nTF {#1}
446
         { \chemmacros_set_keys:nn {textmechanisms} { type } }
         { \chemmacros_set_keys:nn {textmechanisms} { type = #1 } }
447
       \mbox
448
449
           \tl_use:N \l__chemmacros_mechanisms_ar_tl
450
           \tl_use:N \l__chemmacros_mechanisms_type_tl
451
           \tl_use:N \l__chemmacros_mechanisms_mol_tl
452
453
454
     }
455
456 \appto\LWR@restoreorigformatting{%
457 \cs_set_protected:Npn \chemmacros_mechanisms:n #1%
458
    {%
       \tl_if_blank:nTF {#1}%
459
         { \chemmacros_set_keys:nn {mechanisms} { type } }%
460
         { \chemmacros_set_keys:nn {mechanisms} { type = #1 } }%
461
       \mbox%
462
463
464
           \tl_use:N \l__chemmacros_mechanisms_ar_tl%
465
           \tl_use:N \l__chemmacros_mechanisms_type_tl%
           \tl_use:N \l__chemmacros_mechanisms_mol_tl%
466
         }%
467
    }%
468
469 }
471 }{}% Module loaded.
472 }% AtBeginDocument
```

§ 194.12 **Newman**

There are so many options that it is hard to hash these images for reuse.

```
473 \AtBeginDocument{
```

```
474 \chemmacros_module_if_loaded:nTF{{newman}}{
475 \PackageInfo{lwarp}{Patching~chemmacros~module~newman}
477 \VerifyCommand[lwarp][chemmacros]{\newman}
                                         {45E815D161E8467A51F5B04150DEC20C}
478
479
480 \RenewDocumentCommand \newman {od()m}%
481
                                          \IfValueTF{#2}
482
                                          {\left[ \text{begin}{\text{lateximage}}[\text{slash}{\text{newman}(\#2)}{\#3}} \right] *}
483
                                          {\color=0.05cm} $$ {\bf \tilde{1}} = {
484
485
                                           \group_begin:
486
                                                        \IfNoValueF {#1} { \chemmacros_set_keys:nn {newman} {#1} }
487
                                                        \IfNoValueTF {#2}
488
                                                                    { \chemmacros_newman:nn { } {#3} }
489
                                                                    { \chemmacros_newman:nn {#2} {#3} }
490
                                           \group_end:
                                          \end{lateximage}
491
                             }%
492
493
494 }{}% Module loaded.
495 }% AtBeginDocument
```

§ 194.13 **Orbital**

```
496 \AtBeginDocument{
497 \chemmacros_module_if_loaded:nTF{{orbital}}{
498 \PackageInfo{lwarp}{Patching~chemmacros~module~orbital}
500 \VerifyCommand[lwarp][chemmacros]{\orbital}
       {F8E338F96B2EBF6AFE4A91D37A58CD90}
502
503 \RenewDocumentCommand \orbital {om}
504
       \IfValueTF{#1}
505
506
       {
           \begin{lateximage}[%
507
               \textbackslash{}%
508
509
               orbital{[]%
               \LWR@HTMLsanitizedetokenized{\detokenize{#1}}%
510
511
               {]}\{#2\}%
512
           ]*[][margin-left: 1em ; margin-right: 1em]
513
      }
514
515
           \begin{lateximage}[%
               \textbackslash{} orbital \{\#2\}\%
516
           ]*[][margin-left: 1em ; margin-right: 1em]
517
518
       \group_begin:
519
520
         \chemmacros_set_keys:nn {orbital/type} {#2}
         \IfNoValueTF {#1}
521
           { \chemmacros_orbital:n { } }
522
523
           { \chemmacros_orbital:n {#1} }
524
       \group_end:
       \end{lateximage}
525
    }
526
528 }{}% Module loaded.
529 }% AtBeginDocument
```

§ 194.14 Reactions

```
\chemmacros_declare_reaction_env
                                    \{\langle chem \rangle\} \{\langle math \rangle\} \{\langle args\ number \rangle\} \{\langle argument\ list\ (\{\#2\}\{\#3\}...)\rangle\}
                              530 \AtBeginDocument{
                              531 \chemmacros_module_if_loaded:nTF{{reactions}}{
                              532 \PackageInfo{lwarp}{Patching~chemmacros~module~reactions}
                             534 \VerifyCommand[lwarp][chemmacros]{\__chemmacros_declare_reaction_env:nnnn}
                             535
                                     {E52CE623404E664FD0647E3A874F2702}
                             536
                             537 % #1: chem
                              538 % #2: math
                              539 % #3: args number
                              540 % #4: argument list ({#2}{#3}...)
                             541 \cs_gset_protected:Npn \__chemmacros_declare_reaction_env:nnnn #1#2#3#4
                             542
                                     \exp_args:Nnx \DeclareDocumentEnvironment {#1}
                             543
                                       544
                              545
                                       {
                                         \boolfalse{mathjax}%
                              546
                                                                                       lwarp
                              547
                                         \ifdefvoid{\LWR@ThisAltText}{%
                                                                                       lwarp
                              548
                                             \ThisAltText{-chemmacros-~reaction}%
                                                                                       lwarp
                                         }{}%
                                                                                        lwarp
                                         \chemmacros_add_reaction_description:n {##1}
                              551
                                         \__chemmacros_begin_reaction:
                              552
                                         \__chemmacros_reaction_read:nnw {#2} {#4}
                              553
                                       }
                             554
                                            _chemmacros_end_reaction:
                             555
                                         \gdef\LWR@ThisAltText{}%
                                                                                       lwarp
                             556
                                         \ignorespacesafterend
                             557
                              558
                              559
                                  }
                              561 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
                              563 \RenewChemReaction {reaction}
                                                                  {equation}
                              564 \RenewChemReaction \{reaction*\} \{equation*\}
                              565 \RenewChemReaction {reactions} {align}
                             566 \RenewChemReaction {reactions*} {align*}
                             567
                              568 }{}% Module loaded.
                              569 }% AtBeginDocument
```

§ 194.15 Reactants

Recompiled for tabular ampersand processing, with the only change being \StartDefiningTabulars. \xpatchcmd does not work here.

```
580
         \int_step_variable:nNn
           { \seq_count:N \g_chemnum_initiated_compounds_seq }
581
582
           \l__chemmacros_reactants_tmpa_tl
583
584
              \seq_put_right:Nx
585
                \l__chemmacros_reactants_tmpa_seq
586
                {
                  \chemnum_cmpd:nnne { \c_false_bool } { \c_true_bool } {}
587
588
                    {
                      \seq_item:NV
589
                        \verb|\g_chemnum_initiated_compounds_seq|
590
591
                        \l__chemmacros_reactants_tmpa_tl
592
                    }
                  &
                  \bool_if:nT {#1}
594
595
                    {
                      \seq_item:NV
596
                        \g_chemnum_initiated_compounds_seq
597
                        \l__chemmacros_reactants_tmpa_tl
598
                      &
599
                    }
600
                  % TODO: expl3-command ??
601
                  \solvent
602
603
                    {
604
                      \seq_item:NV
605
                        \g_chemnum_initiated_compounds_seq
606
                        \l__chemmacros_reactants_tmpa_tl
607
                    }
                  \tabularnewline
608
609
               }
              \tl_set:Nx
610
                \l__chemmacros_reactants_tmpb_tl
611
612
                {
                  \seq_item:NV
613
                    \g_chemnum_initiated_compounds_seq
614
615
                    \l__chemmacros_reactants_tmpa_tl
616
              \chemmacros_reactants_list_subreactant:Vn
617
                \l__chemmacros_reactants_tmpb_tl
618
                {#1}
619
620
           }
         % TODO: longtable ?
621
622
                  table customizable?
         % first draft of two styles
623
624
625
         \noindent
         \bool_if:NTF \l__chemmacros_reactants_printreactants_style_bool
626
627
              \str_case:\n \l__chemmacros_reactants_printreactants_style_str
628
629
               {
                  {xltabular}
630
631
                  {
                    \chemmacros_if_package_loaded:nTF {xltabular}
632
633
                      {
                        \bool_if:nTF {#1}
634
635
                          {
                            \begin {xltabular}
636
                               { \textwidth }
637
                               { @{}ll>{\raggedright\arraybackslash}X@{} }
638
                          }
639
```

```
640
                             \begin {xltabular}
641
642
                               { \textwidth }
643
                               { @{}l>{\raggedright\arraybackslash}X@{} }
644
645
                        \seq_use:Nn \l__chemmacros_reactants_tmpa_seq { }
                        \end{xltabular}
646
                      }
647
                      {
648
                        \msg_expandable_error:nnnn
649
                           {chemmacros}
650
651
                           {package-not-loaded}
652
                           { \printreactants }
653
                           {xltabular}
                      }
654
655
                  }
                  {longtable}
656
657
                  {
                    \chemmacros_if_package_loaded:nTF {longtable}
658
659
                         \bool_if:nTF {#1}
660
661
                           {
                             \begin {longtable}[l]
662
                       { @{}ll>{\raggedright\arraybackslash}p{0.6\textwidth}@{} }
663
664
                           }
665
666
                             \begin {longtable}[l]
                       { @{}l>{\raggedright\arraybackslash}p{0.9\textwidth}@{} }
667
668
                        \seq_use:Nn \l__chemmacros_reactants_tmpa_seq { }
669
                         \end{longtable}
670
                      }
671
672
                      {
                         \msg_expandable_error:nnnn
673
                           {chemmacros}
675
                           {package-not-loaded}
                           { \printreactants }
676
                           {longtable}
677
                      }
678
                  }
679
               }
680
       }
681
682
                \msg_warning:nn {chemmacros} {missing-printreactants-style}
683
684
685
       \group_end:
686
687
688 \end{Command} [lwarp] [chemmacros] {\chemmacros\_reactants\_list\_subreactant:nn} \\
       {50553A53C2149BD3ADA8AE0FAB0C79C4}
689
690
691% #1: full ID
692% #2: star, include ID in table
693 \cs_gset_protected:Npn \chemmacros_reactants_list_subreactant:nn #1#2
694
695
       \chemnum_if_subcompounds:nT {#1}
696
697
           \int_step_variable:nNn
              { \chemnum_count_subcompounds:n {#1} }
698
              \l__chemmacros_reactants_tmpa_tl
699
```

```
700
              {
                \seq_put_right:Nx
701
702
                \l__chemmacros_reactants_tmpa_seq
703
                    \chemnum_cmpd:nnne { \c_false_bool } { \c_true_bool } {}
704
705
                        \exp_not:n {#1}
706
                        \exp_not:V \l_chemnum_compound_separator_tl
707
                        \chemnum_get_subcompound:nV
708
                           {#1}
709
                           \l__chemmacros_reactants_tmpa_tl
710
711
                      }
712
                    &
713
                    \bool_if:nT {#2}
714
                      {
                        #1
715
                        \l_chemnum_compound_separator_tl
716
                        \verb|\chemnum_get_subcompound:nV| \\
717
                           {#1}
718
                           \l__chemmacros_reactants_tmpa_tl
719
720
                      }
721
                    % TODO: expl3-command ??
722
                    \solvent
723
724
                      {
725
                        #1
726
                        \l_chemnum_compound_separator_tl
727
                        \chemnum_get_subcompound:nV
728
                           {#1}
                           \l__chemmacros_reactants_tmpa_tl
729
                      }
730
731
                    \tabularnewline
732
733
             }
734
735
736 \cs_generate_variant:Nn \chemmacros_reactants_list_subreactant:nn {V}
738 \StopDefiningTabulars%
                                 lwarp
```

§ 194.16 **Redox**

```
739 \AtBeginDocument{
740 \chemmacros_module_if_loaded:nTF{{redox}}{
741 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
742
743 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
744
    {
       \IfBooleanTF {#1}
745
         { \chemmacros_ox:nnnn {#1} {#2} #3 }
746
747
         { \chemmacros_ox:nnnn { } {#2} #3 }
748
749
750 \VerifyCommand[lwarp][chemmacros]{\ox}
       {06B84CC6B38302F75169D5B90D8D29AA}
751
752
753 \RenewDocumentCommand \ox { s O{} m }
754
       \begingroup
755
       \boolfalse{mathjax}
756
```

```
\IfBooleanTF {#1}
757
758
           \LWR@subsingledollar*{% yes hash
759
760
                \textbackslash{}%
761
               ox*%
762
                \{%
                    \LWR@HTMLsanitizedetokenized{\detokenize{#3}}%
763
                \ \ \ \ alt
764
           }{%
765
           star \protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{#2}}%
766
767
           }{%
768
                \LWR@chemmacros@ox* {#2} {#3}% contents
769
           }%
770
771
           \LWR@subsingledollar*{% yes hash
772
                \textbackslash{}%
773
               ox%
774
775
                    \LWR@HTMLsanitizedetokenized{\detokenize{#3}}%
776
                \}% alt
777
           }{%
778
             \protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{#2}}%
779
780
           }{%
781
                \LWR@chemmacros@ox {#2} {#3}% contents
782
           }%
783
         }
784
       \endgroup
785
    }
786
787 }{ }% Module loaded.
788 }% AtBeginDocument
```

§ 194.17 **Scheme**

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```
789 \AtBeginDocument{
790 \chemmacros_module_if_loaded:nTF{{scheme}}{
791 \PackageInfo{{warp}{Patching~chemmacros~module~scheme}}
792
793 \ifdefstring{\schemename}{{los}{
794 \SetupFloatingEnvironment{scheme}{
795 name = \chemmacros_translate:n {scheme-name}}
796 }
797 }{{}
798
799 }{{} Module loaded.
800 }% AtBeginDocument
```

§ 194.18 Spectroscopy

```
801 \AtBeginDocument{
802 \chemmacros_module_if_loaded:nTF{{spectroscopy}}{
803 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
805 \VerifyCommand[lwarp][chemmacros]{\__chemmacros_nmr_base:nn}
       {EDE669CC90B085080E3F96DB754836D5}
807
808 \cs_gset_protected:Npn \__chemmacros_nmr_base:nn #1#2
809
       \group_begin:
810
         \tl_use:N \l__chemmacros_nmr_base_format_tl
811
         \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
812
813
             \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ } }
814
             \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
815
816
817
         \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
818 %
           \chemmacros_formula:n { ^{#1} }
819
         \textsuperscript{#1}
         \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
820
821
           {
             \bool_if:NTF \l__chemmacros_nmr_parse_bool
822
               { \chemformula_ch:nV {} \g__chemmacros_nmr_element_coupled_tl }
823
               { \chemmacros_formula: V \g__chemmacros_nmr_element_coupled_tl }
824
825
         \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
         \tl_use:N \l__chemmacros_nmr_method_tl
828
       \group_end:
829
     }
830
831
832 \VerifyCommand[lwarp][chemmacros]{\chemmacros_nmr_position:n}
       {637FDE0E801CF4052274FF60A12A38F0}
833
834
835 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1
836
    {
       \chemmacros_formula:x
837
838
           \exp_not:V \g__chemmacros_nmr_element_tl
839
           \bool_if:NF \l__chemmacros_nmr_position_side_bool
840
841
               842
               { \text{textsuperscript}(\exp_not:n { $\{\#1\} $\} }\} lwarp
843
               { \textsubscript{\exp_not:n { \#1} }} }% lwarp
844
845 %
                 \exp_not:V \l__chemmacros_nmr_position_tl
                 \exp_not:n { {#1} }
846 %
849
       \verb|\bool_if:NT \l|\_chemmacros_nmr_position\_side\_bool|
850
           \tl_use:N \l__chemmacros_nmr_position_tl
851
           \__chemmacros_nmr_position:n {#1}
852
         }
853
     }
854
855
856 \VerifyCommand[lwarp][chemmacros]{\__chemmacros_nmr_coupling:w}
857
       {4D1E7321CA2F8C7EA2E4F56FB3A26EED}
858
```

```
859 \cs_gset_protected:Npn \__chemmacros_nmr_coupling:w (#1;#2)
       \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
861
862
         {
863
           \l__chemmacros_nmr_coupling_bonds_pre_tl
864
           #1
           \l__chemmacros_nmr_coupling_bonds_post_tl
865
         }
866
       \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
867
868
           \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
869
870
             {
871 %
                  \c_math_subscript_token
               \textsubscript% lwarp
873
                 {
                    \l__chemmacros_nmr_coupling_nuclei_pre_tl
874
                    \chemmacros_formula:n {#2}
875
                    \l__chemmacros_nmr_coupling_nuclei_post_tl
876
877
             }
878
879
         }
880
           \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
881
882
             {
883
               \l__chemmacros_nmr_coupling_nuclei_pre_tl
884
               \chemmacros_formula:n {#2}
885
               \l__chemmacros_nmr_coupling_nuclei_post_tl
886
             }
887
888
         _chemmacros_nmr_coupling_aux_i:w
889
    }
890 \AfterEndPreamble{% After \AtBeginDocument
891
892 \VerifyCommand[lwarp][chemmacros]{\chemmacros_nmr:nnnn}
       {FD67505420F044B2CA8E7CBD05B1ECEB}
893
894
895% \NMR{<num>,<elem>}(<num>,<unit>)[<solvent>] ALL arguments are optional
896% \NMR* same but without ": $\delta$" at end
897 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
898
       \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
899
       \group_begin:
900
           \mode_leave_vertical:
901
           \bool_set_false:N \l__chemmacros_nmr_frequency_bool
902
           \bool_set_false:N \l__chemmacros_nmr_solvent_bool
903
           \tl_if_empty:nF {#3}
904
905
           { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
906
           \tl_if_empty:nF {#4}
           { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
907
           \bool_if:nT
908
909
               \l__chemmacros_nmr_frequency_bool
910
911
               \l__chemmacros_nmr_solvent_bool
912
           }
913
           { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
914
915
           \bool_if:nT
916
           {
```

```
917
               \l__chemmacros_nmr_frequency_bool
918
               \l__chemmacros_nmr_solvent_bool
919
920
           }
921
           { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
922
           \tl_if_empty:nTF {#2}
923
           {
               \verb|\__chemmacros_nmr_nucleus:VV|
924
               \l__chemmacros_nmr_isotope_default_tl
925
               \l__chemmacros_nmr_element_default_tl
926
927
928
           { \__chemmacros_nmr_nucleus:w #2 \q_stop }
929
           \mode_if_math:TF
930
           {
931
               \text
932
933
                    \group_begin:
                    \tl_use:N \l__chemmacros_nmr_format_tl
934
935 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
                    \__chemmacros_nmr_base:VV
936
                        \g__chemmacros_nmr_isotope_tl
937
938
                        \g__chemmacros_nmr_element_tl
                    \bool_if:NT \l__chemmacros_nmr_delimiters_bool
939
                        { ~ ( }
940
941
                    \bool_if:NT \l__chemmacros_nmr_frequency_bool
942
                        { \__chemmacros_nmr_frequency:n {#3} }
943
                    \bool_if:NT \l__chemmacros_nmr_comma_bool
                        { , ~ }
944
                    \bool_if:NT \l__chemmacros_nmr_solvent_bool
945
                        { \chemmacros_formula:n {#4} }
946
                    \bool_if:NT \l__chemmacros_nmr_delimiters_bool
947
948
                        { ) }
                    \tl_if_blank:nT {#1} {:~}
949
950 }}% lwarp
                    \group_end:
951
952
953
               \tl_if_blank:nT {#1}
954
                    \delta
955
                    \text { \l__chemmacros_nmr_delta_tl }
956
                    \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
957
               }
958
959
           }
960
               \group_begin:
961
               \tl_use:N \l__chemmacros_nmr_format_tl
963 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
964
               \__chemmacros_nmr_base:VV
965
                    \g__chemmacros_nmr_isotope_tl
                    \g__chemmacros_nmr_element_tl
966
               \bool_if:NT \l__chemmacros_nmr_delimiters_bool
967
                    {~(}
968
               \bool_if:NT \l__chemmacros_nmr_frequency_bool
969
970
                    { \__chemmacros_nmr_frequency:n {#3} }
               \bool_if:NT \l__chemmacros_nmr_comma_bool
                    {,~}
               \bool_if:NT \l__chemmacros_nmr_solvent_bool
973
974
                    \bool_if:NTF \l__chemmacros_nmr_parse_bool
975
```

```
976 %
                         { \chemformula_ch:nn { } {#4} }% original
                       {\ch{#4}}% lwarp
977
                       {#4}
979
                   }
980
               \bool_if:NT \l__chemmacros_nmr_delimiters_bool
981
982}}% lwarp
               \tl_if_blank:nT {#1} {:}
983
               \verb|\group_end:|
984
               \tl_if_blank:nT {#1}
985
986
                   \tl_use:N \c_space_tl
987
                   \c_math_toggle_token
988
989
                   \delta
990
                   \c_math_toggle_token
991
                   \l__chemmacros_nmr_delta_tl
                   \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
992
               }
993
           }
994
       \group_end:
995
996
997 }% AfterEndPremble
998
999
1000 \VerifyCommand[lwarp][chemmacros]{\chemmacros_data:w}
1001
       {30A6134DE00E9850E074854B48644833}
1002
1003 \RenewDocumentCommand \chemmacros_data:w { smo }
1004
       \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
1005
1006
             \tl_use:N \l__chemmacros_nmr_format_tl #2
1007 %
           \tl_use:N \l__chemmacros_nmr_format_tl
1008
           \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
1009
1010
               \IfNoValueF {#3} { ~ ( #3 ) }
1011
           1012
           }}% lwarp
1013
1014
       \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
1015
1016
     }
1017
1018 }{}% Module loaded.
1019 }% AtBeginDocument
```

§ 194.19 Thermodynamics

```
1020 \AtBeginDocument{
1021 \chemmacros_module_if_loaded:nTF{{thermodynamics}}{
1022 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
1024 \VerifyCommand[lwarp][chemmacros]{\chemmacros_state:nnnnnn}
1025
       {C5B35D9405E380ABE9A9CE849F46EE6D}
1026
1027 \cs_gset_protected:Npn \chemmacros_state:nnnnnn #1#2#3#4#5#6
1028
     {
        \group_begin:
1029
          \chemmacros_set_keys:ne {thermodynamics}
1030
1031
1032
              \exp_not:n {#1} ,
```

```
1033
              \tl_if_novalue:nF {#2} { subscript-left = \exp_not:n {#2} , }
              \tl_if_novalue:nF {#3} { superscript-left = \exp_not:n {#3} , }
1034
              \tl_if_novalue:nF {#5} { subscript-right = \exp_not:n {#5} , }
1035
              \tl_if_novalue:nF {#6} { superscript-right = \exp_not:n {#6} }
1036
1037
1038
            \LWR@subsingledollar*{% yes hashing
1039
                \textbackslash{}state%
                \{\LWR@HTMLsanitizedetokenized{\detokenize{#4}}\}% alt
1040
            }{%
1041
                chemmacros_state% add'l hashing
1042
                #1% options
1043
                LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
1044
                LSB \tl_use:N \l__chemmacros_state_sb_left_tl
1045
1046
                RSP \tl_use:N \l__chemmacros_state_sp_right_tl
1047
                RSB \tl_use:N \l__chemmacros_state_sb_right_tl
1048
1049
                \LWR@origensuredmath
1050
1051
                    \chemmacros_text:V \l__chemmacros_state_pre_tl
1052
                    \c_math_superscript_token
1053
1054
                        { \chemmacros_text:V \l__chemmacros_state_sp_left_tl }
```

Only add the subscripts if they are being used. This avoids causing an incorrect depth, as the empty subscript will be measured by TEX but cropped out by *pdfcrop*.

```
1055
                     \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
1056
                     {}
1057
1058
                         \c_math_subscript_token
                           { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
1059
                     }
1060
                     #4
1061
                     \c_math_superscript_token
1062
                         { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
1063
1064
                     \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl
1065
                     {}
1066
                     {
                         \c_math_subscript_token
1067
1068
                         { \chemmacros_text: V \l__chemmacros_state_sb_right_tl }
1069
1070
                     \chemmacros_text:V \l__chemmacros_state_post_tl
1071
                     }
1072
            }
        \group_end:
1073
1074
     }
1075 \cs_generate_variant:Nn \chemmacros_state:nnnnnn { nVVVVV }
1077 \VerifyCommand[lwarp][chemmacros]{\chemmacros_declare_state:Nn}
1078
        {3C1386935B85ED732A283627DA403FBE}
1079
1080 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
1081
        \chemmacros_define_keys:xn
1082
          {thermodynamics/\chemmacros_remove_backslash:N #1}
1083
1084
          {
1085
          pre
                            .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
                           .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
1086
         superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
1087
         superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
1088
```

```
1089
            superscript
                               .meta:n = { superscript-right = ##1 } ,
         subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
1090
         subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
1091
1092
            subscript
                               .meta:n
                                           = { subscript-left = ##1 } ,
1093
            subscript-pos
                               .choices:nn =
1094
              { left , right }
            { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
1095
            symbol
                               .tl_set:N = \l__chemmacros_state_symbol_tl ,
1096
                               .tl_set:N = \l__chemmacros_state_unit_tl
            unit
1097
          }
1098
        \DeclareDocumentCommand #1 { s0{}D(){}m }
1099
1100
1101
            \group_begin:
1102
              \chemmacros_set_keys:en
1103
                {thermodynamics/\chemmacros_remove_backslash:N #1}
1104
                {#2}
              \tl_if_blank:nF {##3}
1105
1106
                {
                  \chemmacros_set_keys:ne {thermodynamics}
1107
                  { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
1108
                }
1109
1110 %
                \LWR@origensuredmath
1111 %
                  {
                  \chemmacros_state:nVVVVV
1112
1113
                    {##2}
1114
                    \c_novalue_tl
1115
                    \c_novalue_tl
1116
                    \l__chemmacros_state_symbol_tl
1117
                    \c_novalue_tl
1118
                    \c_novalue_tl
               \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
1119
1120
               \IfBooleanF {##1} { = \qty {##4} { \l__chemmacros_state_unit_tl } }
1121 %
                  }
1122
            \group_end:
1123
          }
1124
     }
  The pre-existing macros are redefined with the new definition:
1125 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
1126 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
1127 \RenewChemState \gibbs
                              { symbol = G , unit = \kilo\joule\per\mole }
1129 }{ }% Module loaded.
1130 }% AtBeginDocument
1131 \ExplSyntaxOff
 lwarp-chemnum.sty
```

File 86

chemnum **§ 195** Package

(Emulates or patches code by Clemens Niederberger.)

chemnum is patched for use by lwarp. chemnum (Pkg)

for HTML output: 1 \LWR@ProvidesPackagePass{chemnum}[2016/04/14]

```
2 \ExplSyntaxOn
4 \VerifyCommand[lwarp][chemnum]{\chemnum_compound_write:n}
      {E47ACDCCC4D90FAC40B75B53721EC218}
7 \cs_gset_protected:Npn \chemnum_compound_write:n #1
8
      \chemnum_get_compound_property:nn {#1} {pre-main-label-code}
9
      \group_begin:
10
        \bool_if:NTF \l__chemnum_compound_local_bool
11
          { \l__chemnum_local_label_format_tl }
12
13
          { \chemnum_get_compound_property:nn {#1} {label-format} }
14
        {
15
          \LWR@textcurrentfont{
16
              \chemnum_get_compound_property:nn {#1} {counter-representation}
17
        }
18
19
      \group_end:
      \chemnum_get_compound_property:nn {#1} {post-main-label-code}
20
21
22
23 \VerifyCommand[lwarp][chemnum]{\chemnum_subcompound_write:nn}
      {F6BB883B91A1FA330EF3B89924BF3679}
24
25
26 \cs_gset_protected:Npn \chemnum_subcompound_write:nn #1#2
27
    {
28
      \group_begin:
        \bool_if:NTF \l__chemnum_compound_local_bool
29
30
          { \l__chemnum_local_label_format_tl }
          { \chemnum_get_compound_property:nn {#1} {label-format} }
31
32
        {
33
          \LWR@textcurrentfont{
              \chemnum_get_subcompound_property:nnn {#1} {#2}
34
              {counter-representation}
35
36
37
38
      \group_end:
    }
39
40
41 \ExplSyntaxOff
```

File 87 lwarp-chkfloat.sty

```
§ 196 Package chkfloat
```

chkfloat (*Pkg*) chkfloat is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

File 88 lwarp-chngpage.sty

§ 197 Package chngpage

(Emulates or patches code by Peter Wilson.)

```
chngpage (Pkg)
                   chngpage is ignored.
                   Discard all options for lwarp-chngpage:
for HTML output:
                   1 \LWR@ProvidesPackageDrop{chngpage}[2009/10/20]
                   2 \LWR@origRequirePackage{lwarp-changepage}
           File 89 lwarp-cite.sty
         Package cite
§ 198
                   (Emulates or patches code by Donald Arseneau.)
        cite (Pkg) cite is patched for use by lwarp.
 for HTML output:
                   1 \LWR@ProvidesPackagePass{cite}[2015/02/27]
                   For the [super] option, the \kern must be removed:
                   \label{locality} $2 \det \mathbb{1}\left(\frac{1}{\ker(1)}\right), $$
                   4\ifdefstrequal{\@biblabel}{\LWRCT@biblabel}
                         \def\@biblabel#1{\@citess{#1}}
                   7 }{}
                   For the [super] option, \textsuperscript is used instead of math superscript:
                   8 \def\@citess#1{\textsuperscript{#1}}
                   10 \DeclareDocumentCommand\citepunct{}{,\,\relax}
           File 90 lwarp-citeref.sty
         Package citeref
§ 199
                   (Emulates or patches code by Björn Briel.)
     citeref (Pkg) citeref is patched for use by lwarp.
 for HTML output:
                   1 \LWR@ProvidesPackagePass{citeref}[1999/27/05]
                   2 \def\@cprwrite#1={%
                         \write\@auxout{\string\citepageref{#1}{\theLWR@previousautopagelabel}}%
                   4 }
                   6 \VerifyCommand[lwarp][citeref]{\citepageref}
                         {F5E07AE6603C65E9398417D6D392825D}
                   9 \def\citepageref#1#2{%
                         \xdef\cpr@testa{\@nameuse{cpr@last@#1}}%letzte Zitatstelle
                   10
                         \xdef\cpr@testb{#2}% Seite dieser Zitatstelle
```

12

13

\ifx\cpr@testa\cpr@testb%

\relax% Konsekutive identische Seitenangaben weglassen

```
14
    \else%
       \@namexdef{cpr@last@#1}{#2}%
15
       \@ifundefined{cpr@#1}%
16
       17
18
             \@namexdef{cpr@#1}{\@nameuse{cpr@#1}, % space
19
             \LWR@refwithsection{\BaseJobname-autopage-#2}}%
20
          }%
21
    \fi
22
23
    }
```

File 91 lwarp-CJK.sty

```
§200 Package CJK
```

CJK (Pkg) CJK does not work with lwarp unless called from ctex.

for HTML output:

```
1 \IfPackageLoadedTF{xeCJK}{}
2 \LWR@loadnever{CJK}{ctex, xeCJK}
3 }
4
5 \LWR@ProvidesPackagePass{CJK}[2015/04/18]
```

File 92 lwarp-CJKutf8.sty

```
§201 Package CJKutf8
```

CJKutf8 (Pkg) CJKutf8 does not work with lwarp unless called from ctex.

```
for HTML output: 1 \IfPackageLoadedTF{xeCJK}{}{
2    \LWR@loadnever{CJKutf8}{ctex, xeCJK}}
3 }
4
5 \LWR@ProvidesPackagePass{CJKutf8}[2015/04/18]
```

File 93 lwarp-classicthesis.sty

§ 202 Package classicthesis

(Emulates or patches code by André Miede and Ivo Pletikosić.)

classicthesis (*Pkg*) classicthesis is emulated.

for HTML output: Discard all options for lwarp-classicthesis:

1 \LWR@ProvidesPackageDrop{classicthesis}[2018/06/03]

```
2 \RequirePackage{scrlayer-scrpage} % provides headers and footers (KOMA Script)
3 \RequirePackage{scrtime} % time access
4 \PassOptionsToPackage{titles}{tocloft}
5 \RequirePackage{textcase} % for \MakeTextUppercase
6 \RequirePackage[newparttoc]{titlesec} % newparttoc to write \part to .toc with \numberline
```

```
7 \RequirePackage{tocloft}
8 \PassOptionsToPackage{headinclude, footinclude}{typearea} % for classes other than KOMA
9 \RequirePackage{typearea}
10 \PassOptionsToPackage{marginal}{footmisc}% marginal flushmargin
11 \RequirePackage{footmisc}%
12 \RequirePackage{prelim2e}
13 \RequirePackage{remreset}%
14
15 \DeclareRobustCommand{\spacedallcaps}[1]{\textsc{\MakeTextUppercase{#1}}}}
16 \DeclareRobustCommand{\spacedlowsmallcaps}[1]{\textsc{\MakeTextLowercase{#1}}}}
17 \newcommand{\ctparttext}[1]{}
18 \newcommand{\tocEntry}[1]{}
19 \DeclareRobustCommand*{\deactivateaddvspace}{}%
20 \newlength{\beforebibskip}}
```

File 94 lwarp-cleveref.sty

§ 203 Package cleveref

(Emulates or patches code by Toby Cubitt.)

cleveref (*Pkg*) cleveref is patched for HTML, and limited MATHJAX emulation is added.

cleveref page numbers

cleveref and varioref are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for \cpageref and \cpagerefrange. This phrase includes \cpagerefFor, which defaults to "for".

Ex:

```
\cpageref{tab:first,tab:second}
in html becomes:
    "pages for table 4.1 and for table 4.2"
```

See \cpagerefFor at page 746 to redefine the message which is printed for page number references.

Table 16 on page 500 shows the data structure of the label/reference system as revised by lwarp and cleveref.

For MathJax, each references is printed as an \eqref, without cleveref's description text. Page references are also printed as simple \eqrefs. Multiple labels in a single \cref will print as (???) in MathJax.

 \triangle multiple labels

for HTML output:

1 \LWR@ProvidesPackagePass{cleveref}[2018/03/27]

The following patches are applied. Print-mode versions are not required since they all come down to \ref eventually, and \ref has a print-mode version.

```
\ensuremath{\texttt{000}} setcref \{\langle kindofref \rangle\} \{\langle label \rangle\}
```

\@templabel becomes the section number.

```
6 }{
                         \ifdefequal{\@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
                   7
                   8
                             \renewcommand*{\@@setcref}[2]{%
                   9
                                  #1{\ref{#2}}{}}}
                  10
                             \PackageWarningNoLine{lwarp-cleveref}{
                  11
                                  Unknown version of cleveref.
                  12
                                  \protect\cref\space will fail.
                  13
                             }%
                  14
                        }
                  15
                  16 }
\ensuremath{\verb{QQQSetcrefrange}} \{\langle \textit{text} \rangle\} \{\langle \textit{label} \rangle\} \{\langle \textit{label} \rangle\}
                  17 \def\LWR@orig@@@setcrefrange#1#2#3{%
                      \cref@getlabel{#2}{\@labela}%
                      \cref@getlabel{#3}{\@labelb}%
                  20
                      #1{\@labela}{\@labelb}{}{}{}}%
                  21
                  22 \ifdefequal{\@@setcrefrange}{\LWR@orig@@@setcrefrange}{
                         \renewcommand{\@@setcrefrange}[3]{%
                  23
                             #1{\ref{#2}}{\ref{#3}}{}{}{}%
                  24
                  25
                         }
                  26 }{
                         \ifdefequal{\@@setcrefrange}{\LWR@orig@@@setcrefrange}{
                  27
                             \renewcommand{\@@setcrefrange}[3]{%
                  28
                  29
                                  #1{\ref{#2}}{\ref{#3}}{}{}{}%
                  30
                  31
                        }{
                             \PackageWarningNoLine{lwarp-cleveref}{
                  32
                                  Unknown version of cleveref.
                  33
                                  \protect\crefrange\space will fail.
                  34
                             }
                  35
                        }
                  36
                  37 }
    \cpagerefFor Redefinable word between "page(s)" and the page numbers.
                  38 \newcommand*{\cpagerefFor}{for}
\@@@setcpageref \{\langle typeofref \rangle\} \{\langle label \rangle\}, where typeofref is "page" or "pages"
                  39 \def\LWR@orig@@setcpageref#1#2{% before v0.21
                  40
                      \cref@getpageref{#2}{\@temppage}#1{\@temppage}{}{}}%
                  41
                  42 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
                      \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{}{}}%
                  43
                  44
                  45 \ifdefequal{\@@setcpageref}{\LWR@orig@@setcpageref}{
                         \renewcommand*{\@@setcpageref}[2]{%
                  46
                  47
                             #1{\operatorname{CpagerefFor} \operatorname{Cref}{#2}}{}{}%
                  48
                  49 }{
                         \ifdefequal{\@@esetcpageref}{\LWR@orig@@@setcpageref}{
                  50
                             \renewcommand*{\@@@setcpageref}[2]{%
                  51
                                  #1{\cpagerefFor\ \cref{#2}}{}{}%
                  52
                             }
                  53
```

```
54
      }
      {
55
56
          \PackageWarningNoLine{lwarp-cleveref}{
              Unknown version of cleveref.
57
58
              \protect\cpageref\space will fail.
59
          }
      }
60
61 }
62 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
    \cref@getpageref{#2}{\@pagea}%
    \cref@getpageref{#3}{\@pageb}%
65
   #1{\@pagea}{\@pageb}{}{}{}}%
67 \def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
    \cpageref@getlabel{#2}{\@pagea}%
    \cpageref@getlabel{#3}{\@pageb}%
    1{\q} {1{\q}}{}{}}
70
71
72 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
      \renewcommand*{\@@setcpagerefrange}[3]{%
73
          1{\operatorname{f}}{\cref{#3}}{}{\cref{#3}}{}{}
74
75
      }
76 }{
77
      \ifdefequal{\@@@setcpagerefrange}{\LWR@orig@@@setcpagerefrange}{
78
          \renewcommand*{\@@setcpagerefrange}[3]{%
79
              #1{\operatorname{$-1}}{\operatorname{$-1}}{\operatorname{$-1}}{}
80
      }
81
82
      {
          \PackageWarningNoLine{lwarp-cleveref}{
83
              Unknown version of cleveref.
84
              \protect\cpagerefrange\space will fail.
85
86
          }
      }
87
88 }
```

If hyperref is loaded, cleveref defines starred versions of the following, but since hyperref is only emulated, starred versions are defined here:

```
89 \LWR@absorbstar{cref}
90 \LWR@absorbstar{Cref}
91 \LWR@absorbstar{crefrange}
92 \LWR@absorbstar{Crefrange}
93 \LWR@absorbstar{cpageref}
94 \LWR@absorbstar{Cpageref}
95 \LWR@absorbstar{cpagerefrange}
96 \LWR@absorbstar{Cpagerefrange}
97 \LWR@absorbstar{labelcref}
98 \LWR@absorbstar{labelcpageref}
```

If hyperref is loaded, cleveref also defines starred versions of varioref macros, so they are defined here.

```
99 \IfPackageLoadedTF{varioref}{
100    \LWR@absorbstar{vref}
101    \LWR@absorbstar{Vref}
102    \LWR@absorbstar{vrefrange}
103    \LWR@absorbstar{Vrefrange}
```

```
\LWR@absorbstar{fullref}
104
      \LWR@absorbstar{Fullref}
106 }{}% varioref
107 \IfClassLoadedTF{memoir}{
108 \AtBeginDocument{
109 \def\sf@memsub@label(#1)#2{%
110 \protected@edef\mem@currentlabelname{#1}%
111 \sf@@memsub@label{#2}}
112 }
113 }{}
114 \IfPackageLoadedTF{subfig}{
115 \def\sf@sub@label(#1)#2{%
116 \ifhyperrefloaded
      \protected@edef\@currentlabelname{%
         \expandafter\strip@period #1\relax.\relax\@@@}%
118
    \fi
119
120 \sf@@sub@label{#2}}
121 }{}
```

File 95 lwarp-clrdblpg.sty

§ 204 Package clrdblpg

clrdblpg (*Pkg*) clrdblpg is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]

File 96 lwarp-cmbright.sty

§ 205 Package cmbright

(Emulates or patches code by Walter Schmidt.)

cmbright (*Pkg*) cmbright is used as-is for svg math, and is emulated for MATHJAX.

⚠ limitations

The MathJax emulation ignores all package options, except slantedGreek is honored, and \mathbold is available.

The dedicated macros for upright Greek letters do work correctly.

svg math should appear the same as the printed output.

```
for HTML output: 1 \LWR@ProvidesPackagePass{cmbright}[2005/04/13]
2
3 \LWR@infoprocessingmathjax{cmbright}

4 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
5
6 \begin{warpMathJax}
7
8 \IfPackageLoadedWithOptionsTF{cmbright}{slantedGreek}
```

```
9 {
10      \LWR@mathjax@addgreek@u@it*{}{}
11 }
12 {}
13
14 \LWR@mathjax@addgreek@u@up*{up}{}
15
16 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
17
18 \end{warpMathJax}
```

File 97 lwarp-cmdtrack.sty

```
§ 206 Package cmdtrack
```

cmdtrack (Pkg) cmdtrack is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]

2 \newcommand{\untrack}[1]{}

File 98 lwarp-colonequals.sty

§ 207 Package colonequals

(Emulates or patches code by Heiko Oberdiek.)

colonequals (*Pkg*) colonequals is used as-is for svg math, and is emulated for MATHJAX.

Since UNICODE symbols are not available for each of the following, only two are used for the single and double colons, and the other symbols are derived in a consistent manner. Occasional negative space is added as well. This may need to be undone for some fonts.

```
for HTML output: 1 \LWR@ProvidesPackagePass{colonequals}[2016/05/16]
```

```
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{colonequals}
5 \CustomizeMathJax{\newcommand{\ratio}{\mathrel{\unicode{x2236}}}}
6 \CustomizeMathJax{\newcommand{\coloncolon}{\mathrel{\unicode{x2237}}}}
\label{thm:constant} $$  \colonequals {\mothrel{\unicode{x2236}}!=}} 
 8 \customize MathJax {\newcommand \colonequals} {\mbox{wathrel \unicode \x2237}}!= \} } 
9 \CustomizeMathJax{\newcommand{\equalscolon}{\mathrel{=\!\unicode{x2236}}}}
10 \CustomizeMathJax{\newcommand{\equalscoloncolon}{\mathrel{=\!\unicode{x2237}}}}
11 \CustomizeMathJax{\newcommand{\colonminus}{\mathrel{\unicode{x2236}-}}}
12 \CustomizeMathJax{\newcommand{\coloncolonminus}{\mathrel{\unicode{x2237}-}}}
13 \CustomizeMathJax{\newcommand{\minuscolon}{\mathrel{-\unicode{x2236}}}}
14 \CustomizeMathJax{\newcommand{\minuscoloncolon}{\mathrel{-\unicode{x2237}}}}
15 \CustomizeMathJax{\newcommand{\colonapprox}{\mathrel{\unicode{x2236}\!\approx}}}
16 \CustomizeMathJax{\newcommand{\coloncolonapprox}{\mathrel{\unicode{x2237}\!\approx}}}
17 \CustomizeMathJax{\newcommand{\approxcolon}{\mathrel{\approx\!\unicode{x2236}}}}
18 \CustomizeMathJax{\newcommand{\approxcoloncolon}{\mathrel{\approx\!\unicode{x2237}}}}
```

```
 \label{thm:code} $$20 \subset \frac{\angle (\angle (\
```

File 99 lwarp-color.sty

§ 208 Package **color**

color (Pkg) Allowed but ignored. xcolor is then required as well.

color is superceded by xcolor, and lwarp requires several of the features of xcolor. When color is requested, xcolor is loaded as well.

for HTML output: 1 \LWR@ProvidesPackageDrop{color}[2016/07/10]

2 \RequirePackage{xcolor}

\color@endgroup's \endgraf was conflicting with lwarp's paragraph handling.

3 \let\color@endgroup\endgroup

File 100 lwarp-colortbl.sty

§209 Package colortbl

colortbl (*Pkg*) colortbl is used as-is for print output, and emulated for HTML.

row/cell color Only use \rowcolor and \cellcolor at the start of a row, in that order.

colortbl ignores the overhang arguments.

colored tables \rowcolors is supported, except that the optional argument is ignored so far.

for HTML output: A placeholder definition is forgotten first:

1 \let\rowcolor\relax

3 \LWR@ProvidesPackagePass{colortbl}[2022/06/20]

The following \LWR@HTML versions are used inside an HTML tabular.

\columncolor $[\langle model \rangle] \{\langle color \rangle\} [\langle left \ overhang \rangle] [\langle right \ overhang \rangle]$

\LWR@getmynexttoken is not used here because \columncolor is not used inside the data area of the tabular.

 $\verb|\columncolor| is provided here to satisfy \verb|\LWR@formatted|'s test for the existence of the print-mode macro.$

```
4 \ProvideDocumentCommand{\columncolor}{O{named} m o o}{}% 5 6 \NewDocumentCommand{\LWR@HTML@columncolor}{O{named} m o o}{% 7 \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor% 8 \LWR@addtabularcellcolor%
```

9 }

```
11 \AtBeginDocument{\LWR@formatted{columncolor}}
                                    \LWR@getmynexttoken is used for \rowcolor because it is used inside the data area
                                    of the tabular.
                                     [\langle model \rangle] \{\langle color \rangle\} [\langle left \ overhang \rangle] [\langle right \ overhang \rangle]
  \rowcolor
                                   12 \NewDocumentCommand{\LWR@HTML@rowcolor}{O{named} m o o}{%
                                          \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
                                          \LWR@getmynexttoken%
                                   14
                                   15 }
                                   16
                                   17 \AtBeginDocument{\LWR@expandableformatted{rowcolor}}
                                     [\langle model \rangle] \{\langle color \rangle\} [\langle left \ overhang \rangle] [\langle right \ overhang \rangle]
  \cellcolor
                                   18 \NewDocumentCommand{\LWR@HTML@cellcolor}{O{named} m o o}{%
                                          \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
                                          \LWR@addtabularcellcolor%
                                   20
                                   21 }
                                   23 \AtBeginDocument{\LWR@formatted{cellcolor}}
  \arrayrulecolor
                                     [\langle model \rangle] \{\langle color \rangle\}
                                    The HTML version for use outside a tabular. Inside a tabular, \LWR@HTML@arrayrulecolornexttoken
                                    is used instead.
                                   24 \newcommand{\LWR@HTML@arrayrulecolor}[2][named]{%
                                          \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
                                   26 }
                                   27
                                   28 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolor}}
                                     [\langle model \rangle] \{\langle color \rangle\}
\LWR@arrayrulecolornexttoken
                                    The HTML version for use inside a tabular.
                                   29 \newcommand{\LWR@HTML@arrayrulecolornexttoken}[2][named]{%
                                          \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
                                          \LWR@getmynexttoken%
                                   31
                                   32 }
                                   34 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolornexttoken}}
  \doublerulesepcolor
                                     [\langle model \rangle] \{\langle color \rangle\}
                                    The version for use outside a tabular.
                                   35 \newcommand{\LWR@HTML@doublerulesepcolor}[2][named]{}
                                   37 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolor}}
                                     [\langle model \rangle] \{\langle color \rangle\}
\verb|\LWR@doublerulesepcolornexttok|| \textbf{P} \textbf{he version for use inside a tabular}.
                                   38 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
                                   39
```

```
40 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}
\rowc@l@rs
                                                                               [\langle cmds \rangle] \{\langle startrow \rangle\} \{\langle odd color \rangle\} \{\langle even color \rangle\}
                                                                          41 \newcommand*{\LWR@xcolortempcolor}{}
                                                                          43 \end{tabular} [colortbl] $$ \operatorname{colortbl}_{\end{tabular}} $$ A66C3974E0C5BD5C3DDE033367D197A4$$ $$ A66C3974E0C5BD5C3D197A4$$ $$ A66C3974E0C5BD5C3D197A4$$ $$ A66C3974E0C5BD5C3D197A5$$ $$ A66C3974$$ $$ A66C3974$$ $$ A66C3974$$ $$ A66C3974$$ $$ A66C3974$$ $$ A66C3974$$ A66C3974$$ $$ A66C3974$$ A66C3974$$ $$ A66C3974$$ $$ A66C3974$$ $$ A66C3974$$ $$ A66C3974$
                                                                          45 \def\rowc@l@rs[#1]#2#3#4%
                                                                          46 {%
                                                                           The lwarp emulation starts at row 1 instead of 0.
                                                                                       \global\rownum=\z@
                                                                                        \global\rownum=1%
                                                                                                                                                            lwarp
                                                                                        \global\@rowcolorstrue%
                                                                          49
                                                                          50
                                                                                        \@ifxempty{#3}%
                                                                                            {\def\@oddrowcolor{\@norowcolor}}%
                                                                          51
                                                                          52
                                                                                            {%
                                                                                                     \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
                                                                                                                                                                                                                                                                         lwarp
                                                                          53
                                                                                                     \edef\@oddrowcolor{%
                                                                          54
                                                                                                                \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
                                                                                                                                                                                                                                                                         lwarp
                                                                          55
                                                                          56
                                                                                                     }%
                                                                          57
                                                                                            }%
                                                                          58
                                                                                        \@ifxempty{#4}%
                                                                          59
                                                                                            {\def\@evenrowcolor{\@norowcolor}}%
                                                                          60
                                                                                             {%
                                                                                                     \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
                                                                          61
                                                                                                                                                                                                                                                                         lwarp
                                                                                                     \edef\@evenrowcolor{%
                                                                          62
                                                                                                                \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
                                                                                                                                                                                                                                                                         lwarp
                                                                          63
                                                                                                     }%
                                                                          64
                                                                                            }%
                                                                          65
                                                                          66
                                                                                        \if@rowcmd
                                                                                             \def\@rowcolors
                                                                          67
                                                                          68
                                                                                            {%
                                                                          69 %
                                                                                                           #1%
                                                                          70
                                                                                                     \if@rowcolors
                                                                          71 %
                                                                                                          \noalign{%
                                                                          72
                                                                                                                \relax\ifnum\rownum<#2\@norowcolor\else
                                                                                                                \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
                                                                          73
                                                                          74 %
                                                                                                             }%
                                                                                                     \fi%
                                                                          75
                                                                                            }%
                                                                          76
                                                                          77
                                                                                        \else
                                                                                             \def\@rowcolors
                                                                          78
                                                                          79
                                                                                            {%
                                                                                                     \if@rowcolors
                                                                          80
                                                                          81
                                                                                                                \ifnum\rownum<#2%
                                                                          82 %
                                                                                                                   \noalign{%
                                                                                                                           \@norowcolor
                                                                          83
                                                                                                                     }
                                                                          84 %
                                                                                                                \else
                                                                          85
                                                                                                                   #1%
                                                                          86 %
                                                                                                                   \noalign{%
                                                                          87 %
                                                                                                                           \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
                                                                          88
                                                                                                                     }%
                                                                          89 %
                                                                                                                \fi
                                                                          90
                                                                                                     \fi%
                                                                          91
                                                                          92
                                                                                            }%
```

93

\fi

```
94
                                 \ignorespaces%
                            95 }
                              Turns off color for this row.
\@norowcolor
                            96 \def\@norowcolor{%
                                  \renewcommand{\LWR@xcolorrowHTMLcolor}{}%
                           98 }
\@rowc@lors
                              Executed at the end of each row.
                           99 \def\@rowc@lors{%
                           100 %
                                 \noalign{%
                           101
                                      \advance\rownum\@ne%
                           102 %
                                  \@rowcolors%
                           103
                           104 }
                            For MathJax, use the MathJax package. The unused macro options are ignored.
                           105 \begin{warpMathJax}
                           107 \CustomizeMathJax{\require{colortbl}}
                           108 \CustomizeMathJax{\let\LWRorigcolumncolor\columncolor}
                           109 \CustomizeMathJax{\renewcommand{\columncolor}[2][named]{%
                                  \LWRorigcolumncolor[#1]{#2}%
                           111
                                  \LWRabsorbtwooptions%
                           112 }}
                           114 \CustomizeMathJax{\let\LWRorigrowcolor\rowcolor}
                           115 \CustomizeMathJax{\renewcommand{\rowcolor}[2][named]{%
                                  \LWRorigrowcolor[#1]{#2}%
                                  \LWRabsorbtwooptions%
                           117
                           118 }}
                           120 \CustomizeMathJax{\let\LWRorigcellcolor\cellcolor}
                           121 \CustomizeMathJax{\renewcommand{\cellcolor}[2][named]{%
                                  \LWRorigcellcolor[#1]{#2}%
                           123
                                  \LWRabsorbtwooptions%
                           124 }}
                           126 \end{warpMathJax}
                   File 101 lwarp-continue.sty
                  Package continue
         §210
             continue (Pkg) continue is ignored.
          for HTML output:
                            1 \LWR@ProvidesPackageDrop{continue}}[2018/12/09]
                            2 \newcommand*{\flagcont}{}
                            3 \newcommand*{\flagend}{}
                            4 \newcommand*{\flagword}{}
```

5 \newcommand*{\preflagword}{}
6 \newcommand*{\postflagword}{}

7 \newlength\contsep

8 \newlength\contdrop

File 102 lwarp-copyrightbox.sty

§211 Package copyrightbox

(Emulates or patches code by Thomas Fischer, Ives van der Flaas.)

copyrightbox (*Pkg*) copyrightbox is emulated for use by lwarp.

The entire copyright box is placed inside a <div> of class copyrightbox.

The contents are placed inside a <div> of class copyrightboxcontents.

The copyright notice is placed inside a <div> of class copyrightboxnote.

for HTML output:

1 \LWR@ProvidesPackageDrop{copyrightbox}[2011/11/27]

File 103 lwarp-crop.sty

§212 Package Crop

(Emulates or patches code by Melchior FRANZ.)

crop(Pkg) **crop** is ignored.

for HTML output: Discard all options for lwarp-crop:

1 \LWR@ProvidesPackageDrop{crop}[2003/05/20]

```
2 \newcommand*{\crop}[1][]{}
3 \newcommand*{\cropdef}[6][]{}
```

File 104 lwarp-ctable.sty

§213 Package ctable

(Emulates or patches code by Wybo Dekker.)

ctable (Pkg) ctable is patched for use by lwarp.

Misplaced alignment tab character &

Use \StartDefiningTabulars before one or more \ctables, and \StopDefiningTabulars after. These change the meaning of the ampersand & character.

for HTML output: 1 \LWR@ProvidesPackagePass{ctable}[2015/10/17]

The following is in the original:

```
2 \newcommand{\LWR@HTML@ctable}[4][]{%
     \let\@CTtaborfig \@dfltCTtaborfig
     \let\@CTalign
                       \@dfltCTalign
     \let\@CTsideways \@dfltCTsideways
     \let\@CTcontinued \empty
     \let\@CTpos
                       \@dfltCTpos
8
     \let\@CTcaption
                       \empty
                       \underlined
9
     \let\@CTcap
     \let\@CTlabel
                       \empty
10
     \let\@CTbotcap
                       \@dfltCTbotcap
11
     \let\@CTstarred
                       \@dfltCTstarred
12
     \let\@CTsuper
                       \@dfltCTsuper
13
     \let\@CTnotespar \@dfltCTnotespar
14
     \let\@CTdoinside \@dfltCTdoinside
15
16
     \let\@CTbgopacity \@dfltCTbgopacity
17
     \@CTframerule
                        \@dfltCTframerule
18
     \@CTcaptionskip
                       \@dfltCTcaptionskip
19
     \@CTframesep
                       \@dfltCTframesep
     \@CTwidth
                       \@dfltCTwidth
20
     \@CTmaxwidth
                       \@dfltCTmaxwidth
21
                       \@dfltCTmincapwidth
     \@CTmincapwidth
22
     \@CTfooterwidth
                       \@dfltCTfooterwidth
23
     \def\@CTfgactual {@dfltCTframefg}%
24
25
     \def\@CTbgactual {@dfltCTframebg}%
     \def\@CTbeg
                      {\begin{\@CTsideways\@CTtaborfig\@CTstarred}}%
26
     \def\@CTbegin
27
     \def\@CTend
                      {\end{\@CTsideways\@CTtaborfig\@CTstarred}}%
28
29
     \setkeys{CT}{#1}%
30
     \ifx\@CTcap\undefined\let\@CTcap\@CTcaption\fi
     \ifx\@CTcap\empty
31
       \if @CT caption loaded \else
32
         \PackageWarningNoLine{lwarp-ctable}{\MessageBreak
33
            An empty cap= option prevents lot/loc entry only\MessageBreak
34
            if the caption package is loaded!}
35
       \fi
36
     \fi
37
     \if@CTinmemoir\else
38
39
        \ifx\@CTbotcap\undefined
           \PackageError{lwarp-ctable}{\MessageBreak
40
             You can, currently, use the sidecap option only with\MessageBreak
41
              memoir documents. Use topcap or botcap only}
42
```

```
43
              {}
        \fi
44
     \fi
45
     \ifdim\@CTwidth=0pt\else
46
47
        \ifdim\@CTmaxwidth=0pt\else
           \PackageError{lwarp-ctable}{\MessageBreak
48
            You may not use the width and maxwidth options together\MessageBreak
49
              Use either width or maxwidth}
50
51
              {}
        \fi
52
53
     \fi
54
     \ifx\@CTpos\empty
55
        \ifx\@CTsideways\empty\else
56
        \PackageError{lwarp-ctable}{\MessageBreak
57
           You may not use the pos and sideways options together\MessageBreak
58
           Rotated tables and figures are always typeset on a separate page}
59
          {}
        \fi
60
     \fi
61
     \ifx\@CTcaption\empty
62
        \ifx\@CTlabel\empty\else
63
           \PackageError{lwarp-ctable}{\MessageBreak
64
              You may not label a captionless table \MessageBreak
65
              Such a label can't be referenced}
66
67
              {}
68
        \fi
69
     \fi
```

Some of the original, regarding computing the width of \CT@t, is removed here.

```
70  \@CTbegin
71  \ifx\@CTcontinued\empty\else\addtocounter{\@CTtaborfig}{-1}\fi
72  \@CTalign
```

lwarp's patches begin here:

```
\begin{center}
73
          \setlength{\fboxrule}{\@CTframerule}
74
          \setlength{\fboxsep}{\@CTframesep}
75
          \LWR@forceminwidth{\fboxrule}% lwarp
76
77
          \convertcolorspec{named}{\@CTbgactual}{HTML}\LWR@tempcolor% lwarp
78
          \begin{BlockClass}[%
                                                            lwarp
              border:
79
                  \LWR@printlength{\LWR@atleastonept}
80
81
                  solid
                  \LWR@colorstyle{named}{\@CTfgactual}; %
82
              padding:\LWR@printlength{\fboxsep} ; %
83
              \ifdefstring{\LWR@tempcolor}{FFFFFF}{}{%
84
                  background: \LWR@colorstyle{named}{\@CTbgactual} ; %
85
              }%
86
87
          ]{fminipage}%
                               lwarp
           \verb|\color=| @CTCaption| vskip| @CTcaptionskip| fi
88
89
           \ifx\@CTbotcap\undefined%
               \begin{sidecaption}[\@CTcap]{\@CTcaption}[\@CTlabel]
90
91
           \fi
92
           \@CTdoinside
           \begin{tabularx}{\linewidth}{#2}%
93
                                                    lwarp
              #4%
94
           \end{tabularx}%
95
                                                lwarp
```

```
\def\@CTfootnotes{#3}%
          96
                     \ifx#3\empty\else{% append footnotes, if any
          97
                        \begin{BlockClass}{tnotes}%
          99
                        \end{BlockClass}%
          100
                                                       lwarp
          101
                     }
                     \fi
          102
                     \int \end{sidecaption} fi
          103
                     104
                    \end{BlockClass}
          105
          106
                \end{center}
          107
                \@CTend
          108 }
          109 \LWR@formatted{ctable}
           Required to properly detect the toprule:
          110 \LetLtxMacro\FL\toprule
           Table notes are redefined for HTML:
          111 \newcommand{\LWR@HTML@tmark}[1][a]{%
               \textsuperscript{\textrm{\textit{#1}}}
          112
          113 }
          114 \LWR@formatted{tmark}
          115
          116 \newcommand{\LWR@HTML@tnote}[2][a]{%
                \tmark[#1]\,#2\par
          119 \LWR@formatted{tnote}
  File 105 lwarp-cuted.sty
  Package cuted
           (Emulates or patches code by Sigitas Tolušis.)
cuted (Pkg) cuted is ignored.
           1 \LWR@ProvidesPackageDrop{cuted}[2021/10/04]
           2 \newenvironment{strip}{}{}
           3 \newskip\stripsep
           4 \newtoks\preCutedStrip \preCutedStrip{}
           5 \newtoks\postCutedStrip \postCutedStrip{}
           6 \def\oldcolsbreak#1{}
```

File 106 lwarp-cutwin.sty

Package **Cutwin** §215

§214

for HTML output:

(Emulates or patches code by Peter Wilson and Alan Hoenig.)

cutwin (Pkg) cutwin is emulated.

Discard all options for lwarp-cutwin: for HTML output: 1 \LWR@ProvidesPackageDrop{cutwin}[2010/09/29] 2 \newcommand*{\opencutleft}{} 3 \newcommand*{\opencutright}{} 4 \newcommand*{\opencutcenter}{} 5 \newcommand*{\cutfuzz}{} 7 \newenvironment{cutout}[4] $\\ {\verb| marginpar{ \windowpagestuff}|} \\$ 9 { } 10 $\label{linewcommand*{\windowpagestuff}{}} \label{linewcommand*{\windowpagestuff}{}} \\$ 13 \newcommand*{\pageinwindow}{% 14% \begin{minipage}{.3\linewidth} 15 \windowpagestuff 16% \end{minipage} 17 } 19 \newenvironment{shapedcutout}[3] 20 {\marginpar{\picinwindow}} 21 {} 23 \newcommand*{\putstuffinpic}{} 25 \newcommand*{\picinwindow}{% 26 \begin{picture}(0,0) 27 \putstuffinpic 28 \end{picture}} File 107 lwarp-dblfloatfix.sty Package dblfloatfix \$216 dblfloatfix (Pkg) dblfloatfix is ignored. for HTML output: 1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31] File 108 lwarp-dblfnote.sty Package dblfnote §217 (Emulates or patches code by Hiroshi Nakashima.) dblfnote(Pkg)dblfnote is ignored. for HTML output: 1 \LWR@ProvidesPackageDrop{dblfnote}[1999/07/14] 2 \newcounter{DFNsloppiness} 3 \newdimen\DFNcolumnsep 4 \newdimen\DFNcolumnwidth

5 \def\DFNallowcbreak{}

```
6 \def\DFNinhibitcbreak{}
7 \def\DFNtrysingle{}
8 \def\DFNalwaysdouble{}
9 \def\DFNruleboth{}
10 \def\DFNruleleft{}
```

File 109 lwarp-dcolumn.sty

§218 Package dcolumn

dcolumn (Pkg) dcolumn is used as-is in a lateximage, and is emulated by the lwarp core.

 $\label{lem:continuous} \mbox{dcolumn used to be $\LWR@ProvidesPackageDrop in prior versions of lwarp, but is now supported for print mode.}$

1 \LWR@ProvidesPackagePass{dcolumn}[2014/10/28]

Due to how the D column is created, cannot use \HTMLnewcolumntype here. An HTML version neutralizes the lower-level macros, leaving a c column type.

```
2 \newcommand*{\LWR@HTML@DC@}[3]{}
3 \LWR@formatted{DC@}
4
5 \providecommand*{\DC@end}{}
6
7 \newcommand*{\LWR@HTML@DC@end}{}
8 \LWR@formatted{DC@end}
```

File 110 lwarp-decimal.sty

§219 Package decimal

($\it Emulates~or~patches~code~by$ A. Syropoulos and R. W. D. Nickalls.)

decimal (Pkg) decimal works as-is for svg math, and is emulated for MATHJAX.

```
\begin{tabular}{ll} \textbf{for HTML output:} & 1 \LWR@ProvidesPackagePass{decimal}[2011/06/03] \end{tabular}
```

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\def\.{\mbox{.}}}
4 \end{warpMathJax}
```

File 111 lwarp-decorule.sty

§220 Package decorule

(Emulates or patches code by Peter Flynn.)

decorule (Pkg) decorule is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{decorule}[2020/04/01]

```
2 \xpretocmd{\decorule}
                {\begin{lateximage}*[decorule]}
                {\LWR@patcherror{decorule}{decorule A}}
          5
          7 \xapptocmd{\decorule}
                {\end{lateximage}}
          8
          9
                {}
                {\LWR@patcherror{decorule}{decorule B}}
         10
File 112 lwarp-diagbox.sty
         diagbox
          (Emulates or patches code by Leo Liu.)
         diagbox is patched for use by lwarp.
          1 \LWR@ProvidesPackagePass{diagbox}[2016/12/28]
          To restore print-mode inside a lateximage:
          2 \LetLtxMacro\LWR@origdiagbox@double\diagbox@double
          3 \LetLtxMacro\LWR@origdiagbox@triple\diagbox@triple
          5 \appto\LWR@restoreorigformatting{%
          6 \LetLtxMacro\diagbox@double\LWR@origdiagbox@double%
          7 \LetLtxMacro\diagbox@triple\LWR@origdiagbox@triple%
          8 }
           \{\langle E/W \rangle\} \{\langle A \rangle\} \{\langle E/W \rangle\} \{\langle B \rangle\}
          9 \newcommand{\LWR@diagbox@AB}[4]{
         10 \begingroup%
         11 \LetLtxMacro\\\newline%
         12 \BlockClassSingle{diagbox#1}{#2}%
         13 \BlockClassSingle{diagbox#3}{#4}%
         14 \endgroup%
         15 \LWR@stoppars%
         16 }
           \{\langle A \rangle\} \{\langle B \rangle\}
         17 \newcommand{\LWR@diagboxNW}[2]{%
         18 \LWR@diagbox@AB{E}{#2}{W}{#1}%
         19 }
```

Likewise for NE, SW, SE:

22 }

20 \newcommand{\LWR@diagboxNE}[2]{% 21 \LWR@diagbox@AB{W}{#1}{E}{#2}%

24 \let\LWR@diagboxSW\LWR@diagboxNE 25 \let\LWR@diagboxSE\LWR@diagboxNW

Package

diagbox(Pkg)

for HTML output:

\$221

\LWR@diagbox@AB

\LWR@diagboxNW

```
\{\langle keys \rangle\} \{\langle A \rangle\} \{\langle B \rangle\}
\diagbox@double
                                                                                                                       26 \def\diagbox@double#1#2#3{%
                                                                                                                       27\setkeys{diagbox}{dir=NW,#1}%
                                                                                                                       {\tt 28 \ensuremath{\mbox{\tt 0}diagbox{\tt 0}
                                                                                                                       29 }
                                                                                                                                \{\langle title \rangle\} \{\langle A \rangle\} \{\langle B \rangle\}
\LWR@diagboxTNW
                                                                                                                       30 \newcommand{\LWR@diagboxTNW}[3]{%
                                                                                                                       31 \BlockClassSingle{diagboxtitleN}{#1}
                                                                                                                       32 \LWR@diagboxNW{#2}{#3}
                                                                                                                       33 }
                                                                                                                          Likewise for NE, SW, SE:
                                                                                                                       34 \newcommand{\LWR@diagboxTNE}[3]{%
                                                                                                                      35 \BlockClassSingle{diagboxtitleN}{#1}
                                                                                                                      36 \LWR@diagboxNE{#2}{#3}
                                                                                                                      37 }
                                                                                                                       38
                                                                                                                       39 \newcommand{\LWR@diagboxTSW}[3]{%
                                                                                                                       40 \LWR@diagboxSW{#2}{#3}
                                                                                                                       41 \BlockClassSingle{diagboxtitleS}{#1}
                                                                                                                       42 \LWR@stoppars%
                                                                                                                       43 }
                                                                                                                      44
                                                                                                                      45 \newcommand{\LWR@diagboxTSE}[3]{%
                                                                                                                       46 \LWR@diagboxSE{#2}{#3}
                                                                                                                       47 \BlockClassSingle{diagboxtitleS}{#1}
                                                                                                                       48 \LWR@stoppars%
                                                                                                                       49 }
\diagbox@triple
                                                                                                                                \{\langle keys \rangle\} \{\langle A \rangle\} \{\langle T \rangle\} \{\langle B \rangle\}
                                                                                                                       50 \def\diagbox@triple#1#2#3#4{%
                                                                                                                       51\setkeys{diagbox}{dir=NW,#1}%
                                                                                                                       \label{localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localized-localiz
                                                                                                                       53 }
                                                                                 File 113 lwarp-dingbat.sty
                                                                               Package dingbat
                                       § 222
                                                                                                                          (Emulates or patches code by Scott Pakin.)
                                                            dingbat(Pkg)
                                                                                                                         dingbat is patched for use by lwarp.
                                          for HTML output:
                                                                                                                           1 \LWR@ProvidesPackagePass{dingbat}[2001/04/27]
                                                                                                                          2 \newcommand*{\LWR@dingbatsymbol}[1]{\HTMLunicode{#1}}
                                                                                                                          {\tt 4 \ lemmand \{\ LWR@HTML@rightpointright\} \{\ LWR@dingbatsymbol \{261E\}\} \}}
                                                                                                                          5 \newcommand{\LWR@HTML@leftpointright}{\LWR@dingbatsymbol{261E}}
                                                                                                                          \label{lem:command} $$ \operatorname{LWR@HTML@leftthumbsdown}_{\LWR@dingbatsymbol{1F44E}} $$
```

```
{\tt 8 \ left} \{ \tt LWR@HTML@rightpointleft} \{ \tt LWR@dingbatsymbol \{ 261C \} \}
9 \newcommand{\LWR@HTML@rightthumbsdown}{\LWR@dingbatsymbol{1F44E}}
10 \newcommand{\LWR@HTML@rightthumbsup}{\LWR@dingbatsymbol{1F44D}}
{\tt 11 \ lowcommand \{\ LWR@HTML@squarewithdots\} \{\ LWR@dingbatsymbol \{25C7\}\} }
12 \newcommand{\LWR@HTML@filledsquarewithdots}{\LWR@dingbatsymbol{25C6}}
13 \newcommand{\LWR@HTML@Sborder}{\LWR@dingbatsymbol{271A}}
14 \newcommand{\LWR@HTML@Zborder}{\LWR@dingbatsymbol{274B}}
{\tt 16 \ low command \{\ LWR@HTML@anchor\} \{\ LWR@dingbatsymbol \{2693\}\} }
17 \newcommand{\LWR@HTML@carriagereturn}{\LWR@dingbatsymbol{23CE}}
19 \newcommand{\LWR@HTML@eye}{\LWR@dingbatsymbol{1F441}}
20 \newcommand{\LWR@HTML@satellitedish}{\LWR@dingbatsymbol{1F4E1}}
{\tt 21 \ lemmand \{\ LWR@HTML@smallpencil\} \{\ LWR@dingbatsymbol \{270E\}\} }
23 \LWR@formatted{rightpointright}
24 \LWR@formatted{leftpointright}
25 \LWR@formatted{leftthumbsdown}
26 \LWR@formatted{leftthumbsup}
27 \LWR@formatted{rightpointleft}
28 \LWR@formatted{rightthumbsdown}
29 \LWR@formatted{rightthumbsup}
30 \LWR@formatted{squarewithdots}
31 \LWR@formatted{filledsquarewithdots}
32 \LWR@formatted{Sborder}
33 \LWR@formatted{Zborder}
34 \LWR@formatted{largepencil}
35 \LWR@formatted{anchor}
36 \LWR@formatted{carriagereturn}
37 \LWR@formatted{checkmark}
38 \LWR@formatted{eye}
39 \LWR@formatted{satellitedish}
40 \LWR@formatted{smallpencil}
```

File 114 lwarp-doipubmed.sty

§223 Package doipubmed

(Emulates or patches code by Nicola Talbot.)

doipubmed (*Pkg*) doipubmed is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{doipubmed}[2007/08/20]
```

```
2 \VerifyCommand[\warp][doipubmed]{\doi}{13FFCBAF4F1414B838B6C3AD344117A8}
3
4 \renewcommand*{\doi}[1]{%
5 \def\@doi@code{}%
6 \@doi@linksubs#1\#\@@\@doi@code
7 \@onelevel@sanitize{\@doi@code}%
8 \def\@doi@text{}%
9 \@doi@textsubs#1\@nil\@@\@doi@text%
10 \xpretocmd{\@doi@code}{http://dx.doi.org/}{}}%
11 \expandafter\\ref\expandafter{\@doi@code}{\doitext{}}}
```

Must not modify catcodes before using \url:

```
12 \DeclareDocumentCommand{\LWR@citeurlb}{m}{%
                        \LWR@ensuredoingapar%
                        \textless%
                        \LWR@href@sanitized{#1}{#1}%
                  15
                  16
                        \textgreater%
                        \endgroup%
                  17
                  18 }
                  19
                  20 \renewrobustcmd*{\citeurl}{%
                        \begingroup%
                  21
                  22
                        \LWR@linkcatcodes%
                  23
                        \LWR@citeurlb%
                  24 }
         File 115 lwarp-DotArrow.sty
        Package DotArrow
                   (Emulates or patches code by Sven Schneider.)
   DotArrow (Pkg) DotArrow is patched for use by lwarp, and emulated for MATHJAX.
                   1 \LWR@ProvidesPackagePass{DotArrow}[2007/02/12]
                   The width must be recomputed each time, depending on print or HTML output.
                   2 \xpretocmd{\dotarrow}{\settowidth{\oneWidth}{\onePartX}}{}}
                   4 \begin{warpMathJax}
                   \label{lem:code} \begin{tabular}{l} $\ \customizeMathJax{\newcommand{\dotarrow}[1]{\stackrel{#1}{\unicode{x21E2}}}} \end{tabular}
                   6 \end{warpMathJax}
         File 116 lwarp-dotlessi.sty
        Package dotlessi
                   (Emulates or patches code by JAVIER BEZOS.)
   dotlessi (Pkg) dotlessi is used as-is for svg math, and is emulated for MATHJAX.
HTML \dotlessj
                   Use \usepackage{cmap} if \dotlessj does not appear in HTML in text mode. See
                   section 7.4.
       not bold For MathJax, use \boldsymbol instead of \mathbf.
                   1 \LWR@ProvidesPackagePass{dotlessi}[1999/10/12]
                   For MATHJAX:
                   2 \begin{warpMathJax}
                   3 \CustomizeMathJax{\let\dotlessi\imath}
                   4 \CustomizeMathJax{\let\dotlessj\jmath}
```

§ 224

§ 225

for HTML output:

5 \end{warpMathJax}

for HTML output:

File 117 lwarp-dprogress.sty

§ 226 Package dprogress

dprogress (Pkg) dprogress is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

File 118 lwarp-draftcopy.sty

§ 227 Package draftcopy

draftcopy (Pkg) draftcopy is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftcopy}[2002/02/25]

2 \newcommand{\draftcopyVersion}[1]{}

3 \newcommand{\draftcopySetGrey}[1]{}

4 \newcommand{\draftcopySetScale}[1]{}

5 \newcommand{\draftcopySetScaleFactor}[1]{}

6 \newcommand{\draftcopyFirstPage}[1]{}

7 \newcommand{\draftcopyLastPage}[1]{}

8 \newcommand{\draftcopyName}[2]{}

9 \newcommand{\draftcopyPageTransform}[1]{}

10 \newcommand{\draftcopyBottomTransform}[1]{}

11 \newcommand{\draftcopyPageX}[1]{}

12 \newcommand{\draftcopyPageY}[1]{}

13 \newcommand{\draftcopyBottomX}[1]{}

14 \newcommand{\draftcopyBottomY}[1]{}

File 119 lwarp-draftfigure.sty

§228 Package draftfigure

draftfigure (Pkg) draftfigure is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftfigure}[2017/07/19]

2 \RequirePackage{xkeyval}

4\define@key{draftfigure}{noframe}[true]{}

5 \define@key{draftfigure}{filename}[true]{}

6 \define@key{draftfigure}{content}[]{}

7\define@key{draftfigure}{style}[normal]{}

 ${\tt 8 \setminus define@key\{draftfigure\}\{position\}[left]\{\}}\\$

9 \define@key{draftfigure}{size}[normal]{}

10 \newcommand\setdf[1]{\setkeys{draftfigure}{#1}}

File 120 lwarp-draftwatermark.sty

§ 229 Package draftwatermark

(Emulates or patches code by Sergio Callegari.)

draftwatermark (*Pkg*) draftwatermark is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftwatermark}[2020/03/14]

2 \newcommand{\DraftwatermarkOptions}[1]{}

3 \newcommand{\DraftwatermarkStdMark}{}

4 \newcommand{\SetWatermarkAngle}[1]{}

5 \newcommand{\SetWatermarkColor}[1]{}

6 \newcommand{\SetWatermarkLightness}[1]{}

7 \newcommand{\SetWatermarkFontSize}[1]{}

8 \newcommand{\SetWatermarkScale}[1]{}

9 \newcommand{\SetWatermarkHorCenter}[1]{}

10 \newcommand{\SetWatermarkVertCenter}[1]{}

11 \newcommand{\SetWatermarkText}[1]{}

File 121 lwarp-drftcite.sty

§230 Package drftcite

(Emulates or patches code by Donald Arseneau.)

drftcite (*Pkg*) drftcite is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{drftcite}[1995/01/23]

2 \VerifyCommand[lwarp][drftcite]{\@lbibitem}{43265BD7F1B9C9818D873D651C19485C}

3

4 \def\@lbibitem[#1]#2{\global\@HighCite\z@

5 \item[

7 \@biblabel{\@ifundefined{DCN@#2\@extra@b@citeb}{\@warning

 ${\it 8} \qquad {\it Reference `\#2' on page \land thepage \land space was never cited}}{\it \{}{\it 8}$

9% \DC@llap{\$^{\@nameuse{DCN@#2\@extra@b@citeb}}\$\ \ }%%o

10 $\ensuremath{\mbox{\mbox{$10$}} \ensuremath{\mbox{\mbox{\mbox{10}}}} \ensuremath{\mbox{10}} \ensuremath{\mbox{\mbox{10}}} \ensuremath{\mbox{10}} \ensuremath{\m$

11 \immediate\write\@auxout{\string\bibcite{#2}{#1}}}\fi\ignorespaces}

File 122 lwarp-easy-todo.sty

§231 Package easy-todo

(Emulates or patches code by Juan Rada-Vilela.)

easy-todo (*Pkg*) easy-todo is patched for use by lwarp.

To remove the "P." heading for HTML:

\warpHTMLonly{\renewcommand{\todoindexpagetitle}{}} for HTML output: 1 \LWR@ProvidesPackagePass{easy-todo}[2014/01/01] \listoftodos Modified to correct buggy use of \flushright. ${\tt 2 \ let\ LWR@easy to do@origlist of to dos \ list of to dos}$ 3 4\renewcommand{\listoftodos}{% 5 \begingroup 6 \renewcommand{\flushright}{} 7 \LWR@easytodo@origlistoftodos 8 \endgroup 9 } Modified to use \textcolor instead of \color. \todoii ${\tt 10 \ Verify Command [lwarp] [easy-todo] \{ \ todoii \} \{ 04C63A894C30C706AC60DD6B58FDEDA2 \} }$ 11 12 $\renewcommand{\todoii}[2]{\%}$ $\label{true} {\tt 13 \land ifthenelse{\land qual{\land qtodoobeyfinal}{true}}}\%$ 14 {% \ifoptionfinal{\todoenable{false}}{\todoenable{true}}% 15 }% 16 17 {}% 19 20 \refstepcounter{todos}% 21 \noindent{% \todocolor% 22 \LWR@textcurrentcolor{% 23 \normalfont\scriptsize{\bfseries{\thetodos.#1}}% 24 25 26 27 $\label{local-protect} $$\addcontentsline{lod}{todos}{\protect{\theta}. }\LWR@isolate{#2}}% $$$ }% 28 29 {}% 30 } File 123 lwarp-ebook.sty Package **ebook** § 232 (Emulates or patches code by Jørgen Steensgaard.) ebook (Pkg) ebook is ignored. for HTML output: 1 \LWR@ProvidesPackageDrop{ebook} 2\setcounter{secnumdepth}{0} 3 \setcounter{tocdepth}{2} 5 \providecommand{\pagefill}[1][0.001mm]{\noindent}

7 \providecommand{\ebook}{
8 \setcounter{secnumdepth}{0}

```
9 \setcounter{tocdepth}{2}
10 }
```

File 124 lwarp-econometrics.sty

§ 233 Package econometrics

(Emulates or patches code by Erik Kole.)

econometrics (Pkg) econometrics is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{econometrics}% no date specified in the original

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{econometrics}
7 \CustomizeMathJax{\newcommand{\SC}{\mathbb{C}}}
8 \CustomizeMathJax{\newcommand{\SN}{\mathbb{N}}}
9 \CustomizeMathJax{\newcommand{\SQ}{\mathbb{Q}}}}
10 \CustomizeMathJax{\newcommand{\SR}{\mathbb{R}}}
11 \CustomizeMathJax{\newcommand{\SZ}{\mathbb{Z}}}
13 \CustomizeMathJax{\newcommand{\calA}{\mathcal{A}}}
14 \CustomizeMathJax{\newcommand{\calB}{\mathcal{B}}}
15 \CustomizeMathJax{\newcommand{\calC}{\mathcal{C}}}
16 \CustomizeMathJax{\newcommand{\calD}{\mathcal{D}}}
17 \CustomizeMathJax{\newcommand{\calE}{\mathcal{E}}}
18 \CustomizeMathJax{\newcommand{\calF}{\mathcal{F}}}
19 \CustomizeMathJax{\newcommand{\calG}{\mathcal{G}}}
20 \CustomizeMathJax{\newcommand{\calH}{\mathcal{H}}}
21 \CustomizeMathJax{\newcommand{\calI}{\mathcal{I}}}
22 \CustomizeMathJax{\newcommand{\calJ}{\mathcal{J}}}
23 \CustomizeMathJax{\newcommand{\calK}{\mathcal{K}}}
24 \CustomizeMathJax{\newcommand{\calL}{\mathcal{L}}}
25 \CustomizeMathJax{\newcommand{\calM}{\mathcal{M}}}
26 \CustomizeMathJax{\newcommand{\calN}{\mathcal{N}}}
27 \CustomizeMathJax{\newcommand{\cal0}{\mathcal{0}}}
28 \CustomizeMathJax{\newcommand{\calP}{\mathcal{P}}}
29 \CustomizeMathJax{\newcommand{\calQ}{\mathcal{Q}}}
30 \CustomizeMathJax{\newcommand{\calR}{\mathcal{R}}}
31 \CustomizeMathJax{\newcommand{\calS}{\mathcal{S}}}
32 \CustomizeMathJax{\newcommand{\calT}{\mathcal{T}}}
{\tt 33 \CustomizeMathJax{\newcommand{\calU}}{\tt Mathcal{U}}}}
34 \CustomizeMathJax{\newcommand{\calV}{\mathcal{V}}}
35 \CustomizeMathJax{\newcommand{\calW}{\mathcal{W}}}
36 \CustomizeMathJax{\newcommand{\calX}{\mathcal{X}}}
37 \CustomizeMathJax{\newcommand{\calY}{\mathcal{Y}}}
38 \CustomizeMathJax{\newcommand{\calZ}{\mathcal{Z}}}
40 \LWR@mathjax@addlatin@u@bfit{m}% uppercase Latin, bold italic
41 \LWR@mathjax@addlatin@l@bfit{v}% lowercase Latin, bold italic
43 \LWR@mathjax@addgreek@l@bfit{v}{}% lowercase Greek bold italic
44 \LWR@mathjax@addgreek@u@bfit*{m}{}% uppercase Greek bold italic, capitalized macro names
```

```
46 \command{\rb}{\mbox{\mbox{\mbox{$h$}}}} \\
 47 \CustomizeMathJax{\newcommand{\rB}{\mathrm{B}}}
 48 \command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\commanch}\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\comma
 49 \command{\rD}{\mbox{\mbox{\mbox{$\sim$}}}}
 50 \CustomizeMathJax{\newcommand{\rf}{\mathrm{f}}}
 51 \CustomizeMathJax{\newcommand{\rF}{\mathrm{F}}}
 52 \CustomizeMathJax{\newcommand{\rH}{\mathrm{H}}}
 53 \CustomizeMathJax{\newcommand{\rL}{\mathrm{L}}}
 54 \CustomizeMathJax{\newcommand{\rN}{\mathrm{N}}}
  55 \command{\tr}{\command{\tr}} 
 56 \command{\rU}{\mathrm{U}}}
 57 \CustomizeMathJax{\newcommand{\rGam}{\mathrm{Gam}}}
 58 \CustomizeMathJax{\newcommand{\rBeta}}}
 60 \CustomizeMathJax{\newcommand{\Bin}{\mathrm{Bin}}}
 61 \CustomizeMathJax{\newcommand{\eu}{\mathrm{e}}}
 \label{lem:command} \end{\ensuremathJax{\newcommand{\iu}{\newcommand{ii}}}}
 63 \CustomizeMathJax{\newcommand{\LN}{\mathrm{LN}}}
 64 \CustomizeMathJax{\newcommand{\IN}{\mathrm{IN}}}
 \label{lem:command} $$ CustomizeMathJax{\newcommand{\Poi}{\mathbb{P}i}} $$
 68 \CustomizeMathJax{\newcommand{\ped}[1]{_\mathrm{#1}}}
 69 \CustomizeMathJax{\newcommand{\ap}[1]{^\mathrm{#1}}}
 70 \CustomizeMathJax{\renewcommand{\Re}{\mathrm{Re}}}{\nolimits}}
 71 \CustomizeMathJax{\renewcommand{\Im}{\mathrm{Im}}}{\nolimits}}
 73 \CustomizeMathJax{\newcommand{\deriv}[3][]{%
 74
           \frac{d}^{\#1}}{2}{\mathbf{d}^{\#1}}%
 75 }}
 76 \CustomizeMathJax{\newcommand{\pderiv}[3][]{%
           \frac{\partial^{#1}#2}{\partial #3^{#1}}%
 77
 78 }}
 79
 80 \CustomizeMathJax{\newcommand{\bias}{\operatorname{bias}}}
 81 \CustomizeMathJax{\newcommand{\col}{\operatorname{col}}}
 82 \CustomizeMathJax{\newcommand{\corr}{\operatorname{corr}}}
 83 \CustomizeMathJax{\newcommand{\cov}{\operatorname{cov}}}
 84 \CustomizeMathJax{\newcommand{\dg}{\operatorname{dg}}}
 85 \CustomizeMathJax{\newcommand{\diag}{\operatorname{diag}}}
 86 \command{\E}{\command{E}}}
 87 \CustomizeMathJax{\newcommand{\etr}{\operatorname{etr}}}
 88 \CustomizeMathJax{\newcommand{\ip}{\mathrm{int}}}{\nolimits}}
 89 \CustomizeMathJax{\newcommand{\kur}{\operatorname{kur}}}
 90 \CustomizeMathJax{\newcommand{\MSE}{\operatorname{MSE}}}
 91 \CustomizeMathJax{\newcommand{\MSFE}{\operatorname{MSFE}}}
 92 \CustomizeMathJax{\newcommand{\OLS}{\operatorname{OLS}}}
 93 \CustomizeMathJax{\newcommand{\plim}{\operatorname{plim}}}
 94 \CustomizeMathJax{\newcommand{\resid}{\operatorname{resid}}}
 95 \CustomizeMathJax{\newcommand{\rk}{\operatorname{rk}}}
 96 \CustomizeMathJax{\newcommand{\SE}{\operatorname{SE}}}
 97 \CustomizeMathJax{\newcommand{\sgn}{\operatorname{sgn}}}
 98 \CustomizeMathJax{\newcommand{\tr}}}
 99 \CustomizeMathJax{\newcommand{\var}{\operatorname{var}}}
100 \CustomizeMathJax{\renewcommand{\vec}{\operatorname{vec}}}
101 \CustomizeMathJax{\newcommand{\vech}{\operatorname{vech}}}
103 \CustomizeMathJax{\newcommand{\distr}{\sim}}
105 \CustomizeMathJax{\newcommand{\diff}{\Delta}}
```

```
107 \CustomizeMathJax{\newcommand{\bdiff}{\diff_{\rb}}}
109 \CustomizeMathJax{\newcommand{\eps}{\epsilon}}
110 \CustomizeMathJax{\newcommand{\epsi}{\varepsilon}}
112 \CustomizeMathJax{\newcommand{\longto}{\longrightarrow}}
113 \CustomizeMathJax{\newcommand{\pto}{\stackrel{p}{\longrightarrow}}}
114 \CustomizeMathJax{\newcommand{\dto}{\stackrel{d}{\longrightarrow}}}
117 \CustomizeMathJax{\newcommand{\Infmat}{\bm\calI}}
118 \CustomizeMathJax{\newcommand{\Hesmat}{\bm\calH}}
119 \CustomizeMathJax{\newcommand{\bcdot}{\bullet}}
121 \CustomizeMathJax{\newcommand{\vones}{\bm\imath}}
\label{local-continuity} \end{\mathbf \vzeros} \{\boldsymbol \{\emptyset\}\} \}
123 \converged \conv
\label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
128 \end{warpMathJax}
```

File 125 lwarp-ed.sty

§234 Package **ed**

($Emulates\ or\ patches\ code\ by\ Michael\ Kohlhase.$)

ed (Pkg) ed is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{ed}[2012/01/29]

Bugs:

- 1. todolist fails with the hide option, as does \edexplanation.
- 2. \edstubURI is actually \edstuURI.

```
2 \RequirePackage{xcolor}
4\renewenvironment{edstub}[2][The following blue text]
5 {%
6
     \def\@test{#1}%
7
     \begin{center}%
8
         \huge%
         \textcolor{red}{%
9
            #1 is only a provisional stub\\\Large
10
            the Office document
11
            12
            contains more text\\which will be merged for the final document%
13
14
15
     \end{center}%
     \BlockClass[color:blue]{edstub}%
16
17 }
18 {\endBlockClass}
```

File 126 lwarp-ellipsis.sty

§235 Package ellipsis

(Emulates or patches code by Peter J. Heslin.)

ellipsis (*Pkg*) ellipsis is emulated.

```
1 \LWR@ProvidesPackageDrop{ellipsis}[2004/09/28]
2
3 \newcommand{\ellipsisgap}{0.1em}
4
5 \newcommand*{\midwordellipsis}{\,\textellipsis\,}
```

File 127 lwarp-embrac.sty

§236 Package embrac

(Emulates or patches code by Clemens Niederberger.)

embrac (*Pkg*) embrac is patched for HTML and used as-is for print.

```
for HTML output: 1 \LWR@ProvidesPackagePass{embrac}[2017/07/04]
```

```
2 \ExplSyntaxOn
3 \RenewDocumentCommand{\embrac_kern:n}{m}{}
4 \ExplSyntaxOff
5 \LetLtxMacro\LWR@orig@HTML@emph\LWR@HTML@emph
\label{lem:command} $$ \ensuremath{\command{\LWR@HTML@emph}$ s m}{\LWR@orig@HTML@emph{#2}} $$
8 \LetLtxMacro\LWR@orig@HTML@textit\LWR@HTML@textit
9 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
11 \LetLtxMacro\LWR@orig@HTML@textsl\LWR@HTML@textsl
12 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
14 \ifxetexorluatex
      \LetLtxMacro\LWR@orig@HTML@textsi\LWR@HTML@textsi
15
      \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{%
16
      \LWR@orig@HTML@textsi{#2}}
17
18\fi
19
20 \AtBeginDocument{
      \LWR@formatted{emph}
21
      \LWR@formatted{textit}
22
      \LWR@formatted{textsl}
      \ifxetexorluatex
           \LWR@formatted{textsi}
25
      \fi
26
27 }
28
```

```
29 \newcommand{\LWR@HTML@EmbracOff}{}
                  30 \LWR@formatted{EmbracOff}
                  32 \newcommand{\LWR@HTML@EmbracOn}{}
                  33 \LWR@formatted{EmbracOn}
         File 128 lwarp-emptypage.sty
                 emptypage
§ 237
         Package
  emptypage (Pkg)
                  emptypage is ignored.
                  Discard all options for lwarp-emptypage:
for HTML output:
                   1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
         File 129 lwarp-endfloat.sty
         Package endfloat
§ 238
   endfloat (Pkg) endfloat is ignored.
 for HTML output:
                   1 \LWR@ProvidesPackageDrop{endfloat}[2019/04/15]
                  2 \newcommand\figureplace{}
                  3 \newcommand\tableplace{}
                  4 \newcommand\floatplace[1]{}
                  5 \newcounter{posttable}
                  6 \newcounter{postfigure}
                  7 \newcommand*{\theposttbl}{}
                  8 \newcommand*{\thepostfig}{}
                  9 \newcommand{\AtBeginFigures}[1]{}
                  10 \newcommand{\AtBeginTables}[1]{}
                  {\tt 11 \ \ layedFloats}[1]{\tt 1}
                  12 \newcommand*{\processdelayedfloats}{}
                  13 \newcommand*{\efloatseparator}{}
                  14 \def\efloattype{}
                  15 \providecommand\efloatheading[1]{}
                  16 \providecommand\efloatpreamble{}
                  17 \providecommand\efloatpostamble{}
                  18 \NewDocumentCommand{\addtodelayedfloat}{s m m}{}
                  19 \providecommand{\efloatbegin}{}
                  20 \providecommand{\efloatend}{}
                  21 \providecommand{\efloatbeginlist}{}
                  22 \providecommand{\efloatendlist}{}
         File 130 lwarp-endheads.sty
```

§ 239 Package endheads

endheads (*Pkg*) endheads is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{endheads}[2017/04/06]

```
2 \newcommand{\changesinglepageabbrev}[1]{}
                 3 \newcommand{\changemultiplepageabbrev}[1]{}
                 4 \newcommand{\changenotesname}[1]{}
                 5 \newcommand{\changenotesheader}[1]{}
                 6 \newcommand{\changenotescontentsname}[1]{}
                 7 \newcommand{\changechapternotesline}[1]{}
                 8 \newcommand{\checknoteheaders}{}
                 10 \newcommand{\notesincontents}{\notesincontentsontrue}
                 11 \newif\ifendnoteheaderson \endnoteheadersonfalse
                 12 \newcommand{\setupendnoteheaders}{%
                      \endnoteheadersontrue%
                14 }
                 15 \newif\iftitleinnotes \titleinnotestrue
                 16 \newcommand{\styleforchapternotebegin}{}
                 17 \newcommand{\styleforchapternoteend}{}
                18 \newcommand{\setstyleforchapternotebegin}[1]{%
                      \renewcommand{\styleforchapternotebegin}{#1}%
                20 }
                21 \newcommand{\setstyleforchapternoteend}[1]{%
                22
                      \renewcommand{\styleforchapternoteend}{#1}%
                23 }
                24 \newcommand{\resetendnotes}{}
                25 \newif\ifnotesbychapteron \notesbychapteronfalse
                26 \newcommand{\notesbychapter}{\notesbychapterontrue}
        File 131 lwarp-endnotes.sty
        Package endnotes
                 (Emulates or patches code by John Lavagnino.)
  endnotes (Pkg) Patched for HTML.
table of contents To place the endnotes in the ToC, use:
                      \usepackage{endnotes}
                      \appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
                     \renewcommand*{\notesname}{Endnotes} % optional
     HTML page To additionally have the endnotes on their own HTML page, if FileDepth allows:
                      \ForceHTMLPage
                      \theendnotes
  \endnotemark If using MathJax, see section 8.5.4 regarding the use of \endnotemark and
     numbering \endnotetext.
                 1 \LWR@ProvidesPackagePass{endnotes}
                 2 \def\enoteformat{%
                 3% \rightskip\z@ \leftskip\z@ \parindent=1.8em
                 4 \leavevmode
```

\$240

for HTML output:

5% \llap{ 6\makeenmark

7% } 8 }

```
9 \def\LWR@HTML@@makeenmark{\hbox{\LWR@htmlspan{sup}{\normalfont\theenmark}}}
                                         10 \LWR@formatted{@makeenmark}
                                         12 \def\makeenmark{\@makeenmark}
                                          To nullify the endnotes:
                                         13 \apptocmd{\LWR@nullifyfootnotes}{%
                                                      \renewcommand{\endnote}[2][]{}%
                                                      \renewcommand{\endnotemark}[1]{}%
                                         16 }{}{}
                                          For MATHJAX:
                                         17 \begin{warpMathJax}
                                         18 \def\endnotename{endnote}
                                         19 \appto\LWR@syncnotenumbers{\LWR@synconenotenumber{LWRendnote}} \land \text{\theendnote} \rangle
                                        20 \appto\LWR@syncnotenames{\LWR@synconenotename{LWRendnote}{\endnotename}}
                                        21 \CustomizeMathJax{\def\LWRendnote{1}}
                                         22 \continged ath Jax{\newcommand{\endnote}[2][\LWRendnote]{{}^{\mbox{mathrm}{#1}}}} 
                                         23 \customize MathJax{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newc
                                        24 \end{warpMathJax}
                     File 132 lwarp-engtlc.sty
                    Package engtlc
§ 241
                                          (Emulates or patches code by Claudio Fiandrino.)
             engtlc (Pkg) engtlc is patched for use by lwarp. MATHJAX is emulated.
                          \triangle
                                          For MathJax, \signt, \signf, \signn, and \signz do not force letter case as they
                                          do in svg math.
 for HTML output:
                                          1 \LWR@ProvidesPackagePass{engtlc}[2012/12/18]
                                          2 \newcommand{\LWR@HTML@finees}{%
                                                      \begin{BlockClass}[text-align:right]{exerend}%
                                                      \HTMLunicode{220E}%
                                          4
                                                      \end{BlockClass}%
                                          5
                                          6 }
                                          7 \LWR@formatted{finees}
                                          9 \newcommand{\LWR@HTML@exerend}{\finees}
                                         10 \LWR@formatted{exerend}
                                        11
                                         12 \begin{warpMathJax}
                                         13 \LWR@infoprocessingmathjax{engtlc}
                                        14
                                        15 \CustomizeMathJax{\newcommand{\unit}[1]{\,\mathrm{#1}}}
                                         16 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
                                         18 \CustomizeMathJax{\newcommand{\ho}{\unit{h}}}
                                        19 \CustomizeMathJax{\newcommand{\s}{\unit{s}}}
                                        20 \CustomizeMathJax{\newcommand{\ms}{\unit{ms}}}
                                        21 \CustomizeMathJax{\newcommand{\us}{\unit{\micro s}}}
                                        22 \CustomizeMathJax{\newcommand{\ns}{\unit{ns}}}
```

```
23 \CustomizeMathJax{\newcommand{\ps}{\unit{ps}}}
25 \CustomizeMathJax{\newcommand{\um}{\unit{\micro m}}}
{\tt 26 \CustomizeMathJax{\newcommand{\mm}}{\tt unit\{mm\}}}}
27 \CustomizeMathJax{\newcommand{\cm}{\unit{cm}}}
28 \CustomizeMathJax{\newcommand{\dm}{\unit{dm}}}
29 \CustomizeMathJax{\newcommand{\m}{\unit{m}}}
30 \CustomizeMathJax{\newcommand{\km}{\unit{km}}}
32 \CustomizeMathJax{\newcommand{\MA}{\unit{MA}}}
33 \CustomizeMathJax{\newcommand{\kA}{\unit{kA}}}
34 \command{\A}{\command{A}}
35 \CustomizeMathJax{\newcommand{\mA}{\unit{mA}}}
36\CustomizeMathJax{\newcommand{\uA}{\unit{\micro A}}}
37 \CustomizeMathJax{\newcommand{\nA}{\unit{nA}}}
39 \CustomizeMathJax{\newcommand{\MV}{\unit{MV}}}
40 \CustomizeMathJax{\newcommand{\kV}{\unit{kV }}}
41 \CustomizeMathJax{\newcommand{\V}_{\unit{V}}}
{\tt 42 \CustomizeMathJax{\newcommand{\mV}{\unit{mV}}}}
43 \CustomizeMathJax{\newcommand{\uV}{\unit{\micro V}}}
44 %
45 \CustomizeMathJax{\newcommand{\mohm}{\unit{m\Omega}}}
46 \CustomizeMathJax{\newcommand{\ohm}{\unit{\Omega}}}
47 \CustomizeMathJax{\newcommand{\kohm}{\unit{k\Omega}}}
48 \CustomizeMathJax{\newcommand{\Mohm}{\unit{M\Omega}}}
50 \CustomizeMathJax{\newcommand{\pSi}{\unit{pS}}}
51 \CustomizeMathJax{\newcommand{\nSi}{\unit{nS}}}
52 \CustomizeMathJax{\newcommand{\uSi}{\unit{\micro S}}}
53 \CustomizeMathJax{\newcommand{\mSi}{\unit{mS}}}
54 \CustomizeMathJax{\newcommand{\Si}{\unit{S}}}
55 \CustomizeMathJax{\newcommand{\kSi}{\unit{kS}}}
56 \CustomizeMathJax{\newcommand{\MSi}{\unit{MS}}}
58 \CustomizeMathJax{\newcommand{\fFa}{\unit{fF}}}
59 \CustomizeMathJax{\newcommand{\pFa}{\unit{pF}}}}
60 \command{\nFa}{\unit{nF}}}
61 \CustomizeMathJax{\newcommand{\uFa}{\unit{\micro F}}}
62 \CustomizeMathJax{\newcommand{\mFa}{\unit{mF}}}
63 \converged {Fa}{\converged {Fa}{\converged {Fa}}}
64 %
65 \CustomizeMathJax{\newcommand{\fHe}{\unit{fH}}}}
66 \CustomizeMathJax{\newcommand{\pHe}{\unit{pH}}}}
67 \CustomizeMathJax{\newcommand{\nHe}{\unit{nH}}}
68 \CustomizeMathJax{\newcommand{\uHe}{\unit{\micro H}}}
69 \CustomizeMathJax{\newcommand{\mHe}{\unit{mH}}}
70 \CustomizeMathJax{\newcommand{\He}_{\unit{H}}}
72 \CustomizeMathJax{\newcommand{\dB}{\unit{dB}}}
73 \CustomizeMathJax{\newcommand{\dBm}{\unit{dBm}}}
74 %
75 \CustomizeMathJax{\newcommand{\uW}{\unit{\micro W}}}
76 \CustomizeMathJax{\newcommand{\mW}{\unit{mW}}}
77 \CustomizeMathJax{\newcommand{\W}{\unit{W}}}
78 \CustomizeMathJax{\newcommand{\kW}{\unit{kW}}}
79 \CustomizeMathJax{\newcommand{\MW}{\unit{MW}}}
81 \CustomizeMathJax{\newcommand{\Hz}{\unit{Hz}}}
82 \CustomizeMathJax{\newcommand{\kHz}{\unit{kHz}}}
```

```
83 \CustomizeMathJax{\newcommand{\MHz}{\unit{MHz}}}
 84 \CustomizeMathJax{\newcommand{\GHz}{\unit{GHz}}}
  85 \customizeMathJax{\newcommand{\THz}}{\newcommand{\THz}} 
 87 \CustomizeMathJax{\newcommand{\bit}{\unit{bit}}}
 88 \CustomizeMathJax{\newcommand{\kbit}{\unit{Kib}}}
 89 \CustomizeMathJax{\newcommand{\Mbit}{\unit{Mib}}}
 90 \CustomizeMathJax{\newcommand{\Byte}{\unit{B}}}
 91 \CustomizeMathJax{\newcommand{\kByte}{\unit{KiB}}}
 92 \CustomizeMathJax{\newcommand{\MByte}{\unit{Mib}}}
 93 \CustomizeMathJax{\newcommand{\GByte}{\unit{GiB}}}
 94 \CustomizeMathJax{\newcommand{\TByte}{\unit{TiB}}}
 95 \CustomizeMathJax{\newcommand{\bits}{\unit{bit/s}}}
 96 \customizeMathJax{\newcommand{\kbits}{\unit{Kib/s}}}
 97 \CustomizeMathJax{\newcommand{\Mbits}{\unit{Mib/s}}}
 98 \CustomizeMathJax{\newcommand{\Bytes}{\unit{B/s}}}
 99 \CustomizeMathJax{\newcommand{\kBytes}{\unit{KiB/s}}}
100 \CustomizeMathJax{\newcommand{\MBytes}{\unit{MiB/s}}}
101 \CustomizeMathJax{\newcommand{\GBytes}{\unit{GiB/s}}}
\label{local-continuity} $$102 \c \arrowcommand{TBytes}{\unit{TiB/s}}}
103 \CustomizeMathJax{\newcommand{\chips}{\unit{chip/s}}}
104 \CustomizeMathJax{\newcommand{\kchips}{\unit{Ki\mkern2mu chip/s}}}
105 \CustomizeMathJax{\newcommand{\Mchips}{\unit{Mi\mkern2mu chip/s}}}
106 \CustomizeMathJax{\newcommand{\chipsubit}{\unit{chip/bit}}}
108 \CustomizeMathJax{\newcommand{\frecciadex}[1][0.5]{%
               \hspace{.25cm}\Longrightarrow \hspace{.25cm}}%
110 }
112 %
113 \CustomizeMathJax{\newcommand{\etsymbolbracearg}[2]{%
               #1\mathopen{}\left\lbrace#2\right\rbrace\mathclose{}}%
114
115 }
116 \CustomizeMathJax{\newcommand{\fourier}[1]{\etsymbolbracearg{\mathcal{F}}{#1}}}
117 \CustomizeMathJax{\newcommand{\invfourier}[1]{\etsymbolbracearg{\mathcal{F}^{-1}}{#1}}}
\label{likelike} \begin{tabular}{lllll} $$118 \subset MathJax{\newcommand{\partereale}[1]{\etsymbolbracearg{\textbf{Re}}{\#1}}} $$
\label{locality} $$119 \subset MathJax{\newcommand{\operatorname{lim}}[1]{\textsuppose} $$13{\textsuppose} $$13{\textsuppose
\label{lem:left} $$124 \subset MathJax{\newcommand{\seno}[1]_{\sin\left(2\pi^{1}t\right)}}$
127 \CustomizeMathJax{\newcommand{\modulo}[1]{\left\vert#1\right\vert}}
128 \CustomizeMathJax{\newcommand{\indB}[1]{%
               \mathopen{}\left.#1\right\vert_{\mathrm{dB}}\mathclose{}}}%
130 \CustomizeMathJax{\newcommand{\for}[2]{\left. #1 \right\vert_{#2}}}
131 \CustomizeMathJax{\newcommand{\massimo}[1]{\etsymbolbracearg{\max}{#1}}}
\label{localized localized localiz
133 \CustomizeMathJax{\newcommand{\valc}{3\cdot 10^8}}
\label{loga} $$134 \subset MathJax{\newcommand{\lceil \log_{\#1}\#2}} $$
\label{limit} \begin{tabular}{l} 135 \customizeMathJax{\newcommand{\analitic}[1]{\mathring{\#1}}} \end{tabular}
\label{limited} $$136 \subset \mathcal {\mathbb R}^{\mathbb{T}} \mathbb{T}_{\mathbb{T}} \mathbb{T}_{\mathbb{T}}.
\label{limit} \begin{tabular}{l} 137 \customizeMathJax{\newcommand{\intinf}[1]{\int_{-\infty}^{+\infty}{\#1}}} \end{tabular}
138 \CustomizeMathJax{\newcommand{\deltain}[1]{\delta\left(#1\right)}}
139 \CustomizeMathJax{\newcommand{\iu}{\mathrm{j}}}
```

```
149 \CustomizeMathJax{\newcommand{\lbvt}{\lambda_0}}
150 \CustomizeMathJax{\newcommand{\lbg}{\lambda_g}}
\label{logvt} $$151 \subset MathJax{\newcommand{\lbgvt}{\lambda_{g_0}}}$
\label{locality} $$153 \hookrightarrow P_{\mathrm{mathrm}\{1\}}}
\label{localize} $$154 \subset \mathcal{P}_{\mathbf{S}^{+1}}$
\label{localize} $$155 \subset \mathcal{P}_{newcommand(\potDC)[1][]{P_{\mathcal{DC}}}^{\#1}}}$
\label{localize} $$156 \subset P_{\infty}^{\#1}} $$
157 \CustomizeMathJax{\newcommand{\potirr}[1][]{P_{\mathrm{irr}}^{#1}}}
\label{localize} $$158 \subset \mathcal{P}_{\mathbf{S}}^{\#1}} $$
160 %
\label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
162 \CustomizeMathJax{\newcommand{\znorm}[1]{z_{\mathbb{4}}}}
\label{loss} $$163 \subset \mathcal{Y}[1]_{Y_{\mathrm{mathrm}}}}$
164 \CustomizeMathJax{\newcommand{\ynorm}[1]{y_{\mathrm{#1}}}}
165 \CustomizeMathJax{\newcommand{\zinf}[1][]{Z_{\infty}}
166 \CustomizeMathJax{\newcommand{\zinfn}[1]{\zinf[#1]}}
167 \CustomizeMathJax{\newcommand{\yinf}[1][]{Y_{\infty#1}}}
168 \CustomizeMathJax{\newcommand{\yinfn}[1]{\yinf[#1]}}
169 \CustomizeMathJax{\newcommand{\zvt}{Z_0}}
170 \CustomizeMathJax{\newcommand{\yvt}{Y_0}}
171 %
\label{thm:line} $$172 \subset MathJax{\newcommand{\campoe}_{\underline}(\newcommand{\campoe}_{\underline})} $$
173 \CustomizeMathJax{\newcommand{\campoefas}{\underline{E}(\underline{r})}}
174 \subset \mathcal{H}}(\underline{\mathbf{H}}(\underline{r},t))
175 \CustomizeMathJax{\newcommand{\campohfas}{\underline{H}(\underline{r})}}
177 \cont = 177 
178 \CustomizeMathJax{\newcommand{\signf}[1]{{#1}(f)}}
179 \CustomizeMathJax{\newcommand{\signn}[1]{{#1}(n)}}
180 \CustomizeMathJax{\newcommand{\signz}[1]{{#1}(z)}}
184 \CustomizeMathJax{\newcommand{\var}[1]{\mathrm{Var}\left[#1\right]}}
185 \CustomizeMathJax{\newcommand{\comma}{\, , \,}}
186 \CustomizeMathJax{\newcommand{\dato}{\,|\,}}
188 \CustomizeMathJax{\let\bfRe\partereale}
189 \CustomizeMathJax{\let\bfIm\parteimm}
190 \CustomizeMathJax{\let\noisevar\varianzarumore}
191 % \CustomizeMathJax{\let\exerend\finees}
192 \CustomizeMathJax{\let\Spimplies\frecciadex}
193 \CustomizeMathJax{\let\Downimplies\frecciadown}
194 \CustomizeMathJax{\let\unitvec\versore}
195 \CustomizeMathJax{\let\vector\vettore}
196 \CustomizeMathJax{\let\cosine\coseno}
197 \CustomizeMathJax{\let\sine\seno}
198 \CustomizeMathJax{\let\energy\energia}
199 \CustomizeMathJax{\let\Abs\modulo}
200 \CustomizeMathJax{\let\AbsPow\moduloexp}
201 \CustomizeMathJax{\let\Max\massimo}
202 \CustomizeMathJax{\let\Min\minimo}
```

```
203 \CustomizeMathJax{\let\clight\valc}
204 \CustomizeMathJax{\let\Log\loga}
205 \CustomizeMathJax{\let\analytic\analitic}
206 \CustomizeMathJax{\let\infint\intinf}
207 \CustomizeMathJax{\let\deltaimp\deltain}
208 \CustomizeMathJax{\let\Vgamma\gammatens}
209 \CustomizeMathJax{\let\Cgamma\gammacorr}
{\tt 210 \ CustomizeMathJax\{ \ let\ Vgammain\ gammatensin\}}
211 \CustomizeMathJax{\let\Cgammain\gammacorrin}
212 \CustomizeMathJax{\let\Kgamma\gammak}
213 \CustomizeMathJax{\let\powerin\potin}
214 \CustomizeMathJax{\let\availpow\potdisp}
215 \CustomizeMathJax{\let\irrpow\potirr}
216 \CustomizeMathJax{\let\disspow\potdiss}
217 \CustomizeMathJax{\let\incpow\potinc}
218 \CustomizeMathJax{\let\potalim\potCC}
219 \CustomizeMathJax{\let\potDC\potCC}
220 \CustomizeMathJax{\let\Efield\campoe}
221 \CustomizeMathJax{\let\Hfield\campoh}
222 \CustomizeMathJax{\let\phasorEfield\campoefas}
223 \CustomizeMathJax{\let\phasorHfiled\campohfas}
224 \CustomizeMathJax{\let\given\dato}
225 \CustomizeMathJax{\let\expval\valatt}
226 \CustomizeMathJax{\let\rmexp\ex}
227 \end{warpMathJax}
```

File 133 lwarp-enotez.sty

§ 242 Package **enotez**

(Emulates or patches code by Clemens Niederberger.)

enotez (*Pkg*) enotez is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{enotez}[2020/12/13]

Hyperref is emulated by lwarp, so it is forced on for enotez:

```
2 \ExplSyntaxOn
3 \AtBeginDocument{
4  \bool_set_true:N \l__enotez_hyperref_bool
5  \bool_set_true:N \l__enotez_hyperfootnotes_bool
6 }
```

Do not move or \hbox the \hypertarget:

```
18
                                {
19 %
                                           \box_move_up:nn {1em} {
20 %
                                                     \hbox:n {
21
                                                          \hypertarget {enz.#1.backref} { }
22 %
                                                     }
23 %
                                           }
                                }
24
                      }
25
                     { \enotezwritemark { \enmarkstyle #2 } }
26
27
          }
28 \cs_generate_variant:Nn \enotez_write_mark:nn {x}
  Do not move or \hbox the \hypertarget:
29 \ Verify Command [lwarp] [enotez] \\ \{enotez\_write\_list\_number: n\} \\ \{9793BEC2766E17864C6391209599DD84\} \\ \{enotez\_write\_list\_number: n\} \\ \{enotez\_write\_number: n\} \\ \{enotez\_write
31 \cs_gset_protected:Npn \enotez_write_list_number:n #1
32
                \bool_if:NT \l__enotez_hyperfootnotes_bool
33
34
                     {
35 %
                                \box_move_up:nn {1em} { \hbox:n {
                                     \hypertarget {enz.#1} { }
36
37 %
                                } }
38
39
                \tl_use:N \l__enotez_list_number_format_tl
40
                \tl_if_eq:nxTF {a} { \prop_item:Nn \g__enotez_endnote_man_prop {#1} }
41
                           \bool_if:nTF
42
                                \{ \l_enotez_hyperfootnotes_bool \& \l_enotez_hyperbackref_bool \} 
43
44
                                {
                                     \exp_args:Nnx
45
                                     \hyperlink {enz.#1.backref}
46
                                           { \exp_not:V \l__enotez_endnote_mark_tl }
47
48
49
                                { \prop_item: Nn \g__enotez_endnote_mark_prop {#1} }
50
                     }
51
52
                           \bool_if:nTF
                                53
54
                                {
55
                                     \exp_args:Nnx
                                     \hyperlink {enz.#1.backref}
56
57
                                           { \exp_not:V \l__enotez_endnote_mark_tl }
58
59
                                { \tl_use:N \l__enotez_endnote_mark_tl }
60
                      }
61
          }
  Do not move the label to the left:
62 \DeclareTemplateCode {enotez-list} {paragraph} {1}
63 {
64
                heading
                                                     = \enotez_list_heading:n
                format
                                                     = \l__enotez_list_format_tl
65
                                                     = \enotez_list_number:n
67
                number-format = \l__enotez_list_number_format_tl ,
68
                notes-sep
                                                     = \l__enotez_list_notes_sep_dim
69
           }
70
                \AssignTemplateKeys
71
```

```
72
       \enotez_set_totoc:
       \enotez_list_heading:n { \l__enotez_list_name_tl }
73
       \enotez_list_preamble:
74
75
       \enotez_build_print_list:nnnn {#1}
76
         {}
77
            \par\noindent
78
            \group_begin:
79
              \tl_use:N \l__enotez_list_format_tl
80
                \hbox_overlap_left:n
81 %
82 %
83
                   \enotez_list_number:n
84
                     { \enotez_write_list_number:n {##1} }
                   \tl_use:N \c_space_tl
86 %
              % \cs_set:cpn {@currentlabel}
87
                 { \p@endnote \l__enotez_endnote_mark_tl }
88
              \tl_use:N \g__enotez_endnote_text_tl
89
90
              \dim_compare:nT { \l__enotez_list_notes_sep_dim != 0pt }
91
                { \addvspace { \l__enotez_list_notes_sep_dim } }
92
            \group_end:
93
94
95
         {}
96
       \enotez_list_postamble:
97
     }
98
99 \ExplSyntaxOff
 For MATHJAX:
100 \begin{warpMathJax}
101 \def\endnotename{endnote}
102 \appto\LWR@syncnotenumbers{\LWR@synconenotenumber{LWRendnote}} \right\{ \theendnote} \right\}
103 \appto\LWR@syncnotenames{\LWR@synconenotename{LWRendnote}{\endnotename}}
104 \CustomizeMathJax{\def\LWRendnote{1}}
\label{local-continuity} 105 \land \label{local-continuity} \label{local-continuity} LWRendnote] {{}^{\mathbf{4}}}{}
\label{local-continuity} $$106 \subset \mathcal{M}_{newcommand}\left( -1\right] [\LWRendnote]_{{}^{\mathbf{4}}}}$
107 \end{warpMathJax}
```

File 134 lwarp-enumerate.sty

§ 243 Package enumerate

enumerate (Pkg) enumerate is supported with no changes.

This package is only required because it was used in the past to drop and then emulate the package. It cannot be removed because an older version which dropped the package may still remain, for example in a local vs. distribution directory, but it is now supported directly by lwarp and thus must no longer be dropped.

for HTML output: 1 \LWR@ProvidesPackagePass{enumerate}[2015/07/23]

File 135 lwarp-enumitem.sty

§244 Package enumitem

(Emulates or patches code by Javier Bezos.)

enumitem (Pkg) enumitem is supported with minor adjustments.

for HTML output: 1 \LWR@ProvidesPackagePass{enumitem}[2018/11/30]

```
\label{eq:linear_continuity} $$\operatorname{(name)} {\langle type \rangle} {\langle maxdepth \rangle} $$\operatorname{(name)} {\langle type \rangle} {\langle maxdepth \rangle}$$
```

For enumitem lists, new lists must have the start and end actions assigned to the new environment. Renewed lists already have their actions assigned, and thus need no changes.

```
2 \let\LWR@enumitem@orignewlist\newlist
3
4 \renewcommand*{\newlist}[3]{%
5 \LWR@enumitem@orignewlist{#1}{#2}{#3}%
6 \AtBeginEnvironment{#1}{\@nameuse{LWR@#2start}}%
7 \AtEndEnvironment{#1}{\@nameuse{LWR@#2end}}%
8 }
9
10 \def\DrawEnumitemLabel{}
```

File 136 lwarp-epigraph.sty

§245 Package epigraph

(Emulates or patches code by Peter Wilson.)

ерідгарh (Pkg) ерідгарh is emulated for HTML, and used as-is for print output.

Use css to format epigraphs.

```
for HTML output: 1 \LWR@ProvidesPackagePass{epigraph}[2020/01/02]
```

```
2 \DeclareDocumentCommand{\LWR@HTML@qitem}{m m}
3 {%
      \begin{BlockClass}{qitem}%
4
5
      \LWR@stoppars%
6
7
      \ifbool{FormatWP}%
          {\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}%
8
          {\begin{BlockClass}{epigraphsource}}%
9
10
      #2%
      \end{BlockClass}%
11
12
      \end{BlockClass}%
13 }
14 \LWR@formatted{qitem}
```

```
epigraph: Added ARIA role.
                  15 \DeclareDocumentCommand{\LWR@HTML@epigraph}{m m}
                  16 {%
                       \begin{LWR@BlockClassWP}{\LWR@print@mbox{text-align:right}}{}(note){epigraph}%
                  17
                         \qitem{#1}{#2}%
                  18
                        \end{LWR@BlockClassWP}%
                  21 \LWR@formatted{epigraph}
                  23 \DeclareDocumentEnvironment{LWR@HTML@epigraphs}{}
                       {\LWR@BlockClassWP{\LWR@print@mbox{text-align:right}}{}(note){epigraph}}%
                        {\endLWR@BlockClassWP}
                  26 \LWR@formattedenv{epigraphs}
                   The following cannot be used in print mode while generating HTML:
                  27 \renewcommand{\epigraphhead}[2][0]{#2}
                  28 \renewcommand{\dropchapter}[1]{}
                  29 \renewcommand*{\undodrop}{}
         File 137 lwarp-epsf.sty
         Package epsf
$246
                   (Emulates or patches code by Tom Rokicki.)
        epsf (Pkg) epsf is patched for use by lwarp.
 for HTML output:
                   1 \LWR@ProvidesPackagePass{epsf}% not date given
                   2 \xpretocmd{\epsfsetgraph}
                        {\begin{lateximage}}
                   4
                        {\LWR@patcherror{lwarp-epsf}{epsfsetgraph-begin}}
                   5
                   7 \xapptocmd{\epsfsetgraph}
                        {\end{lateximage}}
                   8
                        {\LWR@patcherror{lwarp-epsf}{epsfsetgraph-end}}
         File 138 lwarp-epsfig.sty
         Package epsfig
$247
     epsfig (Pkg) epsfig is emulated for use by lwarp.
            \triangle
                   Only the LATEX2e syntax is emulated.
 for HTML output:
                   1 \LWR@ProvidesPackagePass{epsfig}[2017/06/25]
                   A few additional keys to capture the filename:
```

```
2 \RequirePackage{graphics}
        4 \define@key{igraph}{file}{%
             \xdef\LWR@epsfig@filename{#1}%
        6 }
        8 \define@key{igraph}{figure}{%
             \xdef\LWR@epsfig@filename{#1}%
        10 }
        11
        12 \define@key{igraph}{prolog}{}
        14 \define@key{igraph}{silent}[]{}
        The captured filename is used as the argument to \includegraphics:
        15 \newcommand{\LWR@HTML@epsfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}
        16 \LWR@formatted{epsfig}
        19 \LWR@formatted{psfig}
File 139 lwarp-epstopdf.sty
Package epstopdf
        Previous versions of lwarp had a nullfied version, but now epstopdf-base is sup-
        ported. lwarp-epstopdf becomes a placeholder to overwrite previous versions.
         See package epstopdf-base for details.
         1 \LWR@ProvidesPackagePass{epstopdf}[2020-01-24]
File 140 lwarp-epstopdf-base.sty
        epstopdf-base
        Images with an .eps extension will be converted to .pdf. The нтмL output uses
        the . svg version, so use
             Enter ⇒ lwarpmk pdftosvg <listofPDFfiles>
         to generate .svg versions.
         1 \LWR@ProvidesPackagePass{epstopdf-base}[2020-01-24]
        Redefine to remember the image filename, replacing .pdf with .svg. Use the
```

§ 248

\$249

epstopdf (Pkg)

Package

for HTML output:

epstopdf-base (Pkg)

convert to . svg

for HTML output:

epstopdf print version inside a lateximage.

```
2 \newcommand*{\LWR@HTML@ETE@OrgGin@setfile}[3]{%
     \edef\LWR@tempone{#3}%
```

```
\StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
                   5
                        \xdef\LWR@parsedfilename{\LWR@tempone}%
                   7 }
                   9 \LWR@formatted{ETE@OrgGin@setfile}
                   \includegraphics in HTML mode redefines \Gin@setfile to be \LWR@HTML@Gin@setfile,
                   which is now redirected to epstopdf's version:
                   10 \renewcommand*{\LWR@HTML@Gin@setfile}[3]{%
                  11
                        \ETE@Gin@setfile{#1}{#2}{#3}%
                  12 }
                   Allow .eps images to be found if a suffix is not provided:
                  13 \AtBeginDocument{
                  14 \DeclareGraphicsExtensions{%
                        .eps,.EPS,.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
                  16 }
                  17 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
                  18 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
                   Likewise when inside a lateximage:
                  20 \appto\LWR@restoreorigformatting{%
                  21 \DeclareGraphicsExtensions{%
                         .eps,.EPS,.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
                  22
                  23 }%
                  24 }
         File 141 lwarp-eqlist.sty
         Package eqlist
§250
      eqlist (Pkg) eqlist is emulated.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{eqlist}[2002/08/15]
                   2 \newenvironment{eqlist}[1][]{\description}{\enddescription}
                   3 \newenvironment{eqlist*}[1][]{\description}{\enddescription}
                   4 \newenvironment{Eqlist}[2][]{\description}{\enddescription}
                   \verb|5| newenvironment{Eqlist*}[2][]{\description}{\description}|
                   6 \newcommand*{\longitem}[1][]{\item[#1]}
                   7 \newcommand*{\eqlistinit}{}
                   8 \newcommand*{\eqliststarinit}{}
                   9 \newcommand*{\eqlistinitpar}{}
                  10 \def\eqlistlabel#1{#1}
                  11 \newcommand{\eqlistauto}[1]{}
```

12 \newcommand{\eqlistnoauto}{}

File 142 lwarp-eqparbox.sty

§251 Package eqparbox

(Emulates or patches code by Scott Pakin.)

eqparbox (*Pkg*) eqparbox is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{eqparbox}[2017/09/03]
```

```
4
          \minipagefullwidth%
5
          \parbox[#1][#2][#3]{\linewidth}{#5}%
     }%
6
7 }
8 \LWR@formatted{eqparbox}
10 \NewDocumentCommand{\LWR@HTML@eqmakebox}{o o m}{%
      \makebox[#2]{#3}%
11
12 }
13 \LWR@formatted{eqmakebox}
15 \NewDocumentCommand{\LWR@HTML@eqframebox}{o o m}{%
      \framebox[#2]{#3}%
17 }
18 \LWR@formatted{eqframebox}
20 \NewDocumentEnvironment{LWR@HTML@eqminipage}\{0\{t\}\ 0\{\}\ m\}
21 { %
22
      \begingroup%
23
      \minipagefullwidth%
24
      \minipage[#1][#2][#3]{\linewidth}%
25 }%
26 {%
27
      \endminipage%
      \endgroup%
28
29 }
31 \newcommand*{\LWR@HTML@eqboxwidth}[1]{.25\linewidth}
32 \LWR@formatted{eqboxwidth}
34 \newcommand*{\LWR@HTML@eqsetminwidth}[2]{}
35 \newcommand*{\LWR@HTML@eqsetmaxwidth}[2]{}
37 \newcommand*{\LWR@HTML@eqsetminwidthto}[2]{}
38 \newcommand*{\LWR@HTML@eqsetmaxwidthto}[2]{}
```

File 143 lwarp-errata.sty

§ 252 Package errata

(Emulates or patches code by Michael Kohlhase.)

errata (*Pkg*) errata is patched for use by lwarp.

This is for v0.3 of errata. A newer version of errata with more features is under development, at which time the lwarp version will have to be updated.

for HTML output:

Macros are being defined with the math dollar, so enable the HTML version during package loading:

1\StartDefiningMath

Now load the package:

2 \LWR@ProvidesPackagePass{errata}[2006/11/12]

Patches for dynamic inline math:

```
3 \VerifyCommand[lwarp][errata]{\erratumAdd}{777B919444DA9C70140B71E0C9EDEEBF}
    5 \xpatchcmd{\erratumAdd}
                                {$_a^{\arabic{erratum}}$}
    7 %
                                            {\inlinemathother$_a^{\arabic{erratum}}$\inlinemathnormal}
    8
                                 {\textsubscript{a}\textsuperscript{\arabic{erratum}}}
                                 {}
                                 {\LWR@patcherror{erratum}{erratumAdd}}}
  10
 12 \VerifyCommand[lwarp][errata]{\erratumDelete}{057CF8E4B6A0DBECF95C009E9DC44FBA}
 14 \xpatchcmd{\erratumDelete}
                                 {$_d^{\arabic{erratum}}$}
                                            {\color=0.05cm} $$ \left( \frac{\sigma^{\alpha}}{\alpha} \right) $$ \color=0.05cm $
 16 %
                                {\textsubscript{d}\textsuperscript{\arabic{erratum}}}
 17
 18
                                 {\LWR@patcherror{erratum}{erratumDelete}}
 19
21 \VerifyCommand[lwarp][errata]{\erratumReplace}{\0E24E5FE5415E6038089ABF21C6933D7}
23 \xpatchcmd{\erratumReplace}
                                 {\subseteq contact for the statem of the sta
                                            {\color=0.05cm} $$ \left( -r^{\alpha}\right) $$ \left( -ratum \right) $$ in line math normal $$ \left( -ratum \right) $$ in line math normal $$ 
25 %
                                 {\textsubscript{r}\textsuperscript{\arabic{erratum}}}
26
27
                                 {\LWR@patcherror{erratum}{erratumReplace}}
28
30 \VerifyCommand[lwarp][errata]{\erratum}{A430F080689BC6FF47E7C905800D2028}
32 \xpatchcmd{\erratum}
33
34 %
                                            {\inlinemathother$_a$\inlinemathnormal}
35
                                 {\textsubscript{a}}
36
                                 {}
                                {\LWR@patcherror{erratum}{erratumDelete}}
37
38 \xpatchcmd{\erratum}
                                 39
                                            {\inlinemathother$_d^{\@thefnmark}$\inlinemathnormal}
40~\%
                                 {\textsubscript{d}\textsuperscript{\@thefnmark}}
41
 42
                                 {\LWR@patcherror{erratum}{eDelete}}
43
44 \xpatchcmd{\erratum}
                                 { r^{\ensuremath{\$}}}
45
                                            {\inline mathother $$_r^{\endalign} $\inline math normal} }
46 %
```

```
47
                       {\textsubscript{r}\textsuperscript{\@thefnmark}}
                 48
                       {\LWR@patcherror{erratum}{eReplace}}
                  Finish the current page's errata before closing and reloading the list:
                  50 \preto\PrintErrata{\LWR@maybe@orignewpage}
                  No longer defining math macros with the HTML $:
                  51 \StopDefiningMath
         File 144 lwarp-eso-pic.sty
         Package eso-pic
§ 253
                  (Emulates or patches code by Rolf Niepraschk.)
    eso-pic (Pkg) eso-pic is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{eso-pic}[2018/04/12]
                  2 \newcommand*{\LenToUnit}{}
                  3 \newcommand{\AtPageUpperLeft}[1]{}
                  4 \newcommand{\AtPageLowerLeft}[1]{}
                  5 \newcommand{\AtPageCenter}[1]{}
                  6 \newcommand{\AtStockLowerLeft}[1]{}
                  7 \newcommand{\AtStockUpperLeft}[1]{}
                  8 \newcommand{\AtStockCenter}[1]{}
                  9 \newcommand{\AtTextUpperLeft}[1]{}
                  10 \newcommand{\AtTextLowerLeft}[1]{}
                  11 \newcommand{\AtTextCenter}[1]{}
                  12 \NewDocumentCommand{\AddToShipoutPictureBG}{s +m}{}
                  13 \newcommand{\AddToShipoutPicture}{\AddToShipoutPictureBG}
                  14 \NewDocumentCommand{\AddToShipoutPictureFG}{s +m}{}
                  15 \newcommand*{\ClearShipoutPictureBG}{}
                  16 \newcommand*{\ClearShipoutPicture}{}
                  17 \newcommand*{\ClearShipoutPictureFG}{}
                  18 \newcommand{\gridSetup}[6][]{}
         File 145 lwarp-esvect.sty
         Package esvect
§ 254
                  (Emulates or patches code by Eddie Saudrais.)
     esvect (Pkg) esvect is used as-is for svg math, and emulated for MATHJAX.
for HTML output:
                  1 \LWR@ProvidesPackagePass{esvect}% no date given
                  2 \begin{warpMathJax}
```

```
4 \CustomizeMathJax{\newcommand{\LWResvectvvstar}[2]{\overrightarrow{#1}\!_{#2}}}
5 \CustomizeMathJax{\newcommand{\vv}{\ifstar\LWResvectvvstar\LWResvectvv}}
6 \end{warpMathJax}
```

File 146 lwarp-etoc.sty

Package **etoc** § 255

etoc (Pkg) etoc is ignored. All commands are nullified.

\ref

\tableofcontents with The etoc package uses a non-standard syntax which looks ahead after a \tableofcontents for a following \ref. These \refs appear in the HTML result unless they are removed. Where a \tableofcontents is followed by \ref, and perhaps also \label as well, enclose all of them inside \warpprintonly:

```
\warpprintonly{\tableofcontents
                                                 \ref{toc:abc}
\label{toc:def}}
```

or place all code related to a local \tableofcontents inside a warpprint environment.

home page

Be sure to keep the initial \tableofcontents on the home page, perhaps in its own \warpHTMLonly macro or warpHTML environment.

for HTML output: 1 \LWR@ProvidesPackageDrop{etoc}[2019/11/17]

```
2 \def\etocsetlevel#1#2{}
3 \def\etocskipfirstprefix{}
4 \let\etocthename
                     \@empty
5 \let\etocthenumber \@empty
6 \let\etocthepage \@empty
7 \let\etocthelinkedname
                           \@emptv
8 \let\etocthelinkednumber \@empty
9 \let\etocthelinkedpage
                           \@emptv
10 \let\etocthelink
                    \@firstofone % prior to 1.08j its was \let to \@empty
11 \DeclareRobustCommand*{\etocname} {}
12 \DeclareRobustCommand*{\etocnumber}{}
13 \DeclareRobustCommand*{\etocpage} {}
14 \DeclareRobustCommand*{\etoclink} {\@firstofone}
15 \DeclareRobustCommand*{\etocifnumbered}{\@firstoftwo}
16 \DeclareRobustCommand*{\etociffirst}{\@firstoftwo}
17 \DeclareRobustCommand*\etocifwasempty{\@firstoftwo}
18 \let\etocaftertitlehook
                             \@empty
19 \let\etocaftercontentshook \@empty
20 \def\etoctableofcontents{}
21 \newcommand*\localtableofcontents{}
22 \newcommand*\localtableofcontentswithrelativedepth[1]{}
23 \newcommand\etocsettocstyle[2]{}
24 \long\def\etocsetstyle#1#2#3#4#5{}
25 \def\etocfontminustwo {\normalfont \LARGE \bfseries}
26 \def\etocfontminusone {\normalfont \large \bfseries}
27 \def\etocfontzero {\normalfont \large \bfseries}
28 \def\etocfontone
                        {\normalfont \normalsize \bfseries}
29 \def\etocfonttwo
                        {\normalfont \normalsize}
30 \def\etocfontthree
                        {\normalfont \footnotesize}
31 \def\etocsepminustwo {4ex \@plus .5ex \@minus .5ex}
32 \def\etocsepminusone {4ex \@plus .5ex \@minus .5ex}
```

```
33 \def\etocsepzero
                        {2.5ex \@plus .4ex \@minus .4ex}
                        {1.5ex \@plus .3ex \@minus .3ex}
34 \def\etocsepone
35 \def\etocseptwo
                        {.5ex \@plus .1ex \@minus .1ex}
36 \def\etocsepthree
                        {.25ex \@plus .05ex \@minus .05ex}
37 \def\etocbaselinespreadminustwo {1}
38 \def\etocbaselinespreadminusone {1}
39 \def\etocbaselinespreadzero
                                   {1}
40 \def\etocbaselinespreadone
                                   {1}
41 \def\etocbaselinespreadtwo
                                   {1}
42 \def\etocbaselinespreadthree
                                   {.9}
43 \def\etocminustwoleftmargin {1.5em plus 0.5fil}
44 \def\etocminustworightmargin {1.5em plus -0.5fil}
45 \def\etocminusoneleftmargin {1em}
46 \def\etocminusonerightmargin {1em}
47 \def\etoctoclineleaders
          {\hbox{\normalfont\normalsize\hb@xt@2ex {\hss.\hss}}}
49 \def\etocabbrevpagename {p.~}
                          {Part}% modified 1.08b
50 \def\etocpartname
51 \def\etocbookname
                          {Book}
52 \def\etocdefaultlines{}
53 \def\etocabovetocskip{3.5ex \@plus 1ex \@minus .2ex}
54 \def\etocbelowtocskip{3.5ex \@plus 1ex \@minus .2ex}
55 \def\etoccolumnsep{2em}
56 \def\etocmulticolsep{0ex}
57 \def\etocmulticolpretolerance{-1}
58 \def\etocmulticoltolerance{200}
59 \def\etocdefaultnbcol{2}
60 \def\etocinnertopsep{2ex}
61 \newcommand\etocmulticolstyle[2][]{}
62 \def\etocinnerbottomsep{3.5ex}
63 \def\etocinnerleftsep{2em}
64 \def\etocinnerrightsep{2em}
65 \def\etoctoprule{\hrule}
66 \def\etocleftrule{\vrule}
67 \def\etocrightrule{\vrule}
68 \def\etocbottomrule{\hrule}
69 \def\etoctoprulecolorcmd{\relax}
70 \def\etocbottomrulecolorcmd{\relax}
71 \def\etocleftrulecolorcmd{\relax}
72 \def\etocrightrulecolorcmd{\relax}
73 \newcommand*\etocruledstyle[2][]{}
74 \def\etocframedmphook{\relax}
75 \long\def\etocbkgcolorcmd{\relax}
76 \newcommand*\etocframedstyle[2][]{}
77 \def\etocmulticol{}
78 \def\etocruled{}
79 \def\etocframed{}
80 \def\etoclocalmulticol{}
81 \def\etoclocalruled{}
82 \def\etoclocalframed{}
83 \def\etocarticlestyle{}
84 \def\etocarticlestylenomarks{}
85 \def\etocbookstyle{}
86 \def\etocbookstylenomarks{}
87 \let\etocreportstyle\etocbookstyle
88 \let\etocreportstylenomarks\etocbookstylenomarks
89 \def\etocmemoirtoctotocfmt #1#2{}
90 \def\etocmemoirstyle{}
91 \def\etocscrartclstyle{}
92 \let\etocscrbookstyle\etocscrartclstyle
```

```
93 \let\etocscrreprtstyle\etocscrartclstyle
             94 \def\etocstandarddisplaystyle{\etocarticlestyle}
             95 \newcommand*\etocmarkboth[1]{}
             96 \newcommand*\etocmarkbothnouc[1]{}
             97 \newcommand\etoctocstyle[3][section]{}
             98 \newcommand\etoctocstylewithmarks[4][section]{}
             99 \newcommand\etoctocstylewithmarksnouc[4][section]{}
             100 \def\etocignoretoctocdepth{}
             101 \def\etocsettocdepth[1]{}
             102 \def\etocdepthtag #1#{\Etoc@depthtag }
             103 \def\Etoc@depthtag #1{}
             104 \def\etocignoredepthtags {}
             105 \def\etocobeydepthtags
             106 \def\etocsettagdepth #1#2{}
             107 \def\invisibletableofcontents {}
             108 \def\invisiblelocaltableofcontents{}
             109 \def\etocsetnexttocdepth #1{}
             110 \def\etocsetlocaltop #1#{\Etoc@set@localtop}
             111 \def\Etoc@set@localtop #1{}
             112 \def\etocstandardlines {}
             113 \def\etoctoclines
                                       {}
             114 \let\etocaftertochook
                                         \@empty
             115 \let\etocbeforetitlehook \@empty
             116 \appto\tableofcontents{\def\tableofcontents{}}
    File 147 lwarp-eurosym.sty
    Package eurosym
              (Emulates or patches code by Henrik Theiling.)
eurosym (Pkg) eurosym is patched for use by lwarp.
              1 \LWR@ProvidesPackagePass{eurosym}[1998/08/06]
              2\renewrobustcmd\officialeuro{\HTMLentity{euro}}
              3 \let\geneuro\officialeuro
              4 \let\geneuronarrow\officialeuro
              5 \let\geneurowide\officialeuro
              6 \let\euro\officialeuro
              7 \renewrobustcmd\eurobars{}
              8 \renewrobustcmd\eurobarsnarrow{}
              9 \renewrobustcmd\eurobarswide{}
    File 148 lwarp-everypage.sty
```

Package everypage **§257**

§ 256

for HTML output:

(Emulates or patches code by Sergio Callegari.)

everypage (*Pkg*) everypage is ignored.

1 \LWR@ProvidesPackageDrop{everypage}[2007/06/20] for HTML output:

```
2 \newcommand*{\AddEverypageHook}[1]{}
3 \newcommand*{\AddThispageHook}[1]{}
```

File 149 lwarp-everyshi.sty

§ 258 Package everyshi

(Emulates or patches code by Martin Schröder.)

everyshi (Pkg) ignored.

for HTML output: Discard all options for lwarp-everyshi:

1 \LWR@ProvidesPackageDrop{everyshi}[2001/05/15]

2 \let\EveryShipout\relax

3 \newcommand*{\EveryShipout}[1]{}

4

5 \let\AtNextShipout\relax

6 \newcommand*{\AtNextShipout}[1]{}

File 150 lwarp-extarrows.sty

§ 259 Package **extarrows**

(Emulates or patches code by Huynh Ky Anh.)

extarrows (Pkg) extarrows is used as-is for svg math, and emulted for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{extarrows}[2008/05/15]

2 \begin{warpMathJax}

 $\label{lem:customize} $$ \CustomizeMathJax{\Newextarrow\xLongleftarrow{10,10}{0x21D0}}$$

4 \CustomizeMathJax{\Newextarrow\xLongrightarrow{10,10}{0x21D2}}

 $\label{lem:customizeMathJax{\encoder}} \begin{tabular}{ll} $$ \customizeMathJax{\encoder} & \customizeMathJax{\encoder} \\ \cup & \cut & \cut$

6 \CustomizeMathJax{\Newextarrow\xLeftrightarrow{10,10}{0x21D4}}

 $\label{lem:customizeMathJax{Newextarrow}xlongleftrightarrow {10,10} \{0x2194\}} \\$

8 \CustomizeMathJax{\Newextarrow\xleftrightarrow{10,10}{0x2194}}
9 \CustomizeMathJax{\let\xlongleftarrow\xleftarrow}

10 \CustomizeMathJax{\let\xlongrightarrow\xrightarrow}

11 \end{warpMathJax}

File 151 lwarp-extramarks.sty

§ 260 Package extramarks

(Emulates or patches code by Piet van Oostrum.)

extramarks (Pkg) extramarks is ignored.

for HTML output: Discard all options for lwarp-extramarks:

1 \LWR@ProvidesPackageDrop{extramarks}[2019/01/31]

```
2 \newcommand*{\extramarks}[2]{}
3 \newcommand*{\firstleftxmark}{}
4 \newcommand*{\lastleftxmark}{}
5 \newcommand*{\lastrightxmark}{}
6 \newcommand*{\lastrightxmark}{}
7 \newcommand*{\firstxmark}{}
8 \newcommand*{\lastxmark}{}
9 \newcommand*{\topxmark}{}
10 \newcommand*{\toptightxmark}{}
11 \newcommand*{\toptightxmark}{}
12 \newcommand*{\firstleftmark}{}
13 \newcommand*{\lastrightmark}{}
14 \newcommand*{\firstrightmark}{}
15 \newcommand*{\lastleftmark}{}
```

File 152 lwarp-fancybox.sty

§ 261 Package

Package fancybox

(Emulates or patches code by Timothy Van Zandt.)

fancybox (Pkg) fancybox is supported with some patches.

framed equation example

fancybox's documentation has an example FramedEqn environment which combines math, \Sbox, a minipage, and an \fbox. This combination requires that the entire environment be enclosed inside a lateximage, which is done by adding \lateximage at the very start of FramedEqn's beginning code, and \endlateximage at the very end of the ending code. Unfortunately, the HTML alt attribute is not used here.

```
\newenvironmentFramedEqn
{
\lateximage% NEW
\setlength{\fboxsep}{15pt}
...}{...
\[\fbox{\TheSbox}\]
\endlateximage% NEW
}
```

framing alternatives

\fbox works with fancybox. Also see lwarp's \fboxBlock macro and fminipage environment for alternatives to \fbox for framing environments.

framed table example

The fancybox documentation's example of a framed table using an \fbox containing a tabular does not work with lwarp, but the FramedTable environment does work if \fbox is replaced by \fboxBlock. This method does lose some HTML formatting. A better method is to enclose the table's contents inside a fminipage environment. The caption may be placed either inside or outside the fminipage:

```
\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{\linewidth}
...
\end{tabular}
\end{fminipage}
\end{table}
```

 \triangle

framed verbatim

lwarp does not support the verbatim environment inside a span, box, or fancybox's \Sbox, but a verbatim may be placed inside a fminipage. The fancybox documentation's example FramedVerb may be defined as:

```
\newenvironment{FramedVerb}[1] % width
{
   \VerbatimEnvironment
   \fminipage{#1}
   \beginVerbatim
}{
   \endVerbatim
   \endfminipage
}
```

framed \VerbBox

fancybox's \VerbBox may be used inside \fbox.

indented alignment

LVerbatim, \LVerbatimInput, and \LUseVerbatim indent with horizontal space which may not line up exactly with what *pdftotext* detects. Some lines may be off slightly in their left edge.

lwarp sanitizes HTML for fancybox verbatims, except for the contents of \VerbBox and any \verb inside.

fancybox, fancyvrb

VerbatimFootnotes

 If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

```
\subsection[Subsection Name]
    {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbtim+.}
```

and likewise for equations or display math.

1 \LWR@ProvidesPackagePass{fancybox}[2010/05/15]

After the preamble is loaded, after any patches to Verbatim:

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching fancybox.}
```

\VerbatimFootnotes

Patched to use the new version.

```
4 \def\VerbatimFootnotes{%
5 \let\@footnotetext\V@footnotetext%
6 \let\LWR@footnotetext\V@footnotetext% lwarp
7 }
```

\V@@footnotetext

Patches in a subset of lwarp's \LWR@footnotetext to the fancyvrb version of \V@@footnotetext.

```
8 \def\V@@footnotetext{%
9 \LWR@traceinfo{V@footnotetext}%
```

Place an autopage marker so that back references to citations inside a footnote will link closer to the footnote text, if possible.

10 \LWR@newautopagelabel{page}%

Take the current footnote box, then append:

11 \global\setbox\LWR@footnotebox=\vbox\bgroup%

Add to any current footnotes:

12 \unvbox\LWR@footnotebox%

Remember the footnote number for \ref:

```
13 \protected@edef\@currentlabel{%
14 \csname p@footnote\endcsname\@thefnmark%
15 }% @currentlabel
```

Use HTML superscripts in the footnote even inside a lateximage:

16 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%

Use paragraph tags if in a tabular data cell or a lateximage:

17 \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline%

Append the footnote to the list:

18 \@makefntext{}%

The footnote text will follow after \V@@footnotetext has completed.

```
19 \bgroup%20 \aftergroup\V@@@footnotetext%
```

Do not generate autopages inside the footnotes, since they are accumulated at the moment before finally being used perhaps on a later page.

```
21 \let\LWR@newautopagelabel\LWR@null@newautopagelabel%
22 \ignorespaces%
23 }%
```

\V@@@footnotetext

```
24 \def\V@@footnotetext{%
      \LWR@orignobreakspace\LWR@orignewline%
      \LWR@htmltagc{/\LWR@tagregularparagraph}\LWR@orignewline%
26
27
      \strut\egroup%
28 }
29 }% AfterEndPreamble
30 \renewcommand*{\@shadowbox}[1]{%
31 \ifbool{FormatWP}%
32 {\InlineClass[border:1px solid black]{shadowbox}{#1}}%
33 {\InlineClass{shadowbox}{#1}}%
34 }
35
36 \renewcommand*{\@doublebox}[1]{%
37 \ifbool{FormatWP}%
38 {\InlineClass[border:1px double black]{doublebox}{#1}}%
39 {\InlineClass{doublebox}{#1}}%
40 }
41
42 \renewcommand*{\@ovalbox}[2]{%
43 \ifbool{FormatWP}%
44 {\InlineClass[border:1px solid black; border-radius:1ex]{ovalbox}{#2}}%
45 {%
      \ifthenelse{\isequivalentto{#1}{\thinlines}}%
46
47
          {\InlineClass{ovalbox}{#2}}%
```

```
{\InlineClass{Ovalbox}{#2}}%
48
49 }%
50 }
Convert minipages, parboxes, and lists into linear text using the LWR@nestspan
environment:
51 \let\LWR@origSbox\Sbox
53 \def\Sbox{\LWR@origSbox\LWR@nestspan}
55
56 \let\LWR@origendSbox\endSbox
58 \def\endSbox{\endLWR@nestspan\LWR@origendSbox}
Begnarray is adapted for MATHJAX or enclosed inside a lateximage:
59 \RenewEnviron{Begnarray}
60 {\LWR@eqnarrayfactor}
62 \csgpreto{Beqnarray*}{\boolfalse{LWR@numbereqnarray}}
\GenericCaption is enclosed in an HTML block:
63 \renewcommand{\GenericCaption}[1]{%
      \LWR@figcaption%
65
      \LWR@isolate{#1}%
66
      \endLWR@figcaption%
67 }
Btrivlist is enclosed in an HTML block. This is a tabular, and does not use \item.
  \{\langle l/c/r \rangle\} [\langle t/c/b \rangle]
68 \RenewDocumentEnvironment{Btrivlist}{m o}
69 {%
70
      \LWR@stoppars%
      \begin{BlockClass}{Btrivlist}%
71
      \tabular{#1}%
72
73 }
74 {%
75
      \endtabular%
76
      \end{BlockClass}%
      \LWR@startpars%
77
78 }
Btrivlist is also neutralized when used inside a span:
79 \AtBeginEnvironment{LWR@nestspan}{%
      \RenewDocumentEnvironment{Btrivlist}{m o}{}{}%
81 }
lwarp's handling of \item is patched to accept fancybox's optional arguments:
82 \let\LWRFB@origitemizeitem\LWR@itemizeitem
83 \let\LWRFB@origdescitem\LWR@descitem
```

\trivlist

```
84
85 \RenewDocumentCommand{\LWR@itemizeitem}{d()o}{%
      \IfValueTF{#2}{%
87
          \LWRFB@origitemizeitem[#2]%
88
          \verb|\LWRFB@origitemizeitem%||
89
      }%
90
91 }
92
93 \RenewDocumentCommand{\LWR@descitem}{d()o}{%
      \IfValueTF{#2}{%
94
95
          \LWRFB@origdescitem[#2]~%
96
      }{%
97
          \LWRFB@origdescitem%
98
      }%
99 }
\if@newlist\else{
101
102
          \LWR@htmltagc{br /}%
          \LWR@orignewline%
103
104
      }\fi%
105
      \LWR@origitem%
106 }
```

The various boxed lists become regular lists:

```
107 \renewenvironment{Bitemize}[1][]
108
      {%
109
           \LWR@spanwarnformat{Bitemize}%
110
           \booltrue{LWR@starting@fancybox}%
111
           \begin{itemize}%
           \boolfalse{LWR@starting@fancybox}%
112
113
       {\end{itemize}}
114
115
116 \renewenvironment{Benumerate}[1][]
117
      {%
           \LWR@spanwarnformat{Benumerate}%
118
           \booltrue{LWR@starting@fancybox}%
119
           \begin{enumerate}%
121
           \boolfalse{LWR@starting@fancybox}%
122
123
       {\end{enumerate}}
124
125 \renewenvironment{Bdescription}[1][]
126
           \LWR@spanwarnformat{Bdescription}%
127
           \booltrue{LWR@starting@fancybox}%
128
           \begin{description}%
129
           \boolfalse{LWR@starting@fancybox}%
130
131
132
       {\end{description}}
```

\boxput simply prints one then the other argument, side-by-side instead of above and behind:

```
133 \RenewDocumentCommand{\boxput}{s d() m m}{%
```

```
\IfBooleanTF{#1}{#3\qquad44}{#4\qquad43}%
134
135 }
   Neutralized commands:
136 \RenewDocumentCommand{\fancyput}{s d() m}{}
137 \RenewDocumentCommand{\thisfancyput}{s d() m}{}
139 \RenewDocumentCommand{\fancypage}{m m}{}
140 \RenewDocumentCommand{\thisfancypage}{m m}{}
141
142 \def\LandScape#1{}
143 \def\endLandScape{}
144 \def\@Landscape#1#2#3{}
145 \def\endLandscape{}
   Low-level patches for UseVerbatim and friends:
146 \ensuremath{\mbox{\mbox{$146$ \ensuremath{\mbox{\mbox{$485522266594F8C0D846AEB1F72232FF}$}}} \ensuremath{\mbox{$485522266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$48552266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$48552266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$48552266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$48552266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$4855266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$4855266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$4855266594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$485566594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$4856666594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$4856666594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$4856666594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$48566666594F8C0D846AEB1F72232FF}} \ensuremath{\mbox{$485666666594F8C0D84664EB1F7224EF}} \ensuremath{\mbox{$4856
147
148 \def\Verbatim@List#1{%
          \if@minipage\else\vskip\parskip\fi
149
          \leftskip\@totalleftmargin
150
          \@rightskip\@flushglue \rightskip\@rightskip
151
           \parindent\z@
152
           \parskip\z@
153
           \parfillskip\@flushglue
           \hfuzz\VerbatimFuzz\relax
           \@@par
           \global\@inlabelfalse %Prevents vspace from being inserted when
157
                                                                %first line exceeds \hsize.
158
          \Verbatim@Prep
159 % #1%
               \expandafter\def\expandafter\tmpb\expandafter{#1}% lwarp
160
               \LWR@HTMLsanitize@tmpb%
                                                                                                                                          lwarp
161
               \tmpb%
                                                                                                                                         lwarp
162
          \Verbatim@Par}%
163
164
165 \VerifyCommand[lwarp][fancybox]{\Verbatim@@Input}{3DCC957D04BC5060FF70DD0FF2928D55}
166
167 \def\Verbatim@@Input{%
168
          \let\protect\noexpand
169
          \LetLtxMacro\tmpb\The@Verbatim%
                                                                                          lwarp
          \LWR@HTMLsanitize@tmpb%
                                                                                          lwarp
170
          \edef\The@Verbatim{%
171
               \noexpand\Every@VerbatimLine
172
173 %
                 \The@Verbatim
174
                                                                                           lwarp
               \ifeof\Verbatim@Infile\else\noexpand\Verbatim@Par\fi}%
           \let\protect\relax
177
           \The@Verbatim
           \ifeof\Verbatim@Infile\else
178
               \let\The@Verbatim\The@GVerbatim
179
               \def\The@GVerbatim{}\Verbatim@NextLine
180
               \expandafter\Verbatim@@Input
181
          \fi}%
182
183
184
```

186 \let\LWRFB@UseVerbatim\UseVerbatim

```
187 \renewcommand*{\UseVerbatim}[1]{%
        \LWR@atbeginverbatim{Verbatim}%
        \verb|\LWRFB@UseVerbatim{#1}|%
190
        \LWR@afterendverbatim%
191 }
192
193 \let\LWRFB@LUseVerbatim\LUseVerbatim
195 \renewcommand*{\LUseVerbatim}[1]{%
        \LWR@atbeginverbatim{LVerbatim}%
196
197
        \noindent%
        \LWRFB@LUseVerbatim{#1}%
199
        \LWR@afterendverbatim%
200 }
202 \ensuremath{ \mbox{ def}\ensuremath{ \mbox{\mbox{\mbox{\mbox{$0$}}}}} 1]#2{\%}
        \LWR@atbeginverbatim{BVerbatim}%
203
        \LWRFB@UseVerbatim{#2}%
204
        \LWR@afterendverbatim%
205
206 }
```

File 153 lwarp-fancyhdr.sty

§ 262 Package fancyhdr

(Emulates or patches code by Piet van Oostrum.)

fancyhdr (*Pkg*) fancyhdr is ignored.

for HTML output: Discard all options for lwarp-fancyhdr:

```
1 \LWR@ProvidesPackageDrop{fancyhdr}[2021/01/04]
```

```
2 \newcommand*{\fancyhead}[2][]{}
3 \newcommand*{\fancyfoot}[2][]{}
4 \newcommand*{\fancyhf}[2][]{}
6 \newcommand*{\lhead}[2][]{}
7 \newcommand*{\chead}[2][]{}
8 \newcommand*{\rhead}[2][]{}
9 \newcommand*{\lfoot}[2][]{}
10 \newcommand*{\cfoot}[2][]{}
11 \newcommand*{\rfoot}[2][]{}
12 \newcommand*{\headrulewidth}{}
13 \newcommand*{\footrulewidth}{}
14 \providecommand{\headruleskip}{0pt}
15 \providecommand{\footruleskip}{0pt}
16 \newcommand{\plainheadrulewidth}{0pt}
17 \newcommand{\plainfootrulewidth}{0pt}
18 \def\fancyplain#1#2{#1}
19 \newcommand*{\headrule}{}
20 \newcommand*{\footrule}{}
21 \newlength{\headwidth}
22 \newcommand*{\fancycenter}[1][1em]{}
23 \newcommand*{\fancyheadoffset}[2][]{}
24 \newcommand*{\fancyfootoffset}[2][]{}
25 \newcommand*{\fancyhfoffset}[2][]{}
```

```
26 \newcommand{\fancyheadinit}[1]{}
27 \newcommand{\fancyfootinit}[1]{}
28 \newcommand{\fancyhfinit}[1]{}
29 \newcommand*{\iffloatpage}[2]{#2}
30 \newcommand*{\ifftopfloat}[2]{#2}
31 \newcommand*{\iffbotfloat}[2]{#2}
32 \newcommand*{\iffootnote}[2]{#2}
33
34 \newcommand{\fancypagestyle}[1]{%
35 \@ifnextchar[{\f@nch@pagestyle{#1}}{\f@nch@pagestyle{#1}[]}%
36 }
37 \long\def\f@nch@pagestyle#1[#2]#3{}
```

File 154 lwarp-fancypar.sty

§ 263 Package fancypar

(Emulates or patches code by Gonzalo Medina.)

fancypar (*Pkg*) fancypar is used as-is for print output, and emulated for HTML.

△ css classes

NotebookPar and related are used as-is inside a lateximage, but for HTML these are emulated as a <div> of class NotebookPar, etc. For HTML, the package options and the macro optional arguments are ignored. The user must provide custom css for each if visual effects are required. See section 7.7.

If using a custom paragraph style, such as MyStylePar from the documentation, use the following to generate an HTML div of class MyStylePar:

```
... (existing definiton of \MyStylePar, print version) ...
\begin{warpHTML}
\AddFancyparClass{MyStyle}
\end{warpHTML}
```

\MyStylePar is then modified to emulate HTML. An optional argument is allowed, which is ignored.

 $\quad \text{for HTML output:} \quad$

 ${\tt 1\,LWR@ProvidesPackagePass\{fancypar\}[2019/01/18]}$

```
2 \begin{warpHTML}
3 \makeatletter
5 \newcommand{\LWR@fancypar}[2]{%
    \begin{BlockClass}{#1Par}
6
7
    #2
    \end{BlockClass}
8
9 }
10
11 \newcommand{\LWR@HTML@NotebookPar}[2][]{\LWR@fancypar{Notebook}{#2}}
12 \LWR@formatted{NotebookPar}
15 \LWR@formatted{ZebraPar}
18 \LWR@formatted{DashedPar}
```

```
20 \newcommand{\LWR@HTML@MarkedPar}[2][]{\LWR@fancypar{Marked}{#2}}
21 \LWR@formatted{MarkedPar}
23 \newcommand{\LWR@HTML@UnderlinedPar}[2][]{\LWR@fancypar{Underlined}{#2}}
24 \LWR@formatted{UnderlinedPar}
27 \newcommand{\LWR@HTML@add@fancy@format}{}
28 \LWR@formatted{add@fancy@format}
30
31 \newcommand{\AddFancyparClass}[1]{%
                                  \verb|\expandafter\\| expandafter\\| expandafter
33
                                                         \LWR@fancypar{#1}{##2}%
34
                                  \LWR@formatted{#1Par}
35
36 }
38 \makeatother
39 \end{warpHTML}
```

File 155 lwarp-fancyref.sty

§264 Package fancyref

 $(Emulates\ or\ patches\ code\ by\ Axel\ Reichert.)$

fancyref (Pkg) fancyref is modifed for HTML output.

for HTML output: 1 \LWR@ProvidesPackagePass{fancyref}[1999/02/03]

\fancyrefhook (*Hook*) [fancyref]

To remove the margin option, if \fancyrefhook is anything other than the paren option, then force it to the default instead. (Comparing to the margin option was not possible since lwarp has revised the meaning of \mbox so the comparison failed.)

```
2 \newcommand*{\LWRfref@parenfancyrefhook}[1]{(#1)}
3
4 \ifdefstrequal{\fancyrefhook}{\LWRfref@parenfancyrefhook}
5 {}{
6 \renewcommand*{\fancyrefhook}[1]{#1}%
7 }
```

File 156 lwarp-fancytabs.sty

§ 265 Package fancytabs

fancytabs (Pkg) fancytabs is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fancytabs}[2016/03/29]

```
2 \newcommand{\fancytab}[3][RIGHT]{}
3 \newcommand{\fancytabsStyle}[1]{}
```

```
4\newcommand{\fancytabsHeight}[1]{}
5 \newcommand{\fancytabsWidth}[1]{}
6 \newcommand{\fancytabsCount}[1]{}
7 \newcommand{\fancytabsLeftColor}[1]{}
8 \newcommand{\fancytabsRightColor}[1]{}
9 \newcommand{\fancytabsTop}[1]{}
10 \newcommand{\fancytabsTextVPos}[1]{}
11 \newcommand{\fancytabsTextHPos}[1]{}
12 \newcommand{\fancytabsGap}[1]{}
13 \newcommand{\fancytabsFloor}[1]{}
14 \newcommand{\fancytabsRotate}[1]{}
```

File 157 lwarp-fancyvrb.sty

\$266

Package fancyvrb

(Emulates or patches code by Timothy Van Zandt.)

fancyvrb (*Pkg*) fancyvrb is supported with some patches.

HTML classes

The fancy verbatim environment is placed inside a <div> of class fancyvrb. The label is placed inside a <div> of class fancyvrblabel. The verbatim text itself is placed inside a <div> of class verbatim.

For an inline \Verb, the verbatim is placee inside a of class fancyvrb.

fancybox, fancyvrb \VerbatimFootnotes \triangle sectioning or displaymath If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

```
\subsection[Subsection Name]
    {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbtim+.}
```

and likewise for equations or display math.

```
1\AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec
3 \LWR@ProvidesPackagePass{fancyvrb}[2023/11/06]
```

Initial default patch for fancyvrb:

```
4 \fvset{frame=none}%
```

Gobble does not work with HTML sanitization, so if gobbling is non-zero then turn off HTML sanitization.

```
5 \define@key{FV}{gobble}{%
   \@tempcnta=#1\relax
7
   \ifnum\@tempcnta<\@ne
     \let\FV@Gobble\relax
8
9
     \ifnum\@tempcnta>9
10
        \FV@Error{gobble parameter must be less than 10}\FV@eha
11
12
      \else
        \renewcommand{\FV@@@Gobble}[\@tempcnta]{}%
13
        \let\FV@Gobble\FV@Gobble%
14
```

```
15 \boolfalse{LWR@HTMLsanitize@tmpb@enable}% lwarp
16 \fi
17 \fi}
```

\FancyVerbSpace

Force the use of a vibible space instead of an empty box.

\FancyVerbTab

Set the visible tab. Unicode 240B (SYMBOL FOR HORIZONTAL TABULATION) and 21E5 (RIGHTWARDS ARROW TO BAR) both gave unindended new lines at each tab, so a simple pipe character is used instead.

For the print mode, the fancyvrb definition does not copy, so a simplified version is used.

```
30 \def\LWR@print@FancyVerbTab{|}
31 \def\LWR@HTML@FancyVerbTab{|}%
32 \LWR@formatted{FancyVerbTab}
33 \fvset{tabsize=8, showtabs=false}
```

\FV@CatCodes

```
34 \VerifyCommand[lwarp][fancyvrb]{\FV@CatCodes}{BF2C1F38D5FEF0658C18B636ACBDA40E}
36 \def\FV@CatCodes{%
37 \let\do\@makeother\dospecials % The usual stuff.
   \FV@ActiveWhiteSpace
                                % See below.
                               % See below.
   \FV@FontScanPrep
39
40 \FV@CatCodesHook
                               % A style hook.
41 \FancyVerbCodes
                                % A user-defined hook.
42 \catcode'\>=12%
                                % lwarp
  \catcode'\<=12%
                                 % lwarp
44 }
```

\FV@GetLine

Added the catcode changes for < and> to avoid the effect of \@noligs for these characters. They were being made active and thus would not be sensed by the search/replace to sanitize.

 \triangle

This code is sensitive to the use of %, and for some reason does not work if \expandafter immediately follows the < catcode change.

```
45 \VerifyCommand[lwarp][fancyvrb]{\FV@GetLine}{9B86134119C575F099B5B567A9B65A9F}
46
47 \def\FV@GetLine{%
48 \@noligs%
49 \catcode'\>=12% lwarp, and the next line as well
50% for some reason, there must not be a % after the following 12:
```

```
\catcode'\<=12
51
52 %
53
      \expandafter\FV@CheckScan\FancyVerbGetLine%
54 }
Modified to sanitize HTML. \LWR@HTMLsanitize@tmpb is included in \FV@Line, so
it will adjust if used inside an lateximage.
55 \VerifyCommand[lwarp][fancyvrb]{\FancyVerbGetLine}{498B88BACBD0811BAC0791BDF4F3B335}
57\begingroup
58 \catcode'\^^M=\active%
59 \gdef\FancyVerbGetLine#1^^M{%
60
   \@nil%
   \FV@CheckEnd{#1}%
61
   \ifx\@tempa\FV@EnvironName%
                                             % True if end is found
      \ifx\@tempb\FV@@@CheckEnd\else\FV@BadEndError\fi%
      \let\next\FV@EndScanning%
65
   \else%
      \ifbool{LWR@HTMLsanitize@tmpb@enable}%
                                                                lwarp
66
          {\c {\tt V@Line{\tt LWR@HTML} sanitize@use@tmpb{\#1}}} \%
                                                                 lwarp
67
          {\def\FV@Line{#1}}%
                                                                 lwarp
68
      \def\next{\FV@PreProcessLine\FV@GetLine}%
69
70
    \fi%
71
    \next}%
72 \endgroup
  \{\langle R/L \ margin \ 0/1 \rangle\}
Modified to always allow line wrapping because added HTML tags may make run
off the end of the line in the PDF output file before conversion to HTML.
73 \VerifyCommand[lwarp][fancyvrb]{\FV@List}{8FB649FAF7C9487B257B76AF4FFB27D1}
74
75 \def\FV@List#1{%
   \begingroup
76
    \FV@UseKevValues
77
78
    \FV@LeaveVMode
    \if@inlabel\else\setbox\@labels=\box\voidb@x\fi
    \FV@ListNesting{#1}%
    \FV@ListParameterHook
    \FV@ListVSpace
82
83
    \FV@SetLineWidth
   \FV@InterLinePenalty
84
85% \let\FV@ProcessLine\FV@ListProcessLine@i
86 \let\FV@ProcessLine\FV@ListProcessLine%
                                                         lwarp
   \FV@CatCodes
87
   \FV@FormattingPrep
88
   \FV@ObeyTabsInit
    \FV@BeginListFrame}
  \{\langle text \rangle\}
 Processes each line, adding optional line numbers. Modified to always allow line
wrapping because added HTML tags may make run off the end of the line in the
PDF output file before conversion to HTML.
91 \VerifyCommand[lwarp][fancyvrb]{\FV@ListProcessLine}{660F9938234FC1043ACF7B02B3F37372}
93 \def\FV@ListProcessLine#1{%
```

\FV@List

\FV@ListProcessLine

\hbox to \hsize{%

```
95 %
                                        \kern\leftmargin
                                    \hbox to \VerbatimHTMLWidth {%
  96
                                       \footnote{Months of the control of
  97
  98
                                           \FV@LeftListNumber%
                                           \FV@LeftListFrame
  99 %
                                    \FancyVerbFormatLine{#1}%
100
                                    \hss%
101
                                           \FV@RightListFrame
102 %
                                    \FV@RightListNumber%
103
                           }%
104
105
                                   \hss% required to avoid underfull hboxes
106 }
107 }
          \{\langle name \rangle\} \{\langle character \rangle\}
      Modified to sanitize HTML when stored. Sanitizing on use would be too late to
     adjust catcodes. \LWR@HTMLsanitize@tmpb is included in the saved macro, so if
     inside a lateximage, \LWR@HTMLsanitize@tmp does nothing.
\label{thm:command} $$108 \end{command} [warp] [fancyvrb] {\end{command} [warp] [fancyvrb] {\end{command} $$108$ } $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$108$ $$10
109
110 \begingroup
111 \catcode'\^^M=\active%
112 \gdef\FVC@SaveVerb#1#2{%
                  \@namedef{FV@SV@#1}{}%
113
                   \begingroup%
114
                           \FV@UseKeyValues%
115
                           \FV@CatCodes%
116
                           \displaystyle \operatorname{\def^{M}(\FV@EOL)}_{\def}
117
                           \global\let\@tempg\FancyVerbAfterSave%
119
                           \catcode'#2=12%
                           120
                            121~\%
                            \expandafter\@tempa\string#2{%
122
                                           \endgroup%
123
                                            \@namedef{FV@SV@#1}{%
124
125 %
                                                            \LWR@HTMLsanitize@use@tmpb{##2}%
126
                                                                                                                                                                                                               lwarp
                                           }\@tempg%
127
                           }%
128
                            \FancyVerbGetVerb\FV@EOL}%
129
130 \endgroup
          \{\langle macro \rangle\}
     Adds a <span>.
131 \VerifyCommand[lwarp][fancyvrb]{\FV@UseVerb}{A3A9D802CCDBEC8D2FDAB626346B5EDD}
133 \def\FV@UseVerb#1{%
                           \ifbool{LWR@verbtags}%
                                                                                                                                                                               lwarp
135
                                   {\LWR@htmltag\{span\ class=\textquotedbl{}\}\fine cyvrb\textquotedbl{}\}\fine cyvrb\textquotedbl{}
136
                                                                                                                                                                               lwarp
                           \mbox{\FV@UseKeyValues\FV@FormattingPrep#1}%
137
                           \ifbool{LWR@verbtags}%
                                                                                                                                                                               lwarp
138
                                           {\LWR@htmltag{/span}}%
                                                                                                                                                                               lwarp
139
```

lwarp

\FVC@SaveVerb

\FV@UseVerb

{}%

140 141 }

```
\FVC@Verb
                              \{\langle character \rangle\}
                             Modified to sanitize HTML.
                           142 \end{tabular} [fancyvrb] {\tt VCeVerb} {\tt 806B03D5A78CAB39E0514667991695C9} \\
                           143
                           144 \begingroup
                           145 \catcode '\^^M=\active%
                           146 \gdef\FVC@Verb#1{%
                                \begingroup%
                           147
                           148
                                  \FV@UseKeyValues%
                                  \FV@FormattingPrep%
                                  \FV@CatCodes\%
                           151
                                  \outer\def^^M{}%
                           152
                                  \catcode'#1=12%
                                  \def\@tempa{\def\FancyVerbGetVerb###1###2}%
                           153
                                  \expandafter\@tempa\string#1{%
                           154
                                      \ifbool{LWR@verbtags}%
                                                                                lwarp
                           155
                                          {%
                                                                                lwarp
                           156
                                         \LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl}% lwarp
                           157
                                               \def\tmpb{##2}%
                                                                                lwarp
                           158
                                               \LWR@HTMLsanitize@tmpb%
                                                                                lwarp
                           159
                                               \mbox{\tmpb}%
                                                                                lwarp
                           160
                           161
                                               \LWR@htmltag{/span}%
                                                                                lwarp
                           162
                                           }% lwarp
                           163
                                           {\mbox{##2}}%
                           164
                                      \endgroup%
                                  }%
                           165
                                  \FancyVerbGetVerb\FV@E0L%
                           166
                           167 }%
                           168 \endgroup
                              Modified to sanitize HTML.
\FV@ReadLine
                           169 \VerifyCommand[lwarp][fancyvrb]{\FV@ReadLine}{3C3481D735295DAEB5B30DDE9152287D}
                           171 \begingroup
                           172 \catcode '\^^M=\active
                           173 \gdef\FV@ReadLine{%
                                \ifeof\FV@InFile\else
                                   175 %
                                   \expandafter\FV@@ReadLine\@tempa^^M\relax^^M\@nil%
                           176 %
                                  \immediate\read\FV@InFile to\tmpb%
                           177
                                  \LWR@HTMLsanitize@tmpb%
                           178
                                  \expandafter\FV@@ReadLine\tmpb^^M\relax^^M\@nil%
                           179
                               \fi}
                           180
                           181 \endgroup
                              Holds the style of the verbatim.
\LWR@FVstyle
                           182 \newcommand*{\LWR@FVstyle}{}
                             After the preamble is loaded, after any patches to Verbatim, such as by fvextra:
                           183 \AfterEndPreamble{
```

\VerbatimFootnotes

Patched to use the new version.

185 \LWR@traceinfo{Patching fancyvrb.}

```
186 \VerifyCommand[lwarp][fancyvrb]{\VerbatimFootnotes}{931C9BE6284EB9D8B1516D566C997A87}
187
188 \def\VerbatimFootnotes{%
189 \let\@footnotetext\V@footnotetext%
190 \let\footnote\V@footnote%
191 \let\LWR@footnotetext\V@footnotetext% lwarp
192 }
```

\V@@footnotetext

Patches in a subset of lwarp's \LWR@footnotetext to the fancyvrb version of \V@@footnotetext.

Place an autopage marker so that back references to citations inside a footnote will link closer to the footnote text, if possible.

```
197 \LWR@newautopagelabel{page}%
```

Take the current footnote box, then append:

198 \global\setbox\LWR@footnotebox=\vbox\bgroup%

Add to any current footnotes:

199 \unvbox\LWR@footnotebox%

Remember the footnote number for \ref:

```
200 \protected@edef\@currentlabel{%
201 \csname p@footnote\endcsname\@thefnmark%
202 }% @currentlabel
```

Use HTML superscripts in the footnote even inside a lateximage:

```
203 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Verbatim tags and HTML sanitization will have been turned off inside a lateximage, such as in svG math, so turn them on here so they will be active in the HTML footnotes.

```
204 \booltrue{LWR@verbtags}%
205 \booltrue{LWR@HTMLsanitize@tmpb@enable}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

206 \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline%

Append the footnote mark to the list:

```
207 \@makefntext{}%
```

The footnote text will follow after \V@@footnotetext has completed.

```
208 \bgroup%
209 \aftergroup\V@@footnotetext%
```

Do not generate autopages inside the footnotes, since they are accumulated at the moment before finally being used perhaps on a later page.

```
210 \let\LWR@newautopagelabel\LWR@null@newautopagelabel%
211 \ignorespaces%
212 }%
```

```
\V@@@footnotetext
```

Improves <par>.

```
213 \def\V@@footnotetext{%
214    \LWR@orignobreakspace\LWR@orignewline%
215    \LWR@htmltagc{/\LWR@tagregularparagraph}\LWR@orignewline%
216    \strut\egroup%
217 }
```

\FVB@Verbatim

\FVB@LVerbatim

Prevents unexpected page break in the PDF output before HTML conversion.

```
218 \preto\FVB@Verbatim{\LWR@forcenewpage}
219 \preto\FVB@LVerbatim{\LWR@forcenewpage}
220% \preto\FVB@BVerbatim{\LWR@forcenewpage}% Fails, so done below.
```

Simplified to remove PDF formatting:

```
221 \def\LWR@HTML@FV@BeginListFrame@Single{%
    \FV@SingleFrameLine{\z@}%
223 }
224 \LWR@formatted{FV@BeginListFrame@Single}
226 \def\LWR@HTML@FV@EndListFrame@Single{%
227 \FV@SingleFrameLine{\@ne}%
228 }
229 \LWR@formatted{FV@EndListFrame@Single}
231 \def\LWR@HTML@FV@BeginListFrame@Lines{%
    \FV@SingleFrameLine{\z@}%
234 \LWR@formatted{FV@BeginListFrame@Lines}
236 \def\LWR@HTML@FV@EndListFrame@Lines{%
      237
238 }
239 \LWR@formatted{FV@EndListFrame@Lines}
241 \newcommand*{\LWR@HTML@FV@SingleFrameSep}{}%
242 \LWR@formatted{FV@SingleFrameSep}
```

The following patches to Verbatim are executed at the start and end of the environment, depending on the choice of frame.

\LWR@fvstartnone

Wraps label in a <div> of class fancyvrblabel.

```
243 \newcommand*{\LWR@fvstartnone}{%
244 \LWR@traceinfo{fvstartnone}%
245 % \hbox to\z@{
```

If the current text sytle is empty, do not print an HTML style.

```
\BlockClass[\LWR@FVstyle]{fancyvrb}%
254
           }%
255
256 %
        \BlockClass[\LWR@FVstyle]{fancyvrb}%
257 \LWR@stoppars
258 \ifx\FV@LabelPositionTopLine\relax\else
       \ifx\FV@LabelBegin\relax\else
259
           \FancyVerbRuleColor{\LWR@FVfindbordercolor}
260
           \ifbool{LWR@verbtags}%
                                         lwarp
261
                                         lwarp
262
               {%
                    \LWR@findcurrenttextcolor%
263
                    \LWR@htmltagc{%
                                         lwarp
264
265
                    div class=\textquotedbl{}fancyvrblabel\textquotedbl\ % space
                            style=\textquotedbl{}%
                                 color: \LWR@origpound\LWR@tempcolor%
268
                            \textquotedbl%
269
                    \LWR@orignewline%
270
                                         lwarp
               }%
                                         lwarp
271
                                         lwarp
               {}%
272
           \LWR@print@textrm{\FV@LabelBegin}% \textrm preserves emdash
273
274
           \LWR@orignewline%
                                             lwarp
           \ifbool{LWR@verbtags}%
275
                                             lwarp
                                              lwarp
276
               {%
                    \LWR@htmltagc{/div}%
                                             lwarp
277
278
                    \LWR@orignewline%
                                             lwarp
279
               }%
                                             lwarp
280
               {}%
                                             lwarp
       \fi
281
282 \fi
283 \LWR@atbeginverbatim{verbatim}%
284 % }% hbox
285 }
  Wraps label in a <div> of class fancyvrblabel.
286 \newcommand*{\LWR@fvendnone}{%
287 \LWR@traceinfo{fvendnone}%
288 % \hbox to\z@{
289 \LWR@afterendverbatim%
290 \LWR@stoppars%
291 \ifx\FV@LabelPositionBottomLine\relax\else
292
       \ifx\FV@LabelEnd\relax\else
           \FancyVerbRuleColor{\LWR@FVfindbordercolor}%
                                                               lwarp
293
           \ifbool{LWR@verbtags}%
                                                               lwarp
294
                                                               lwarp
295
               {%
                    \LWR@findcurrenttextcolor%
296
                    \LWR@htmltagc{%
297
                                                      lwarp
                    div class=\textquotedbl{}fancyvrblabel\textquotedbl\ % space
                            style=\textquotedbl{}%
                                 color: \LWR@origpound\LWR@tempcolor%
300
                            \textquotedbl%
301
302
                    \LWR@orignewline%
                                                      lwarp
303
               }%
                                                      lwarp
304
                                                      lwarp
305
               {}%
           \LWR@print@textrm{\FV@LabelEnd}%
                                                      lwarp
306
           \LWR@orignewline%
                                                      lwarp
307
           \ifbool{LWR@verbtags}%
                                                      lwarp
308
```

lwarp

{%

\LWR@fvendnone

```
\LWR@htmltagc{/div}%
310
                                                      lwarp
                    \LWR@orignewline%
                                                      lwarp
311
                }%
                                                      lwarp
312
313
               {}%
                                                      lwarp
       \fi
314
315 \fi
316 \endBlockClass%
                        lwarp
317 % }% hbox
318 }
319 \newcommand*{\LWR@fvstartsingle}{%
320 \LWR@traceinfo{fvstartsingle}%
321 \LWR@fvstartnone%
322 \FV@BeginListFrame@Single%
323 }
324
325 \newcommand*{\LWR@fvendsingle}{%
326 \LWR@traceinfo{fvendsingle}%
327 \FV@EndListFrame@Single%
328 \LWR@fvendnone%
329 }
330
331 \newcommand*{\LWR@fvstartline}{%
332 \LWR@traceinfo{fvstartline}%
333 \LWR@fvstartnone%
334% \setlength{\LWR@templengthone}{\baselineskip}%
335 \FV@BeginListFrame@Lines%
336% \setlength{\baselineskip}{\LWR@templengthone}%
337% \setlength{\baselineskip}{5pt}%
338 }
339
340 \newcommand*{\LWR@fvendline}{%
341 \LWR@traceinfo{fvendline}%
342 \FV@EndListFrame@Lines%
343 \LWR@fvendnone%
344 }
```

The following patches select the start/left/right/end behaviors depending on frame.

```
345 \newcommand*{\LWR@FVfindbordercolor}{%
346 \FancyVerbRuleColor%
347 \LWR@findcurrenttextcolor%
348 \color{black}%
349 }
350
351% border width of \FV@FrameRule
352 \newcommand*{\LWR@FVborderstyle}[1]{%
353 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt; % space
354 \LWR@FVfindbordercolor\LWR@indentHTMLtwo%
355 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt % space
356 solid {\FancyVerbRuleColor{\LWR@origpound\LWR@tempcolor}} ; % space
357 }
358
359 \VerifyCommand[lwarp][fancyvrb]{\FV@Frame@none}{C60E1656944AB4C4D2B74410E88FE7C0}
361 \def\LWR@HTML@FV@Frame@none{%
362 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
363 \let\FV@BeginListFrame\LWR@fvstartnone%
364 \let\FV@LeftListFrame\relax%
```

```
365 \let\FV@RightListFrame\relax%
366 \let\FV@EndListFrame\LWR@fvendnone}
367 \LWR@formatted{FV@Frame@none}
369 \FV@Frame@none% default values
370
371 \VerifyCommand[lwarp][fancyvrb]{\FV@Frame@single}{CDF78DB9C6408F48D05302D07091C629}
373 \def\LWR@HTML@FV@Frame@single{%
374 \renewcommand*{\LWR@FVstyle}{%
375
       \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
       \LWR@FVborderstyle{}%
377 }%
378 \let\FV@BeginListFrame\LWR@fvstartsingle%
379 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
380 \let\FV@RightListFrame\FV@RightListFrame@Single%
381 \let\FV@EndListFrame\LWR@fvendsingle}
382 \LWR@formatted{FV@Frame@single}
384 \VerifyCommand[lwarp][fancyvrb]{\FV@Frame@lines}{1AADD6691DA93C9A66227F5C5B34EAE4}
386 \def\LWR@HTML@FV@Frame@lines{%
387 \renewcommand*{\LWR@FVstyle}{%
       \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
       \LWR@FVborderstyle{-top}%
389
390
       \LWR@indentHTMLtwo%
391
       \LWR@FVborderstyle{-bottom}%
392 }%
393 \let\FV@BeginListFrame\LWR@fvstartline%
394 \let\FV@LeftListFrame\relax%
395 \let\FV@RightListFrame\relax%
396 \let\FV@EndListFrame\LWR@fvendline}
397 \LWR@formatted{FV@Frame@lines}
399 \VerifyCommand[lwarp][fancyvrb]{\FV@Frame@topline}{7E102D81F4FD367B398B8E85F48A7754}
401 \def\LWR@HTML@FV@Frame@topline{%
402 \renewcommand*{\LWR@FVstyle}{%
       \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
       \LWR@FVborderstyle{-top}%
404
405 }%
406 \let\FV@BeginListFrame\LWR@fvstartline%
407 \let\FV@LeftListFrame\relax%
408 \let\FV@RightListFrame\relax%
409 \let\FV@EndListFrame\LWR@fvendnone}
410 \LWR@formatted{FV@Frame@topline}
412 \VerifyCommand[lwarp][fancyvrb]{\FV@Frame@bottomline}{A51600F812F57F4211EF9E34F261564A}
414 \def\LWR@HTML@FV@Frame@bottomline{%
415 \renewcommand*{\LWR@FVstyle}{%
416
       \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
417
       \LWR@FVborderstyle{-bottom}%
418 }%
419 \let\FV@BeginListFrame\LWR@fvstartnone%
420 \let\FV@LeftListFrame\relax%
421 \let\FV@RightListFrame\relax%
422 \let\FV@EndListFrame\LWR@fvendline}
423 \LWR@formatted{FV@Frame@bottomline}
```

Seems to be required in some situations. Is not $\LWR@formatted$ because it is defined as needed.

```
424 \def\FV@FrameFillLine{}
425 \end{tabular} [fancyvrb] \end{tabular} 2A77982C6520FD64F6DBFA1C03B670BA} \end{tabular}
426
427 \def\LWR@HTML@FV@Frame@leftline{%
428 \renewcommand*{\LWR@FVstyle}{%
                \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
                \LWR@FVborderstyle{-left}%
430
431 }%
   To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)
432 \ifx\FancyVerbFillColor\relax%
433 \let\FV@FrameFillLine\relax%
434 \else%
435 \@tempdima\FV@FrameRule\relax%
436 \multiply\@tempdima-\tw@%
437 \edef\FV@FrameFillLine{%
438 {\noexpand\FancyVerbFillColor{\vrule\@width\number\@tempdima sp}%
439 \ker -\infty sp}%
440\fi%
441 \let\FV@BeginListFrame\LWR@fvstartnone%
442 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
443 \let\FV@RightListFrame\relax%
444 \let\FV@EndListFrame\LWR@fvendnone}
445 \LWR@formatted{FV@Frame@leftline}
      Adds the optional label to the top and bottom edges.
446 \VerifyCommand[lwarp][fancyvrb]{\FV@SingleFrameLine}{2D8B1DAED851500F255E357437FF065C}
448 \def\LWR@HTML@FV@SingleFrameLine#1{%
               \textstyle \begin{tabular}{ll} \b
449 %
                    \kern\leftmargin
450 %
                \ifnum#1=\z@\relax
451
                    \let\FV@Label\FV@LabelBegin
452
                \else
453
                    \let\FV@Label\FV@LabelEnd
454
455
                \ifx\FV@Label\relax
456
457 %
                        \FancyVerbRuleColor{\vrule \@width\linewidth \@height\FV@FrameRule}%
                \else
458
459
                     \ifnum#1=\z@
                               \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
460 %
                          \ifx\FV@LabelPositionTopLine\relax
461
                         \else
462
                         \fi
463
                     \else
464
                               \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
465 %
                         \ifx\FV@LabelPositionBottomLine\relax
466
                         \else
467
                         \fi
468
                     \fi
469
```

\FV@SingleFrameLine

\fi

}

\hss

470 471 %

472 %

BVerbatim

§ 267

for HTML output:

```
473 }
          474 \LWR@formatted{FV@SingleFrameLine}
             Adds lwarp verbatim patches.
          475 \xpretocmd{\FV@BeginVBox}
          476
                 {%
                     \LWR@forcenewpage%
          477
                     \LWR@atbeginverbatim{bverbatim}%
          478
          479
          480
                 {}
                 {\LWR@patcherror{fancyvrb}{FV@BeginVBox}}
          481
          482
          483 \xapptocmd{\FV@EndVBox}
          484
                 {%
                     \LWR@afterendverbatim%
          485
          486
                 }
          487
                 {}
                 {\LWR@patcherror{fancyvrb}{FV@EndVBox}}
          488
           End of the modifications to make at the end of the preamble:
          489 } % \AfterEndPreamble
          \label{thm:power_state} $$490 \operatorname{lwarp}[fancyvrb]{\FVB@VerbatimOut}_{A0AC591D2DB283DCEBCCC75968FF88CF}$$
          492 \def\FVB@VerbatimOut#1{%
          493
               \@bsphack
          494
               \begingroup
                 \FV@UseKeyValues
                 \FV@DefineWhiteSpace
                 \def\FV@Space{\space}%
          498
                 \FV@DefineTabOut
          499
                 \def\FV@ProcessLine{\immediate\write\FV@OutFile}%
                 \immediate\openout\FV@OutFile #1\relax
          500
                 \let\FV@FontScanPrep\relax
          501
          502 %% DG/SR modification begin - May. 18, 1998 (to avoid problems with ligatures)
                 \let\@noligs\relax
          504 %% DG/SR modification end
              \boolfalse{LWR@HTMLsanitize@tmpb@enable}%
                                                                   lwarp
                 \FV@Scan}
 File 158 lwarp-fbox.sty
          fbox
 Package
           (Emulates or patches code by Herbert Voss.)
fbox (Pkg) fbox is patched for use by lwarp.
           1 \LWR@ProvidesPackagePass{fbox}[2022/02/20]
           This will be \LWR@formatted when \AtBeginDocument:
           2 \LetLtxMacro\LWR@HTML@fbox\fbox
```

Instead of using the original, the new version is used with all borders:

```
3 \renewcommand*{\orig@fbox}{\FBox@i[tblr]}
```

\WR@fboxpkg@border

```
\{\langle 1: top/bottom/left/right \rangle\} \{\langle 2: t/b/l/r \rangle\} \{\langle 3: padding, or empty \rangle\}
```

Accumulates HTML styles for border, and padding if given:

```
4 \newcommand*{\LWR@fboxpkg@border}[3]{%
      \colorlet{LWR@border@color}{\csuse{fbox@#2color}}%
    \protect\convertcolorspec{named}{LWR@border@color}{HTML}\LWR@tempbordercolor\relax%
6
      \appto\LWR@tempone{%
7
          border-#1: % space
8
          \LWR@printlength{\LWR@atleastonept} % space
9
10
          solid \LWR@origpound%
11
     }%
12
    \expandafter\appto\expandafter\LWR@tempone\expandafter{\LWR@tempbordercolor}%
13
      \appto\LWR@tempone{ ;\LWR@indentHTML}%
14
      \ifblank{#3}{}{%
15
          \appto\LWR@tempone{%
              padding-#1: \LWR@printlength{#3} ;\LWR@indentHTML
16
17
          }%
      }%
18
19 }
```

A hack to reuse the same code for inline and blocks:

```
20 \newbool{LWR@fboxpkg@ispar}
21 \boolfalse{LWR@fboxpkg@ispar}
```

Acculumate HTML styles for left and right padding, depending on \iflet fox@space@left, \iflet fox@space@right:

```
22 \newcommand{\LWR@fboxpkg@lrpadding}[1]{%
23
      \csuse{if@fbox@space@#1}%
          \appto\LWR@tempone{%
25
              padding-#1: \LWR@printlength{\fbox@@sep};\LWR@indentHTML
26
          }
      \else%
27
          \appto\LWR@tempone{%
28
              padding-#1: 0pt;\LWR@indentHTML
29
          }
30
      \fi%
31
32 }
```

The HTML version, modified to use HTML styles and either an \InlineClass or BlockClass:

```
33 \newcommand{\LWR@HTML@FBox@iii}[1]{%
```

Find and set the text color, rule width, margin:

Add left/right padding:

```
40 \LWR@fboxpkg@lrpadding{left}%
41 \LWR@fboxpkg@lrpadding{right}%
```

Per the original to decode the borders, in a new way:

```
\ifnum\the\@tempcntb>8\relax
42
          \advance\@tempcntb by -8\relax
43
44
          \LWR@fboxpkg@border{top}{t}{\fbox@@sep}%
      \fi
45
46
      \ifnum\@tempcntb>3
          \advance\@tempcntb by -4\relax
47
          \LWR@fboxpkg@border{left}{l}{}%
48
      \fi
49
      \ifnum\@tempcntb>1\relax
50
51
          \LWR@fboxpkg@border{right}{r}{}%
52
      \ifodd\@tempcntb
53
          \LWR@fboxpkg@border{bottom}{b}{\fbox@@sep}%
54
55
      \fi
```

Generate a BlockClass or \InlineClass with the contents:

```
56
      \color@begingroup
57
      \ifbool{LWR@fboxpkg@ispar}%
          {%
58
               \begin{BlockClass}[\LWR@tempone]{fboxpkg}%
59
                   #1%
60
61
               \end{BlockClass}%
62
          }%
63
          {%
64
               \InlineClass[\LWR@tempone]{fboxpkg}{%
65
66
               }%
          }%
67
      \color@endgroup
68
      \boolfalse{LWR@fboxpkg@ispar}% globally
69
70 }
71 \LWR@formatted{FBox@iii}
```

For \fparbox, set the use of BlockClass, then reuse the above:

```
72 \long\def\LWR@HTML@FParBox@i[#1]#2{%
73  \booltrue{LWR@fboxpkg@ispar}%
74  \FBox@i[#1]{#2}
75 }
76 \LWR@formatted{FParBox@i}
77
78 \long\def\LWR@HTML@FParBox@ii#1{%
79  \booltrue{LWR@fboxpkg@ispar}%
80  \FBox@i[tblr]{#1}%
81 }
82 \LWR@formatted{FParBox@ii}
```

For MathJax, absorb and ignore star and optional arguments:

```
83 \CustomizeMathJax{\let\LWRorigfbox\fbox}
84 \CustomizeMathJax{\newcommand{\LWRfboxpkgtwo}[2][]{\LWRorigfbox{#2}}}
```

```
85 \CustomizeMathJax{\renewcommand{\fbox}{\ifstar\LWRfboxpkgtwo\LWRfboxpkgtwo}}
86 \CustomizeMathJax{\newcommand{\fparbox}{\fbox}}

File 159 | lwarp-fewerfloatpages.sty
```

§ 268 Package fewerfloatpages

fewerfloatpages (Pkg) fewerfloatpages is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fewerfloatpages}[2020/02/14]

2 \newcommand\floatpagekeepfraction{\textfraction}

3 \newcounter{floatpagedeferlimit}

 ${\tt 4 \ \ loss} tage keep limit \}$

File 160 lwarp-figcaps.sty

§ 269 Package figcaps

(Emulates or patches code by Patrick W. Daly.)

figcaps (Pkg) figcaps is ignored.

for HTML output: Discard all options for lwarp-figcaps:

1\LWR@ProvidesPackageDrop{figcaps}[1999/02/23]

2 \newcommand*{\figcapson}{}
3 \newcommand*{\figcapsoff}{}
4 \newcommand*{\figmarkon}{}
5 \newcommand*{\figmarkon}{}
6 \newcommand*{\figmarkoff}{}
7 \def\figurecapname{Figure Captions}
8 \def\figurepagename{Tables}
9 \def\figurepagename{Figures}

File 161 lwarp-figsize.sty

§ 270 Package figsize

(Emulates or patches code by Anthony A. Tanbakuchi.)

figsize (*Pkg*) figsize is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{figsize}[2002/03/18]

Emulates a virtual 6×9 inch textsize.

```
2 \newlength{\figwidth}
3 \newlength{\figheight}
```

```
lwarp
                                                                                       815
             5 \newcommand{\SetFigLayout}[3][0]{%
             6\setlength{\figheight}{8in}%
             7\setlength{\figheight}{\figheight / #2}%
             9\setlength{\figwidth}{5.5in}%
            10 \setlength{\figwidth}{\figwidth / #3}%
            11 }
    File 162 lwarp-fitbox.sty
   Package fitbox
fitbox(Pkg)
            fitbox is ignored.
             1 \LWR@ProvidesPackageDrop{fitbox}[2019/02/20]
             2 \NewDocumentCommand{\fitbox}{s o m}{%
                  \begin{BlockClass}{fitbox}
                  \end{BlockClass}
             5
             6 }
             8 \newcommand*{\fitboxset}[1]{}
            10 \newdimen\fitboxnatheight
            11 \newdimen\fitboxnatwidth
```

File 163 lwarp-fix2col.sty

Package fix2col § 272

§271

for HTML output:

fix2col (Pkg) fix2col is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]

13 \newcommand\SetFitboxLayout[3][]{}

File 164 lwarp-fixmath.sty

Package fixmath **§273**

(Emulates or patches code by Walter Schmidt.)

fixmath (*Pkg*) fixmath is used as-is for svg math, and emulated for MATHJAX.

limitations MathJax does not have full font support for bold italic Greek.

for HTML output: 1 \LWR@ProvidesPackagePass{fixmath}[2000/04/11]

2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}

```
4 \begin{warpMathJax}
5 \LWR@mathjax@addgreek@u@it*{}{}
\label{local-boolean} 6 \LWR@mathjax@addletter{\BooleanTrue} \\ \{up\}{\delta\}{0394}}
\label{lem:condition} $$7 \LWR@mathjax@addletter{\BooleanTrue}_{up}_{\correct}omega_{03A9}$$
8 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
9 \end{warpMathJax}
```

File 165 lwarp-fixme.sty

\$274

Package fixme

(Emulates or patches code by Didier Verna.)

fixme (Pkg) fixme is patched for use by lwarp.

⚠ external layouts

External layouts (\fxloadlayouts) are not supported.

Customized layouts are overwritten by lwarp's versions \AtBeginDocument in order to provide the HTML conversion. If creating a new layout, see lwarp's changes to provide similar for the new layout, inside a warpHTML environment.

User control is provided for setting the HTML styling of the "faces". The defaults are as follows, and may be changed in the preamble after fixme is loaded:

```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

for HTML output:

1 \LWR@ProvidesPackagePass{fixme}[2019/01/03]

Restore lwarp's version of \@wrindex, ignoring the fixme package's target option:

2 \let\@wrindex\LWR@wrindex

Float-related macros required by lwarp:

```
3 \newcommand{\ext@fixme}{lox}
5 \renewcommand{\l@fixme}[2]{%
     \hypertocfloat{1}{fixme}{lox}%
      {\LWR@nameref{\BaseJobname-autopage-\arabic{LWR@nextautopage}} --- #1}%
9 }
```

Other modifications. Done \AtBeginDocument to hopefully work if the user customizes the layouts.

```
10 \AtBeginDocument{
12 \def\FXFaceInlineHTMLStyle{font-weight:bold}
14\renewcommand*\FXLayoutInline[3]{ % space
      \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
15
          {\@fxtextstd{#1}{#2}{#3}}%
16
17 }
```

```
19 \def\FXFaceEnvHTMLStyle{font-weight:bold}
21\renewcommand*\FXEnvLayoutPlainBegin[2]{%
      \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
23
      \ignorespaces#2 \fxnotename{#1}: \ignorespaces%
24 }
25
26\renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
28\renewcommand*\FXEnvLayoutSignatureBegin[2]{%
      \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
30
      \fxnotename{#1}: \ignorespaces%
31 }
{\tt 33 \ lenewcommand *\ FXEnvLayoutSignatureEnd[2]{\ lendBlockClass}}
35 \def\FXFaceSignatureHTMLStyle{font-style:italic}
37 \DeclareRobustCommand*\@fxsignature[1]{%
      \left( \frac{\#1}{{}}\right) 
38
          {}%
39
         { -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{#1}}}%
40
41 }
42
44 \def\FXFaceTargetHTMLStyle{font-style:italic}
46 \renewcommand\FXTargetLayoutPlain[2]{%
      \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{#2}%
47
48 }
49
50 }% \AtBeginDocument
```

File 166 lwarp-fixmetodonotes.sty

§ 275 Package fixmetodonotes

($Emulates\ or\ patches\ code\ by\ Gioele\ Barabucci.$)

fixmetodonotes (*Pkg*) fixmetodonotes is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{fixmetodonotes}[2013/04/28]
```

```
2 \VerifyCommand[lwarp][fixmetodonotes]{\NOTES@addtolist}{C8CA636EF295D370F26A278FFAE28B2F}
3
4 \renewcommand{\NOTES@addtolist}[2]{%
5 \refstepcounter{\NOTES@note}%
6 % \phantomsection% REMOVED
7 \addcontentsline{\notes}{\NOTES@note}{%
8 \protect\numberline{\theNOTES@note}{{\#1}: {\#2}}%
9 }%
10 }
11
12 \VerifyCommand[lwarp][fixmetodonotes]{\NOTES@marker}{\B5B482E83AB149A1B7F0CCFB4099C61E}
13
14 \renewcommand{\NOTES@marker}[2]{\fbox{%
```

```
15 \textcolor{#2}{% WAS \color
16 \textbf{#1}}%
17 }}
18
19 \VerifyCommand[\warp][fixmetodonotes]{\NOTES@colorline}{816FF1D31286EA48258FE3F2BA58E99C}
20
21 \renewcommand{\NOTES@colorline}[2]{%
22 \bgroup%
23 \ULon{\LWR@backgroundcolor{#1}{#2}}%
24 }
```

File 167 lwarp-flafter.sty

§ 276 Package flafter

flafter (Pkg) flafter is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]

2\providecommand\fl@trace[1]{}

File 168 lwarp-flippdf.sty

§277 Package flippdf

flippdf (Pkg) flippdf is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]

2 \newcommand\FlipPDF{}
3 \newcommand\UnFlipPDF{}

File 169 lwarp-float.sty

§ 278 Package float

(Emulates or patches code by Anselm Lingnau.)

float (Pkg) float is emulated.

Float styles boxed and ruled are emulated by css and a float class according to style.

The HTML <figure> class is set to the float type, so css may also be used to format the float and its caption, according to float type. Furthermore, an additional class is set to the float style: plain, plaintop, boxed, or ruled, so css may be used to format by float style as well. Default formatting by css is provided for ruled and boxed styles.

not seem to be a floating environment for HTML output:

Always declare a \newfloat before modifying it with \floatname, etc.

1 \LWR@ProvidesPackageDrop{float}[2001/11/08]

```
\LWR@floatstyle The default float style.
```

```
2 \newcommand*{\LWR@floatstyle}{plain}
                                 \{\langle 1: type \rangle\} \{\langle 2: placement \rangle\} \{\langle 3: ext \rangle\} [\langle 4: within \rangle]
\newfloat
                                Emulates the \newfloat command from the float package.
                                "placement" is ignored.
                                3 \NewDocumentCommand{\newfloat}{m m m o}{%
                                      \IfValueTF{#4}%
                                           {\DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}}%
                                5
                                           {\DeclareFloatingEnvironment[fileext=#3]{#1}}%
                                6
                                Remember the float style:
                                      \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
                                newfloat package automatically creates the \listof command for new floats, but
                                float does not, so remove \listof here in case it is manually created later.
                                      \cslet{listof#1s}\relax%
                                      \cslet{listof#1es}\relax%
                                Likesize, newfloat also creates \l@<type>, but float does not, so remove it here:
                                      \cslet{l@#1}\relax%
                               10
                               11 }
                                 \{\langle type \rangle\} \{\langle name \rangle\}
\floatname
                                Sets the text name of the float, such as "Figure". Avoids trying to set a recursive
                                name, from trivfloat.
                               12 \NewDocumentCommand{\floatname}{m +m}{%
                                      \def\LWR@tempone{#2}%
                                      \def\LWR@temptwo{\@nameuse{#1name}}%
                               14
                                      \ifdefequal{\LWR@tempone}{\LWR@temptwo}{}{%
                               15
                                           \SetupFloatingEnvironment{#1}{name=#2}%
                               16
                               17
                                      }%
                               18 }
\floatplacement
                                 \{\langle type \rangle\} \{\langle placement \rangle\}
                                Float placement is ignored.
                               19 \newcommand*{\floatplacement}[2]{%
                                      \SetupFloatingEnvironment{#1}{placement=#2}%
                               21 }
                                 \{\langle style \rangle\}
\floatstyle
                                Remember the style for future floats:
                               22 \newcommand{\floatstyle}[1]{%
                                      \def\LWR@floatstyle{#1}%
                               24 }%
                                 * {\langle type \rangle }
\restylefloat
```

Remember the style for this float:

```
25 \NewDocumentCommand{\restylefloat}{s m}{%
26 \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
27 }
```

\listof

See section 78.2 for the \LWR@listof command in the lwarp core.

28 \newcommand{\listof}{\LWR@listof}

File 170 lwarp-floatflt.sty

§279 Package floatflt

(Emulates or patches code by Mats Dahlgren.)

floatflt (Pkg) floatflt is emulated.

for HTML output:

Discard all options for lwarp-floatflt:

1 \LWR@ProvidesPackageDrop{floatflt}[1997/07/16]

```
Env [\langle \rangle]
```

offset $\{\langle type \rangle\}$ $\{\langle width \rangle\}$ Borrowed from the lwarp version of keyfloat:

```
2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{O{-1.2ex} m m}
3 {%
      \begin{LWR@setvirtualpage}*%
4
5
      \ifblank{#3}{%
6
           \LWR@BlockClassWP{%
7
               float:right; %
8
               width: 1.5in; % reasonable dummy width for word processor
9
               margin:10pt%
10
           }{}%
           (note)%
11
           {marginblock}%
12
      }{%
13
           \setlength{\LWR@templengthone}{#3}%
14
           \LWR@BlockClassWP{%
15
16
               float:right; %
17
               width:\LWR@printlength{\LWR@templengthone};  % extra space
18
               margin:10pt%
           }{%
19
               width:\LWR@printlength{\LWR@templengthone}%
20
           }%
21
           (note)%
22
23
           {marginblock}%
24
      \renewcommand*{\@captype}{#2}%
25
26 }
27 {%
      \endLWR@BlockClassWP%
28
29
      \end{LWR@setvirtualpage}%
30 }
  [\langle placement \rangle] \{\langle width \rangle\}
```

Env floatingfigure

```
31 \DeclareDocumentEnvironment{floatingfigure}{o m}
32     {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
33     {\end{KFLTfloatflt@marginfloat}}
```

nv floatingtable

 $[\langle placement \rangle]$

- 35 {\begin{KFLTfloatflt@marginfloat}{table}{}}
- 36 {\end{KFLTfloatflt@marginfloat}}

File 171 lwarp-floatpag.sty

§ 280 Package

Package floatpag

(Emulates or patches code by Vytas Statulevičius and Sigitas Tolušis.)

floatpag (Pkg)

floatpag is ignored.

for HTML output:

Discard all options for lwarp-floatpag:

1 \LWR@ProvidesPackageDrop{floatpag}[2012/05/29]

2 \newcommand*{\floatpagestyle}[1]{}

3 \newcommand*{\rotfloatpagestyle}[1]{}

4 \newcommand*{\thisfloatpagestyle}[1]{}

File 172 lwarp-floatrow.sty

§ 281 Package

floatrow

(Emulates or patches code by Olga Lapko.)

floatrow(Pkg)

floatrow is emulated.

for HTML output:

 ${\tt 1\,LWR@ProvidesPackageDrop\{floatrow\}[2008/08/02]}$

Z!\\ T

Misplaced alignment tab character &

Use \StartDefiningTabulars and \StopDefiningTabulars before and after defining macros using \ttabbox with a tabular inside. See section 8.10.1.

When combined with the subfig package, while inside a subfloatrow \ffigbox and \ttabbox must have the caption in the first of the two of the mandatory arguments.

 \wedge

\FBwidth, \FBheight

The emulation of floatrow does not support \FBwidth or \FBheight. These values are pre-set to .3\linewidth and 2in. Possible solutions include:

- Use fixed lengths. lwarp will scale the HTML lengths appropriately.
- Use warpprint and warpHTML environments to select appropriate values for each case.
- Inside a warpHTML environment, manually change \FBwidth or \FBheight before the \ffigbox or \ttabbox. Use \FBwidth or \FBheight normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

After everything has loaded, remember whether subcaption was loaded. If not, it is assumed that subfig is used instead:

```
2 \newbool{LWR@subcaptionloaded}
   4 \AtBeginDocument{
   5 \IfPackageLoadedTF{subcaption}
                                            {\booltrue{LWR@subcaptionloaded}}
                                              {\boolfalse{LWR@subcaptionloaded}}
   8 }
                     [\langle 1 \text{ preamble} \rangle] \{\langle 2 \text{ captype} \rangle\} [\langle 3 \text{ width} \rangle] [\langle 4 \text{ height} \rangle] [\langle 5 \text{ vert pos} \rangle] \{\langle 6 \text{ midth} \rangle\} [\langle 6 \text{ midth} \rangle] [
     caption \} {\langle 7 object \rangle}
     Only parameters for captype, width, caption, and object are used.
   LWR@insubfloatrow is true if inside a subfloatrow environment.
   There are two actions, depending on the use of subcaption or subfig.
   9 \NewDocumentCommand{\floatbox}{o m o o o +m +m}{%
 10 \ifbool{LWR@subcaptionloaded}%
11 {% subcaption
   For subcaption:
```

\floatbox

```
\ifbool{LWR@insubfloatrow}%
13
      {% subcaption in a subfloatrow
```

subfigure and subtable environments take width as an argument.

```
\IfValueTF{#3}%
14
          {\@nameuse{sub#2}{#3}}%
15
          {\@nameuse{sub#2}{\linewidth}}%
16
17
      }% subcaption in a subfloatrow
      {% subcaption not in subfloatrow
```

figure and table environments do not take a width argument.

```
\@nameuse{#2}%
19
      }% subcaption not in subfloatrow
20
21
      #6
22
```

End the environments:

```
\ifbool{LWR@insubfloatrow}%
24
      {\@nameuse{endsub#2}}%
25
      {\@nameuse{end#2}}%
27 }% subcaption
28{% assume subfig
```

For subfig:

```
29 \ifbool{LWR@insubfloatrow}%
30 {% subfig in a subfloatrow
```

\subfloat is a macro, not an environment.

Package subfig's \subfloat command takes an optional argument which is the caption, but \floatbox argument #6 contains commands to create the caption and label, not the caption itself. Thus, \caption is temporarily disabled to return its own argument without braces.

```
31
      \begingroup
```

```
\let\caption\@firstofone
                                  32
                                         \subfloat[#6]{#7}
                                  33
                                         \endgroup
                                  35}% subfig in a subfloatrow
                                  36 {% subfig package, but not a subfig
                                  figure and table are environments:
                                  37 \@nameuse{#2}
                                  38 #6
                                  39
                                  40 #7
                                  41 \@nameuse{end#2}
                                 42}% subfig package, but not a subfig
                                  43}% assume subfig
                                  44 }
                                  Not used:
                                  45 \newcommand*{\nocapbeside}{}
                                  46 \newcommand*{\capbeside}{}
                                  47 \newcommand*{\captop}{}
                                  48 \newlength{\FBwidth}
                                  49 \setlength{\FBwidth}{.3\linewidth}
                                  50 \newlength{\FBheight}
                                  51 \setlength{\FBheight}{2in}
                                  52 \newcommand*{\useFCwidth}{}
                                  53 \rightarrow {1}{2}[]{}
                                  54 \newcommand{\thisfloatsetup}[1]{}
                                  55 \newcommand{\clearfloatsetup}[1]{}
                                  56 \newcommand*{\killfloatstyle}{}
                                    \{\langle 1 \ command \rangle\} \{\langle 2 \ captype \rangle\} [\langle 3 \ preamble \rangle] [\langle 4 \ default \ width \rangle]
\newfloatcommand
                                  Preamble and default width are ignored.
                                  57 \NewDocumentCommand{\newfloatcommand}{m m o o}{%
                                  58 \@namedef{#1}{
                                  59 \floatbox{#2}
                                  60 }
                                  61 }
\renewfloatcommand
                                    \{\langle 1 \ command \rangle\} \{\langle 2 \ captype \rangle\} [\langle 3 \ preamble \rangle] [\langle 4 \ default \ width \rangle]
                                  Preamble and default width are ignored.
                                  62 \NewDocumentCommand{\renewfloatcommand}{m m o o}{%
                                  63 \@namedef{#1}{%
                                  64 \floatbox{#2}
                                  65 }
                                  66 }
\ffigbox
                                    [\langle width \rangle] [\langle height \rangle] [\langle vposn \rangle] \{\langle caption \ commands \rangle\} \{\langle contents \rangle\}
                                  67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][]
\ttabbox
                                    [\langle width \rangle] [\langle height \rangle] [\langle vposn \rangle] \{\langle caption \ commands \rangle\} \{\langle contents \rangle\}
                                  68 \newfloatcommand{ttabbox}{table}[\captop][\FBwidth]
```

 $[\langle width \rangle] [\langle height \rangle] [\langle vposn \rangle] \{\langle caption \ commands \rangle\} \{\langle contents \rangle\}$

```
69 \newfloatcommand{fcapside}{figure}[\capbeside][]
                                                                     [\langle numfloats \rangle]
   floatrow
                                                                 The row of floats is placed into a <div> of class floatrow.
                                                                70 \newenvironment*{floatrow}[1][2]
                                                                71 {%
                                                                72
                                                                              \begin{LWR@setvirtualpage}*%
                                                                73
                                                                              \BlockClass{floatrow}%
                                                                74 }
                                                                75 {
                                                                              \endBlockClass%
                                                                76
                                                                77
                                                                              \end{LWR@setvirtualpage}%
                                                                78 }
                                                                 Keys for \DeclareNewFloatType:
                                                                79 \newcommand*{\LWR@frowkeyplacement}{}
                                                                80 \newcommand*{\LWR@frowkeyname}{}
                                                                81 \newcommand*{\LWR@frowkeyfileext}{}
                                                                82 \newcommand*{\LWR@frowkeywithin}{}
                                                                83 \newcommand*{\LWR@frowkeycapstyle}{}
                                                                85 \define@key{frowkeys}{placement}{}%
                                                                86 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
                                                                87\define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
                                                                88 \end{\command{\LWR@frowkeywithin}{\command{\LWR@frowkeywithin}{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\comman
                                                                89 \define@key{frowkeys}{relatedcapstyle}{}%
                                                                     \{\langle type \rangle\} \{\langle options \rangle\}
\DeclareNewFloatType
                                                                  Use \listof{type}{Title} to print a list of the floats.
                                                                90 \newcommand*{\DeclareNewFloatType}[2]{%
                                                                 Reset key values:
                                                                91 \renewcommand*{\LWR@frowkeyplacement}{}%
                                                                92 \renewcommand*{\LWR@frowkeyname}{}%
                                                                93 \renewcommand*{\LWR@frowkeyfileext}{}%
                                                                94 \renewcommand*{\LWR@frowkeywithin}{}%
                                                                95 \renewcommand*{\LWR@frowkeycapstyle}{}%
                                                                 Read new key values:
                                                                96 \LWR@traceinfo{about to setkeys frowkeys}%
                                                                97\setkeys{frowkeys}{#2}%
                                                                98 \LWR@traceinfo{finished setkeys frowkeys}%
                                                                 Create a new float with optional [within]:
                                                                99 \ifthenelse{\equal{\LWR@frowkeywithin}{}}%
                                                              100 {%
                                                                              \DeclareFloatingEnvironment[
                                                              101
                                                                                        placement=\LWR@frowkeyplacement,
                                                              102
                                                              103
                                                                                        fileext=\LWR@frowkeyfileext
                                                              104
                                                                              ]{#1}%
                                                              105 }%
                                                              106 {%
                                                                              \DeclareFloatingEnvironment[
                                                              107
```

\fcapside

```
placement=\LWR@frowkeyplacement,
108
           fileext=\LWR@frowkeyfileext,
109
110
           within=\LWR@frowkeywithin
111
       ]{#1}%
         \LWR@traceinfo{finished newfloat #1}%
112\ \%
113 }%
 Rename the float if a name was given:
114 \ifthenelse{\equal{\LWR@frowkeyname}{}}%
115
       {}%
116
       {%
117
           \SetupFloatingEnvironment{#1}{name={\LWR@frowkeyname}}%
118
       }%
119 }
 Not used:
120 \newcommand{\buildFBBOX}[2]{}
121 \newcommand*{\CenterFloatBoxes}{}
122 \newcommand*{\TopFloatBoxes}{}
123 \newcommand*{\BottomFloatBoxes}{}
124 \newcommand*{\PlainFloatBoxes}{}
126 \newcommand{\capsubrowsettings}{}
128 \NewDocumentCommand{\RawFloats}{o o}{}
  \{\langle text \rangle\}
 To be used inside a minipage or parbox.
129 \newcommand{\RawCaption}[1]{#1}
  \{\langle text \rangle\}
 Places additional text inside a float, inside a css <div> of class floatfoot.
130 \NewDocumentCommand{\floatfoot}{s +m}{%
131
       \begin{BlockClass}{floatfoot}
132
       \end{BlockClass}
133
134 }
 Used to compute \linewidth.
135 \newbool{LWR@insubfloatrow}
136 \boolfalse{LWR@insubfloatrow}
  [\langle num\_floats \rangle]
137 \newenvironment*{subfloatrow}[1][2]
138 {
 The row of floats is placed into a <div> of class floatrow:
139
       \LWR@forcenewpage
140
       \BlockClass{floatrow}
 While inside the floatrow, LWR@insubfloatrow is set true, which tells \floatbox to
```

use \subfigure or \subtable.

\RawCaption

\floatfoot

subfloatrow

```
141
                    \begingroup%
             142
                    \booltrue{LWR@insubfloatrow}%
             143 }
             144 {%
                    \endgroup%
             145
                    \endBlockClass%
             146
                    \boolfalse{LWR@insubfloatrow}%
             147
             148 }
     File 173 lwarp-fltrace.sty
     Package fltrace
 fltrace (Pkg)
              fltrace is ignored.
               1 \LWR@ProvidesPackageDrop{fltrace}[2018/01/08]
               2 \def\tracefloats{}
               3 \def\tracefloatsoff{}
               4 \def\tracefloatvals{}
     File 174 lwarp-flushend.sty
     Package flushend
               (Emulates or patches code by Sigitas Tolušis.)
flushend (Pkg)
               flushend is ignored.
               Discard all options for lwarp-flushend:
               1 \LWR@ProvidesPackageDrop{flushend}[2021/10/04]
               2 \newcommand*{\flushend}{}
               3 \newcommand*{\raggedend}{}
               4 \newcommand*{\flushcolsend}{}
               5 \newcommand*{\raggedcolsend}{}
               6 \newtoks\atColsBreak \atColsBreak={}
               7 \newtoks\atColsEnd \atColsEnd={}
               8 \newcommand*{\showcolsendrule}{}
     File 175 lwarp-fnbreak.sty
     Package fnbreak
 fnbreak (Pkg)
              fnbreak is ignored.
```

1 \LWR@ProvidesPackageDrop{fnbreak}[2012/01/01]

2 \newcommand*{\fnbreakverbose}{} 3 \newcommand*{\fnbreaknonverbose}{} 4 \newcommand*{\fnbreaklabel}{} 5 \newcommand*{\fnbreaknolabel}{}

§ 282

§ 283

§ 284

for HTML output:

for HTML output:

for HTML output:

File 176 lwarp-fncychap.sty

§ 285 Package fncychap

(Emulates or patches code by Ulf A. Lindgren.)

fncychap (Pkg) fncychap is ignored.

for HTML output: Discard all options for lwarp-fncychap:

1 \LWR@ProvidesPackageDrop{fncychap}[2007/07/30]

```
2 \def\mghrulefill#1{}
```

- 3 \def\ChNameLowerCase{}
- 4 \def\ChNameUpperCase{}
- 5 \def\ChNameAsIs{}
- 6 \def\ChTitleLowerCase{}
- 7\def\ChTitleUpperCase{}
- 8 \def\ChTitleAsIs{}
- 9 \newcommand{\ChRuleWidth}[1]{}
- 10 \newcommand{\ChNameVar}[1]{}
- 11 \newcommand{\ChNumVar}[1]{}
- ${\tt 12 \ \ leVar}[1]\{\}$
- 13 \newcommand{\TheAlphaChapter}{}
- 14 \newcommand{\DOCH}{}
- 15 \newcommand{\DOTI}[1]{}
- 16 \newcommand{\DOTIS}[1]{}
- 17 \newlength{\mylen}
- 18 \newlength{\myhi}
- 19 \newlength{\px}
- $20 \neq 0$
- 21 \newlength{\pyy}
- 22 \newlength{\pxx}
- 23 \newlength{\RW}
- 24 \newcommand{\FmN}[1]{#1}
- 25 $\mbox{newcommand} \mbox{FmTi}[1]{#1}$

File 177 lwarp-fnlineno.sty

§ 286 Package fnlineno

fnlineno (Pkg) fnlineno is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

File 178 lwarp-fnpara.sty

§ 287 Package fnpara

fnpara (Pkg) fnpara is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnpara}

File 179 lwarp-fnpos.sty

§ 288 Package fnpos

(Emulates or patches code by HIROSHI NAKASHIMA.)

fnpos (*Pkg*) fnpos is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnpos}[1999/07/14]

```
2 \newcommand*{\makeFNbottom}{}
3 \newcommand*{\makeFNmid}{}
4 \newcommand*{\makeFNbelow}{}
5 \newcommand*{\makeFNabove}{}
```

File 180 lwarp-fontawesome.sty

§ 289 Package fontawesome

(Emulates or patches code by Xavier Danaux.)

fontawesome (*Pkg*) fontawesome is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

poppler syntax warning

If using PDF LATEX, *poppler* may issue a syntax warning regarding parsing a ligature component. XHLATEX or LuaLATEX may be used to avoid this warning.

In the following, the general strategy is to intercept \symbol and embed it inside a lateximage. These changes are done inside a local group.

For PDF LATEX, the alt tag includes the icon (symbol) number. For $X \exists LATEX$ and LuaLATEX, the alt tag is generic.

for HTML output:

```
1 \LWR@ProvidesPackagePass{fontawesome}[2016/05/15]
```

```
2 \LetLtxMacro\LWR@orig@symbol\symbol
4 \ifxetexorluatex
6 \newfontfamily{\LWR@orig@FA}{FontAwesome}
8 \newcommand*{\LWR@fontawesome@xelatex@symbol}[1]{%
      \LWR@findcurrenttextcolor%
     \begin{lateximage}*[icon][fontawesomexetex#1SZ\LWR@font@size{}CL\LWR@tempcolor]%
10
11
      \csuse{\LWR@font@size}%
12
      \LWR@orig@FA%
13
      \LWR@orig@symbol{#1}%
      \end{lateximage}%
14
15 }
17 \RenewDocumentCommand{\FA}{}{%
```

```
\LetLtxMacro\symbol\LWR@fontawesome@xelatex@symbol%
18
19 }
20
21 \else
23 \newcommand*{\LWR@fontawesome@symbolX}[2]{%
     \LWR@findcurrenttextcolor%
    25
     \csuse{\LWR@font@size}%
26
     \fontencoding{U}\fontfamily{fontawesome#2}\selectfont%
27
28
     \LWR@orig@symbol{#1}%
29
     \end{lateximage}%
30 }
{\tt 32 \ lowcommand*{LWR@fontawesome@symbolone}[1]{\tt \%}}
     \LWR@fontawesome@symbolX{#1}{one}%
34 }
35
36 \newcommand*{\LWR@fontawesome@symboltwo}[1]{%
     \LWR@fontawesome@symbolX{#1}{two}%
38 }
39
40 \newcommand*{\LWR@fontawesome@symbolthree}[1]{%
     \LWR@fontawesome@symbolX{#1}{three}%
42 }
43
44 \renewrobustcmd\FAone{%
     \LetLtxMacro\symbol\LWR@fontawesome@symbolone%
45
46 }
47
48 \renewrobustcmd\FAtwo{%
     \LetLtxMacro\symbol\LWR@fontawesome@symboltwo%
49
50 }
52 \renewrobustcmd\FAthree{%
     \LetLtxMacro\symbol\LWR@fontawesome@symbolthree%
54 }
55 \fi
```

File 181 lwarp-fontawesome5.sty

§ 290 Package fontawesome 5

(Emulates or patches code by MARCEL KRÜGER.)

fontawesome5 (*Pkg*) fontawesome5 is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

The alt tag has the name of the icon.

 $\begin{tabular}{ll} for HTML output: & $1 \times Perovides Package Pass {fontawesome 5} [2022/05/02] \end{tabular}$

This used to contain code, but now it is split into the related two packages.

File 182 lwarp-fontawesome5-generic-helper.sty

§291 Package fontawesome5-generic-helper

(Emulates or patches code by Marcel Krüger.)

fontawesome5-generic-helper (Pkg)

fontawesome5-generic-helper is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

The alt tag has the name of the icon.

for HTML output:

1 \LWR@ProvidesPackagePass{fontawesome5-generic-helper}[2022/05/02]

```
2 \ExplSyntaxOn
 4 \VerifyCommand[lwarp][fontawesome5-generic-helper]{\fontawesome_use_icon:nn}
      {0260A9C94303C43957AAEBEA2B4D3DB1}
7 \cs_set:Nn\fontawesome_use_icon:nn{
      \I WR@findcurrenttextcolor
    \cs_if_exist:cTF{c__fontawesome_slot_#2_tl}{
9
     \begin{lateximage}*[#2][fontawesome5#1SZ\LWR@font@size{}CL\LWR@tempcolor]% lwarp
10
11
      \csuse{\LWR@font@size}% lwarp
      \bool_if:NTF\c__fontawesome_fixed_bool{
12
        \makebox[1.5em][c]
13
14
      }{
15
        \use:n
16
      }
17
        \exp_last_unbraced:Nv
18
19
          \__fontawesome_icon_at:nnnn
          {c__fontawesome_slot_#2_tl}
20
            {#1}{#2}
21
22
23
      \end{lateximage}% lwarp
24
    }{
25
      \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
26
27 }
28 \ExplSyntaxOff
```

File 183 lwarp-fontawesome5-utex-helper.sty

§ 292 Package **fontaw**

fontawesome5-utex-helper

(Emulates or patches code by Marcel Krüger.)

fontawesome5-utex-helper (Pkg)

fontawesome5-utex-helper is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

The alt tag has the name of the icon.

for HTML output:

1 \LWR@ProvidesPackagePass{fontawesome5-utex-helper}[2022/05/02]

```
2 \ExplSyntaxOn
4 \VerifyCommand[lwarp][fontawesome5-utex-helper]{\fontawesome_use_icon:nn}
      {8452FF2BF0A317552B0920628ADD8C18}
6
7 \cs_set:Nn\fontawesome_use_icon:nn{
    \group_begin:
9
      \LWR@findcurrenttextcolor
10
      \usefont
11
        {TU}
        {fontawesome\c__fontawesome_kind_tl}
12
        {#1}
13
        {n}
14
      \bool_set:Nn \l__fontawesome_duotone_bool {
15
16
        \str_if_eq_p:ee {#1} {duotone}
17
      \int_set:Nn\l_tmpa_int{
18
19
        \__fontawesome_glyphindex:n{
20
          \bool_if:NT \l__fontawesome_duotone_bool { -primary }
21
22
        }
23
      }
      \int_compare:nNnT{\l_tmpa_int}={0}{
24
        \fontseries{solid}
25
        \selectfont
26
27
        \bool_set_false:N \l__fontawesome_duotone_bool
28
        \int_set:Nn\l_tmpa_int{\__fontawesome_glyphindex:n{#2}}
29
        \int_compare:nNnTF{\l_tmpa_int}={0}{
30
          \fontfamily{fontawesomebrands}
31
          \fontseries{regular}
32
          \selectfont
          \int_set:Nn\l_tmpa_int{\__fontawesome_glyphindex:n{#2}}
33
          \int_compare:nNnT{\l_tmpa_int}={0}{
34
            \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
35
          }
36
        }{
37
          \msg_warning:nnxx{fontawesome5}{style-substitution}{#2}{#1}
38
        }
39
40
41
     \begin{lateximage}*[#2][fontawesome5#1SZ\LWR@font@size{}CL\LWR@tempcolor]% lwarp
42
      \csuse{\LWR@font@size}% lwarp
43
      \bool_if:NTF\c__fontawesome_fixed_bool{
        \makebox[1.5em][c]
44
45
      }{
        \use:n
46
47
      }
48
        \bool_if:NTF \l__fontawesome_duotone_bool {
49
          \__fontawesome_glyph:w \l_tmpa_int
50
         \int_set:Nn\l_tmpa_int{ \__fontawesome_glyphindex:n{ #2-secondary } }
51
52
          \llap {
53
              \l_fontawesome_duotone_secondary_style_tl
54
              { \__fontawesome_glyph:w \l_tmpa_int }
55
            }
56
          }
57
          % \ooalign {
58
59
              \hss \__fontawesome_glyph:w \l_tmpa_int \hss \cr
```

```
60
            \hss
        \int_set:Nn\l_tmpa_int{ \__fontawesome_glyphindex:n{ #2-secondary } }
61
            62
63
         %
              \color{gray}\__fontawesome_glyph:w \l_tmpa_int
64
         %
            }
         %
65
            \hss \cr
         % }
66
       } {
67
           _fontawesome_glyph:w \l_tmpa_int
68
69
       }
70
71
     \end{lateximage}% lwarp
72
   \group_end:
73 }
74 \ExplSyntaxOff
```

File 184 lwarp-fontaxes.sty

§ 293 Package

fontaxes

(Emulates or patches code by Andreas Bühmann, Michael Ummels.)

fontaxes (*Pkg*) fontaxes is emulated for HTML, and used as-is for print output.

Functionality for small caps is in the lwarp core. Swashes and figure styles are ignored for HTML.

for HTML output:

 ${\tt 1 \LWR@ProvidesPackagePass\{fontaxes\}[2014/03/23]}$

```
2\ifdef{\LWR@HTML@swshape}{}{% duplicated by nfssext-cfr
     \newcommand{\LWR@HTML@swshape}{}
4
     \LWR@formatted{swshape}
5
     6
7
     \LWR@formatted{textsw}
8
     \FilenameNullify{%
9
        \LetLtxMacro\swshape\@empty%
10
        \LetLtxMacro\textsw\firstofone%
11
     }
12
13 }
```

File 185 lwarp-fontenc.sty

§ 294 Package

fontenc

fontenc (Pkg)

If using PDF LATEX, lwarp used to require fontenc be loaded before lwarp, but now lwarp itself loads \fontenc with T1 encoding, which lwarp requires. fontenc is now allowed to be loaded with another encoding after lwarp.

lwarp-fontenc is no longer necessary, but is still provided to overwrite older versions.

for HTML output:

1 \LWR@ProvidesPackagePass{fontenc}[2017/04/05]

File 186 lwarp-footmisc.sty

§ 295 Package footmisc

(Emulates or patches code by Robin Fairbairns.)

footmisc (*Pkg*) footmisc is emulated.

lwarp incidentally happens to emulate the stable option.

1 \LWR@ProvidesPackageDrop{footmisc}[2011/06/06]

Some nullified commands:

```
2 \newcommand{\footnotelayout}{}
3 \newcommand{\setfnsymbol}[1]{}
4 \NewDocumentCommand{\DefineFNsymbols}{s m o m}{}
5
6 \newdimen\footnotemargin
7 \footnotemargin1.8em\relax
8
9 \newcommand*\hangfootparskip{0.5\baselineskip}
10 \newcommand*\hangfootparindent{0em}%
11
12 \let\pagefootnoterule\footnoterule
13 \let\mpfootnoterule\footnoterule
14 \def\splitfootnoterule{\kern-3\p@ \hrule \kern2.6\p@}
15
16 \providecommand*{\multiplefootnotemarker}{3sp}
17 \providecommand*{\multfootsep}{,}
```

Using cleveref. \labelcref only prints the number of the object, not its type.

 $\label{labelcref} \ensuremath{\texttt{13}} \ensuremath{\texttt{13}} \ensuremath{\texttt{13}}$

The following work as-is:

```
19 \newcommand\mpfootnotemark{%
   \@ifnextchar[%
     \@xmpfootnotemark%
21
22
       \stepcounter\@mpfn%
23
       \protected@xdef\@thefnmark{\thempfn}%
24
       \@footnotemark%
25
26
     }%
28 \def\@xmpfootnotemark[#1]{%
29
   \begingroup%
     \csname c@\@mpfn\endcsname #1\relax%
30
     31
   \endgroup%
32
   \@footnotemark%
33
34 }
```

File 187 lwarp-footnote.sty

\$296

Package footnote

(Emulates or patches code by Mark Wooding.)

footnote (*Pkg*) footnote is used with minor patches.

for HTML output:

footnote patches \@makefntext in a strange way. It must be restored to the expected defintion before loading footnote, then replaced again after.

```
1 \long\def\@makefntext#1{\textsuperscript{\@thefnmark}~#1}
3 \LWR@ProvidesPackagePass{footnote}[1997/01/28]
5 \long\def\@makefntext#1{\textsuperscript{\@thefnmark}~{#1}}
6 \VerifyCommand[lwarp][footnote]{\spewnotes}{BCC4919F5404BADA8F1CF486E5709072}
{\tt 8 \backslash def \backslash spewnotes \{\%}
9 \endgroup%
    \if@savingnotes\else\ifvoid\fn@notes\else\begingroup%
10
      \let\@makefntext\@empty%
11
      \let\@finalstrut\@gobble%
12
13
      \let\rule\@gobbletwo%
      \booltrue{LWR@spewingnotes}%
14
                                            lwarp
15
      \@footnotetext{\unvbox\fn@notes}%
16 \endgroup\fi\fi%
17 }
18 \let\endsavenotes\spewnotes
20 \ \ Verify Command [lwarp] [footnote] \{ 4C750987515F28FE665A08AB710193BA \} \\
22 \def\fn@fntext#1{%
    \ifx\ifmeasuring@\@@undefined%
24
      \expandafter\@secondoftwo\else\expandafter\@iden%
25
26
    {\ifmeasuring@\expandafter\@gobble\else\expandafter\@iden\fi}%
27
28
      \global\setbox\fn@notes\vbox{%
29
        \unvbox\fn@notes%
        \LWR@htmltagc{\LWR@tagregularparagraph}%
30
                                                         lwarp
        \LWR@orignewline%
                                                         lwarp
31
        \fn@startnote%
32
        \@makefntext{%
33
          \rule\z@\footnotesep%
34
          \ignorespaces%
35
36
37
          \@finalstrut\strutbox%
38
        }%
        \fn@endnote%
39
      }%
40
41
    }%
42 }
```

```
Removed print-version formatting:
43 \VerifyCommand[lwarp][footnote]{\fn@startnote}{D101A3D1B9653A6FDD7E9CF37BD5A4DD}
45 \def\fn@startnote{%
     \@parboxrestore%
47 \protected@edef\@currentlabel{\csname p@\@mpfn\endcsname\@thefnmark}%
      \color@begingroup% *** conflicts with lwarp
49 }
50
51% \let\fn@endnote\color@endgroup% *** conflicts with lwarp
52 \def\fn@endnote{%
      \LWR@orignobreakspace\LWR@orignewline%
      \LWR@htmltagc{/\LWR@tagregularparagraph}\LWR@orignewline%
54
55
      \LWR@orignobreakspace\LWR@orignewline%
56 }
Removed print-version formatting:
57\VerifyCommand[lwarp][footnote]{\fn@startfntext}{7270AD27C28391C41DA1FE47C49B5E7A}
59 \def\fn@startfntext{%
60 \setbox\z@\vbox\bgroup%
      \LWR@htmltagc{\LWR@tagregularparagraph}%
                                                   lwarp
      \LWR@orignewline%
                                                   lwarp
62
      \fn@startnote%
63
      \fn@prefntext% Req'd for numbering.
64
65 %
        \rule\z@\footnotesep%
      \ignorespaces%
66
67 }
Removed print-version formatting, added closing paragraph tag:
69 \VerifyCommand[lwarp][footnote]{\fn@endfntext}{17BC1D2CD9A84BAFFBE765CC1618C36D}
71 \def\fn@endfntext{%
72
      \fn@postfntext%
      \LWR@orignobreakspace\LWR@orignewline%
73
      \LWR@htmltagc{/\LWR@tagregularparagraph}%
74
      \LWR@orignewline%
75
76 \egroup%
77
   \begingroup%
      \let\@makefntext\@empty%
78
     \let\@finalstrut\@gobble%
79
      \LetLtxMacro\rule\@gobbletwo%
80
      \booltrue{LWR@spewingnotes}%
81
                                       lwarp
      \@footnotetext{\unvbox\z@}%
82
```

These have been redefined, so re-\let them again:

```
85 \let\endfootnote\fn@endfntext
86 \let\endfootnotetext\endfootnote
```

\endgroup%

83 84 }

File 188 lwarp-footnotebackref.sty

§ 297 Package footnotebackref

footnotebackref (Pkg) footnotebackref is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

File 189 lwarp-footnotehyper.sty

§298 Package footnotehyper

footnotehyper (*Pkg*) footnotehyper is a hyperref-safe version of footnote. For lwarp, footnotehyper is

emulated.

for HTML output: Discard all options for lwarp-footnotehyper:

1 \RequirePackage{footnote}

2

3 \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]

File 190 lwarp-footnoterange.sty

§ 299 Package footnoterange

(Emulates or patches code by H.-Martin Münch.)

footnoterange (*Pkg*) footnoterange is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{footnoterange}[2012/02/17]

2 \csletcs{footnoterange}{footnoterange*}
3 \csletcs{endfootnoterange}{endfootnoterange*}

File 191 lwarp-footnpag.sty

§300 Package footnpag

footnpag (Pkg) footnpag is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{footnpag}

File 192 lwarp-foreign.sty

§301 Package foreign

(Emulates or patches code by Philip G. Ratcliffe.)

foreign (*Pkg*) foreign is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{foreign}[2012/09/25]

2\renewcommand\foreignabbrfont{\emph}

File 193 lwarp-forest.sty

Package forest § 302

(Emulates or patches code by Sašo Živanović.)

forest (*Pkg*) forest is patched for use by lwarp.

\Forest* The starred version of the macro \Forest* is not supported. warp encases each lateximage in an environment, so the global results of the starred \Forest* are

for HTML output: 1 \LWR@ProvidesPackagePass{forest}[2017/07/14]

```
2 \BeforeBeginEnvironment{forest}{%
      \begin{lateximage}[-forest-~\PackageDiagramAltText]%
4 }
6 \AfterEndEnvironment{forest}{\end{lateximage}}
8 \VerifyCommand[lwarp][forest]{\Forest}{D44A6D1EAFFC86653905CC666F563E6D}
10 \RenewDocumentCommand{\Forest}{s D(){} m}{%
   \forest@config{#2}%
12
   \IfBooleanTF{#1}{%
          \PackageError{lwarp-forest}%
13
          {\protect\Forest* is not supported}%
14
          {Lwarp uses an environment for images,\MessageBreak
15
              but \protect\Forest* cannot work in an environment.}%
16
          \let\forest@next\forest@env%
17
      }{\let\forest@next\forest@group@env}%
18
      \begin{lateximage}[-forest-~\PackageDiagramAltText]%
                                                                lwarp
19
20
   \forest@next{#3}%
      \end{lateximage}%
                                       lwarp
21
22 }
```

File 194 lwarp-fouridx.sty

Package fouridx **§ 303**

(Emulates or patches code by Stefan Karrmann.)

fouridx (Pkg)fouridx works as-is with svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{fouridx}[2013/11/21]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{%
```

File 195 lwarp-fourier.sty

§ 304 Package

fourier

(Emulates or patches code by Michel Bovani.)

fourier (*Pkg*) fourier is used as-is for svg math, and is emulated for MATHJAX.

⚠ limitations

The MathJax emulation ignores all package options, except sloped and upright are honored for Greek characters, but MathJax cannot yet honor these for Latin characters.

The dedicated macros for upright and italic Greek letters do work correctly.

svg math should appear the same as the printed output.

for HTML output:

```
1 \LWR@ProvidesPackagePass{fourier}[2020/03/03]
3 \LWR@infoprocessingmathjax{fourier}
4 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
6 \LWR@origRequirePackage{lwarp-common-mathjax-overlaysymbols}
8 \begin{warpMathJax}
10 \IfPackageLoadedWithOptionsTF{fourier}{sloped}
11
          \LWR@mathjax@addgreek@l@up{other}{}
12
          \LWR@mathjax@addgreek@u@it*{other}{}
13
      }% sloped
14
      {% not sloped
15
          \IfPackageLoadedWithOptionsTF{fourier}{upright}
16
17
              {% upright option
                  \LWR@mathjax@addgreek@l@up{}{}
18
                  \LWR@mathjax@addgreek@u@up*{}{}
19
                  \LWR@mathjax@addgreek@l@it{other}{}
20
                  \LWR@mathjax@addgreek@u@it*{other}{}
21
22
              {% neither sloped nor upright
23
                  \LWR@mathjax@addgreek@l@up{other}{}
24
                  \LWR@mathjax@addgreek@u@it*{other}{}
25
26
              }
27
      }
29 \CustomizeMathJax{\newcommand{\othergreek}[1]{#1}}
30 \CustomizeMathJax{\let\varvarrho\varrho}
31 \CustomizeMathJax{\let\varvarpi\varpi}
32 \CustomizeMathJax{\let\othervarvarpi\othervarpi}
33 \CustomizeMathJax{\let\othervarrho\othervarrho}
{\tt 34 \CustomizeMathJax{\let\varpartialdiff\partial}}
```

lwarp_mathjax.txt adds \left/\right support for delimiters.

```
35 \CustomizeMathJax{\let\llbracket\lBrack}
36 \CustomizeMathJax{\let\rrbracket\rBrack}
37 \CustomizeMathJax{\let\dblbrackleft\lBrack}
38 \CustomizeMathJax{\let\dblbrackright\rBrack}
40 \CustomizeMathJax{\let\VERT|}
42 \CustomizeMathJax{\newcommand{\parallelslant}{\mathrel{\unicode{x02AFD}}}}
44 \CustomizeMathJax{\newcommand{\nparallelslant}{%
               \mathrel{\LWRoverlaysymbols{-}{\unicode{x02AFD}}}%
45
46 }}
47 \CustomizeMathJax{\newcommand{\xswordsup}{\mathord{\unicode{x2694}}}}
49 \CustomizeMathJax{\newcommand{\notowns}{\mathrel{\unicode{x220C}}}}
51\CustomizeMathJax{\newcommand{\iintop}{\mathop{\unicode{x222C}}\limits}}
52 \CustomizeMathJax{\newcommand{\iiintop}{\mathop{\unicode{x222D}}\limits}}
53 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicode{x222F}}\limits}}
54 \CustomizeMathJax{\let\oiintop\oiint}
55 \CustomizeMathJax{\newcommand{\oiiint}{\mathop{\unicode{x2230}}\limits}}
56 \CustomizeMathJax{\let\oiiintop\oiiint}
57 \CustomizeMathJax{\newcommand{\slashint}{\mathop{\unicode{x2A0D}}}\limits}}
58 \CustomizeMathJax{\let\slashintop\slashint}
60 \CustomizeMathJax{\let\overgroup\overparen}
61 \CustomizeMathJax{\let\wideparen\overparen}
62 \CustomizeMathJax{\let\widearc\overparen}
63 \CustomizeMathJax{\let\wideOarc\overrightarrow}
\label{lem:condex} $$64 \subset M_{\alpha}[1]_{\star}(x) = (unicode_{x2218}}_{\alpha}(x) = (unicode_{x2218})_{\alpha}(x) = (u
66 \end{warpMathJax}
```

File 196 lwarp-framed.sty

§305 Package framed

(Emulates or patches code by Donald Arseneau.)

framed (*Pkg*) framed is supported and patched by lwarp.

for HTML output: Accept all options for lwarp-framed:

```
1 \LWR@ProvidesPackagePass{framed}[2011/10/22]
2
3 \AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec
4 \renewenvironment{framed}
5 {%
6 \LWR@forcenewpage
7 \BlockClass{framed}%
8 }
9 {\endBlockClass}
10
11 \renewenvironment{oframed}
12 {%
```

```
13
                          \LWR@forcenewpage
                          \BlockClass{framed}%
 14
 15 }
 16 {\endBlockClass}
 17
18
19 \renewenvironment{shaded}
20 {%
                          \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
21
                          \LWR@forcenewpage
22
                           \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
23
24 }
25 {\endBlockClass}
27 \renewenvironment{shaded*}
28 {%
                           \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
29
                          \LWR@forcenewpage
30
                          \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
31
32 }
33 {\endBlockClass}
34
35
36\renewenvironment{leftbar}{%
                         \LWR@forcenewpage
38
                          \BlockClass{framedleftbar}
39
                          \def\FrameCommand{}%
40
                          \MakeFramed {}
41 }%
42 {\endMakeFramed\endBlockClass}
43
44
45 \renewenvironment{snugshade}
46 {%
47
                           \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
48
                          \LWR@forcenewpage
                          \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
49
50 }
51 {\endBlockClass}
53 \renewenvironment{snugshade*}
54 {%
                          \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
55
56
                          \LWR@forcenewpage
                          \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
57
58 }
59 {\endBlockClass}
61 \let\oframed\framed
62 \leq \left( \right)
64
65 \RenewEnviron{titled-frame}[1]{%
                          66
67 }
           \{\langle toptitle \rangle\} \ \{\langle bottitle \rangle\} \ \{\langle thicknesstop \rangle\} \ \{\langle bottom \rangle\} \ \{\langle left \rangle\} \ \{\langle right \rangle\} \ \{\langle text \rangle
```

\CustomFBox

contents\}

```
68 \renewcommand{\CustomFBox}[7]{%
                                     \verb|\convertcolorspec{named}{TFFrameColor}{HTML}\\ \verb|\LWR@tempcolor%||
                                     \LWR@forcenewpage
                              71
                                   \begin{BlockClass}[border: 3px solid \LWR@origpound\LWR@tempcolor]{framed}%
                                     \ifthenelse{\isempty{#1}}{}% not empty
                                      \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
                              73
                                         \textcolor{TFTitleColor}{\textbf{#1}}%
                              74
                                         \end{BlockClass}%
                              75
                                    }% not empty
                              76
                              77
                              78
                              79
                              80
                                     \ifthenelse{\isempty{#2}}{}{% not empty
                              81
                                         \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
                              82
                                      \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
                              83
                                         \textcolor{TFTitleColor}{\textbf{#2}}%
                              84
                                         \end{BlockClass}%
                                     }% not empty
                              85
                                     \end{BlockClass}%
                              86
                              87 }
\TitleBarFrame
                                [\langle marker \rangle] \{\langle title \rangle\} \{\langle contents \rangle\}
                              88 \renewcommand\TitleBarFrame[3][]{%
                                     \CustomFBox%
                              90
                                         {#2}{}%
                                         \fboxrule\fboxrule\fboxrule%
                              91
                              92
                                         {#3}%
                              93 }
                              94 \renewcommand{\TF@Title}[1]{#1}
  MakeFramed
                                \{\langle settings \rangle\}
                              95 \let\MakeFramed\relax
                              96 \let\endMakeFramed\relax
                              98 \NewEnviron{MakeFramed}[1]{%
                                     \FrameCommand{\begin{minipage}{\linewidth}\BODY\end{minipage}}%
                             100 }
                                \{\langle frame\ cmd\ no\ split \rangle\}\ \{\langle frame\ cmd\ split \rangle\}
\fb@put@frame
                             101 \renewcommand*{\fb@put@frame}[2]{%
                                     \relax%
                             103
                                     \@tempboxa%
                             104 }
                    File 197 lwarp-froufrou.sty
                    Package froufrou
         §306
                               (Emulates or patches code by Nelson Lago.)
              froufrou (Pkg) froufrou is patched for use by lwarp.
```

1 \LWR@ProvidesPackagePass{froufrou}[2020/12/22]

for HTML output:

```
2 \ExplSyntaxOn
  3 \xpretocmd{\setfroufrou}
                   {\edef\LWR@latestfroufrou{\detokenize{#1}}}
  5
                   {\LWR@patcherror{froufrou}{setfroufrou}}
  7 \ExplSyntaxOff
  \\ 9 \end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][frou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufrou]{\end{[lwarp][froufro
 11 \RenewDocumentCommand{\froufrou}{s 0{}}{%
             \nopagebreak[4]\par
 12
13
14
             \IfBooleanTF{#1}{\@afterindenttrue}{\@afterindentfalse}
 15
             \nopagebreak[4]\@froufrouspacebefore\nopagebreak[4]
 16
 17
             \bgroup
18
                   \setfroufrou{#2}%
19
                   \normalsize
20
                \ifdefvoid{\setstretch}{}{\setstretch{\setspace@singlespace}}% normally 1
21
22
                   \setlength{\parskip}{0pt}
                   \noindent\centering\bgroup%
23
                                 \begin{center}%
                                                                                                                                                                                                                       lwarp
24
25
                                 \begin{lateximage}*[froufrou][\LWR@latestfroufrou]%
                                                                                                                                                                                                                       lwarp
26
                                 \@froufrouOrnament%
27
                                 \end{lateximage}%
                                                                                                                                                                                                                       lwarp
28
                                 \end{center}%
                                                                                                                                                                                                                       lwarp
29
                    \egroup\par
30
             \egroup
31
             \nopagebreak[4]\@froufrouspaceafter\nopagebreak[4]
32
33
             \@froufrouFixSpacingAfter
34
35
36
             \nopagebreak[3]
37
             \@afterheading
38
39 }
```

File 198 lwarp-ftcap.sty

```
§307 Package ftcap
```

ftcap (Pkg) ftcap is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ftcap}

File 199 lwarp-ftnright.sty

§308 Package ftnright

ftnright (Pkg) ftnright is ignored.

for HTML output:

Discard all options for lwarp-ftnright:

1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]

File 200 lwarp-fullminipage.sty

§ 309 Package fullminipage

fullminipage (Pkg) fullminipage is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

2\newenvironment{fullminipage}[1][]{}{}

File 201 lwarp-fullpage.sty

§310 Package fullpage

fullpage (Pkg) fullpage is ignored.

for HTML output: Discard all options for lwarp-fullpage:

1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]

File 202 lwarp-fullwidth.sty

§311 Package fullwidth

(Emulates or patches code by MARCO DANIEL.)

fullwidth (Pkg) fullwidth is emulated.

A minipage is used, of no нтмL width.

 $\textbf{for HTML output:} \qquad 1 \texttt{\LWR@ProvidesPackageDrop\{fullwidth\}[2011/11/18]}$

2 \newenvironment*{fullwidth}[1][]{%

3 \minipagefullwidth%
4 \minipage{\linewidth}%

5 }

6 {%

7\endminipage%

8 }

File 203 lwarp-fvextra.sty

§312 Package fvextra

(Emulates or patches code by Geoffrey M. Poore.)

fvextra (*Pkg*) fvextra is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{fvextra}[2023/11/28]

48 \fvset{breaksymbolright={}}

If line numbers on the right side are used along with breaklines, the line numbers will not be aligned.

```
2 \define@booleankey{FV}{obeytabs}%
3 % {\let\FV@ObeyTabsInit\FV@@ObeyTabsInit}%
4 {\let\FV@ObeyTabsInit\relax}% lwarp
5 {\let\FV@ObeyTabsInit\relax}
```

tabcolor causes extra HTML tags, destroying the verbatim text alignment, so tabcolor is ignored.

```
6 \define@key{FV}{tabcolor}{}%
7 \define@booleankey{FV}{showtabs}%
8 {\def\FV@TabChar{\FV@TabColor{\FancyVerbTab}}}%
9 {\let\FV@TabChar\relax}
11 \newbool{LWR@FV@breaklines}
13 \define@booleankey{FV}{breaklines}%
14 {\boolfalse{FV@breaklines}%
     \booltrue{LWR@FV@breaklines}%
15
                                                             lwarp
16% \let\FV@ListProcessLine\FV@ListProcessLine@Break}%
     \let\FV@ListProcessLine\FV@ListProcessLine@NoBreak}%
17
                                                            lwarp
   {\boolfalse{FV@breaklines}%
18
     \boolfalse{LWR@FV@breaklines}%
                                                             lwarp
19
     \let\FV@ListProcessLine\FV@ListProcessLine@NoBreak}
20
21% \fvset{breaklines}
23 \define@key{FV}{breakanywheresymbolpre}{\def\FancyVerbBreakAnywhereSymbolPre{}}
24 \fvset{breakanywheresymbolpre={}}
27 \fvset{breakanywheresymbolpost={}}
29 \define@key{FV}{breakbeforesymbolpre}{\def\FancyVerbBreakBeforeSymbolPre{}}
30 \fvset{breakbeforesymbolpre={}}
32 \define@key{FV}{breakbeforesymbolpost}{\def\FancyVerbBreakBeforeSymbolPost{}}
33 \fvset{breakbeforesymbolpost={}}
35 \define@key{FV}{breakaftersymbolpre}{\def\FancyVerbBreakAfterSymbolPre{}}
36 \fvset{breakaftersymbolpre={}}
{\tt 38 \setminus define@key\{FV\}\{breakaftersymbolpost\}\{\setminus def\setminus FancyVerbBreakAfterSymbolPost\{\}\}\}}
39 \fvset{breakaftersymbolpost={}}
40
41 \define@key{FV}{breaksymbolleft}{\def\FancyVerbBreakSymbolLeft{}}
42
43 \define@key{FV}{breaksymbol}{\fvset{breaksymbolleft={}}}
45 \fvset{breaksymbolleft={}}
47 \define@key{FV}{breaksymbolright}{\def\FancyVerbBreakSymbolRight{}}
```

Modified to insert a fixed-width space (\nobreakspace) to indent the left margin on indented code, but also allow a line break if needed (\allowbreak), to allow for break lines.

```
49 \def\FV@DefFVSpace{%
    \ifbool{FV@showspaces}%
51
          \def\FV@Space{%
52
              \FV@SpaceColor{\FancyVerbSpace}%
53
              \allowbreak%
54
          }%
55
       }%
56
      {\def\FV@Space{\nobreakspace\allowbreak}}%
57
58 }
```

\FancyVerbSpace

Force the use of a vibible space instead of an empty box. From fancyvrb.

 $\verb|\FV@ListProcessLine@NoBreak| \\$

Modified to always allow line wrapping because added HTML tags may make run off the end of the line in the PDF output file before conversion to HTML.

```
70 \ensuremath{\lowerp}[fvextra]{\ensuremath{\lowerp}[fvextra]{\ensuremath{\lowerp}[fvextra]{\ensuremath{\lowerp}[fvextra]}} \\ 271 \ensuremath{\lowerp}[fvextra]{\ensuremath{\lowerp}[fvextra]{\ensuremath{\lowerp}[fvextra]}} \\ 271 \ensuremath{\lowerp}[fvextra]{\ensuremath{\lowerp}[fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][fvextra][
72 \def\FV@ListProcessLine@NoBreak#1{%
73% \hbox to \hsize{%
74 %
                                \kern\leftmargin
75 %
                                \hbox to \linewidth{%
76
                                 \FV@LeftListNumber%
77
                                 \FV@LeftListFrame%
                                 \FancyVerbFormatLine{%
78
                                        \FancyVerbHighlightLine{%
79
80
                                                 \FV@RightListFrame%
81
                                 \FV@RightListNumber%
82
                                }%
83 %
84 %
                                 \hss}%
85 \null\par%
                                                                                                                              lwarp
86 }
87 \newcommand*{\LWR@FV@linethensep}{%
                        \ifbool{LWR@FV@breaklines}%
                                        {\theFancyVerbLine\kern\FV@NumberSep}%
90
                                        {\hbox to\z@{\hss\theFancyVerbLine\kern\FV@NumberSep}}%
91 }
93 \newcommand*{\LWR@FV@septhenline}{%
```

```
94
                            \ifbool{LWR@FV@breaklines}%
  95
                                              {\kern\FV@NumberSep\theFancyVerbLine}%
                                              96
  97 }
  99 \end{[lwarp]} [fvextra] {\end{[lwarp]} fvextra] {
100
101 \xpatchcmd{\FV@Numbers@left}%
                            102
                            {\LWR@FV@linethensep}
103
104
105
                            {\LWR@patcherror{fvextra}{FV@Numbers@left A}}
106
107 \xpatchcmd{\FV@Numbers@left}%
                            {\hbox to\z@{\hss\theFancyVerbLine\kern\FV@NumberSep}}
109
                            {\LWR@FV@linethensep}
110
                            {\LWR@patcherror{fvextra}{FV@Numbers@left B}}
111
112
113 \xpatchcmd{\FV@Numbers@left}%
                            {\begin{tabular}{l} \begin{tabular}{l} \begin{tab
114
                            {\LWR@FV@linethensep}
115
116
                            {}
                            {\LWR@patcherror{fvextra}{FV@Numbers@left C}}
117
119 \VerifyCommand[lwarp][fvextra]{\FV@Numbers@right}{6D0F98326BCB22695874D94BEC12E32F}
120
121 \xpatchcmd{\FV@Numbers@right}%
                            {\begin{tabular}{l} \begin{tabular}{l} \begin{tab
122
                            {\LWR@FV@septhenline}
123
124
                            {}
                            {\LWR@patcherror{fvextra}{FV@Numbers@right A}}
125
126
127 \xpatchcmd{\FV@Numbers@right}%
                            {\hbox to\z@{\kern\FV@NumberSep\theFancyVerbLine\hss}}
128
129
                            {\LWR@FV@septhenline}
130
                            {\LWR@patcherror{fvextra}{FV@Numbers@right B}}
131
133 \xpatchcmd{\FV@Numbers@right}%
                            134
                            {\LWR@FV@linethensep}
135
136
                            {}
137
                            {\LWR@patcherror{fvextra}{FV@Numbers@right C}}
139 \VerifyCommand[lwarp][fvextra]{\FV@Numbers@both}{C349DC2B800D5DD085FFB7620A6289EA}
141 \xpatchcmd{\FV@Numbers@both}%
                            {\hbox to\z@{\hss\theFancyVerbLine\kern\FV@NumberSep}}
142
                            {\LWR@FV@linethensep}
143
144
                            {\LWR@patcherror{fvextra}{FV@Numbers@both A}}
145
146
147 \xpatchcmd{\FV@Numbers@both}%
                            {\hbox to\z@{\hss\theFancyVerbLine\kern\FV@NumberSep}}
148
                            {\LWR@FV@linethensep}
149
150
151
                            {\LWR@patcherror{fvextra}{FV@Numbers@both B}}
153 \xpatchcmd{\FV@Numbers@both}%
```

```
154
                                                                         {\begin{tabular}{l} \begin{tabular}{l} \begin{tab
                                                          155
                                                                         {\LWR@FV@linethensep}
                                                          156
                                                                         {}
                                                                         {\LWR@patcherror{fvextra}{FV@Numbers@both C}}
                                                          157
                                                          159 \xpatchcmd{\FV@Numbers@both}%
                                                                         {\hbox to\z@{\kern\FV@NumberSep\theFancyVerbLine\hss}}
                                                          160
                                                                         {\LWR@FV@septhenline}
                                                          161
                                                          162
                                                                         {}
                                                                         {\LWR@patcherror{fvextra}{FV@Numbers@both D}}
                                                          163
                                                          164
                                                          165 \xpatchcmd{\FV@Numbers@both}%
                                                                         {\b to\z@{\kern\FV@NumberSep\theFancyVerbLine\hss}}
                                                          166
                                                          167
                                                                         {\LWR@FV@septhenline}
                                                          168
                                                                         {\LWR@patcherror{fvextra}{FV@Numbers@both E}}
                                                          169
                                                          170
                                                          171 \xpatchcmd{\FV@Numbers@both}%
                                                                         {\b to\z@{\hss\theFancyVerbLine\kern\FV@NumberSep}}
                                                          172
                                                                         {\LWR@FV@linethensep}
                                                          173
                                                          174
                                                                         {}
                                                                         {\LWR@patcherror{fvextra}{FV@Numbers@both F}}
                                                          175
                                                                \{\langle name \rangle\} \{\langle raw \ text \rangle\} \{\langle text \rangle\}
\FVC@SaveVerb@Extra@ii
                                                              Modified to add \LWR@HTMLsanitize@use@tmb to the stored macro. This is used
                                                              on recall to sanitize for HTML unless in a lateximage.
                                                          176 \VerifyCommand[lwarp][fvextra]{\FVC@SaveVerb@Extra@ii}{BCE88217BA577F70BAC8158E110E404C}
                                                          177
                                                          178 \def\FVC@SaveVerb@Extra@ii#1#2#3{%
                                                                     \global\let\FV@AfterSave\FancyVerbAfterSave
                                                          179
                                                                    \endgroup
                                                          181 % \@namedef{FV@SV@#1}{#3}%
                                                                       \@namedef{FV@SV@#1}{\LWR@HTMLsanitize@use@tmpb{#3}}%
                                                                                                                                                                                                      lwarp
                                                          183 % \@namedef{FV@SVRaw@#1}{#2}%
                                                                    \@namedef{FV@SVRaw@#1}{\LWR@HTMLsanitize@use@tmpb{#2}}%
                                                                                                                                                                                                      lwarp
                                                          185
                                                                    \FV@AfterSave}%
\FV@UseVerb@Extra
                                                                \{\langle text \rangle\}
                                                             Adds the opening and closing tags.
                                                          186 \VerifyCommand[lwarp][fvextra]{\FV@UseVerb@Extra}{8B4DAB7A789CAB11394A35D2BA864FE4}
                                                          188 \def\FV@UseVerb@Extra#1{%
                                                          189
                                                                         \ifbool{LWR@verbtags}%
                                                                                                                                                         lwarp
                                                                            {\LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl}}% lwarp
                                                          190
                                                          191
                                                                                  {}%
                                                                                                                                                         lwarp
                                                                     \ifFV@breaklines
                                                          192
                                                                         \expandafter\@firstoftwo
                                                          193
                                                                     \else
                                                          194
                                                                         \expandafter\@secondoftwo
                                                          195
                                                          196
                                                                     {\FV@InsertBreaks{\FancyVerbFormatInline}{#1}}%
                                                          197
                                                                     {\mbox{#1}}%
                                                          198
                                                          199
                                                                         \ifbool{LWR@verbtags}%
                                                                                                                                                          lwarp
                                                          200
                                                                                  {\LWR@htmltag{/span}}%
                                                                                                                                                         lwarp
                                                          201
                                                                                  {}%
                                                                                                                                                         lwarp
                                                          202
                                                                     \endgroup}
```

```
\{\langle text \rangle\}
\FVC@Verb@Extra@ii
                              Sanitize HTML.
                            203 \VerifyCommand[lwarp][fvextra]{\FVC@Verb@Extra@ii}{8B4DAB7A789CAB11394A35D2BA864FE4}
                            205 \def\FVC@Verb@Extra@ii#1{%
                            206
                                   \def\tmpb{#1}%
                                                                                                        lwarp
                            207
                                   \ifbool{LWR@verbtags}%
                                                                          lwarp
                            208
                                     {\LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl}}% lwarp
                            209
                                                                                           lwarp
                                   \LWR@HTMLsanitize@tmpb%
                                                                                           lwarp
                            210
                                 \ifFV@breaklines
                            211
                                   \expandafter\@firstoftwo
                            212
                            213
                                   \expandafter\@secondoftwo
                            214
                                 {\FV@InsertBreaks{\FancyVerbFormatInline}{\tmpb}}%
                                 {\mbox{\tmpb}}%
                                                                                           lwarp
                                   \ifbool{LWR@verbtags}%
                            218
                                                                          lwarp
                                       {\tt \{\LWR@htmltag\{/span\}\}\%}
                                                                          lwarp
                            219
                                       {}%
                                                                          lwarp
                            220
                                 \endgroup}
                            221
\FVC@EscVerb@ii
                               \{\langle text \rangle\}
                             Santize HTML.
                            222 \VerifyCommand[lwarp][fvextra]{\FVC@EscVerb@ii}{8B4DAB7A789CAB11394A35D2BA864FE4}
                            223
                            224 \def\FVC@EscVerb@ii#1{%
                                 \def\tmpb{#1}%
                            225
                                                                          lwarp
                                   \ifbool{LWR@verbtags}%
                            226
                                                                          lwarp
                            227
                                     {\LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl}}% lwarp
                            228
                                                                          lwarp
                                       {}%
                                 \LWR@HTMLsanitize@tmpb%
                            229
                                                                          lwarp
                                 \ifFV@breaklines
                            230
                            231
                                   \expandafter\@firstoftwo
                            232
                                 \else
                                   \expandafter\@secondoftwo
                            233
                            234
                            235% {\FV@InsertBreaks{\FancyVerbFormatInline}{#1}}%
                            236% {\mbox{#1}}%
                            237 {\FV@InsertBreaks{\FancyVerbFormatInline}{\tmpb}}%
                                                                                           lwarp
                                 {\mbox{\tmpb}}%
                            238
                                                                                           lwarp
                            239
                                   \ifbool{LWR@verbtags}%
                                                                          lwarp
                                       {\LWR@htmltag{/span}}%
                                                                          lwarp
                            240
                            241
                                       {}%
                                                                          lwarp
                                 \endgroup}
                                Disable santizing HTML while writing the file. HTML will be sanitized on
\FVB@VerbatimWrite
                             \VerbatimInput.
                            243 \VerifyCommand[lwarp][fvextra]{\FVB@VerbatimWrite}{B092E8AB57DB2ABBA815BC39DB5256DC}
                            245 \xpatchcmd{\FVB@VerbatimWrite}
                            246
                                   {\FV@Scan}
                                   {\boolfalse \{LWR@HTMLsanitize@tmpb@enable\} \FV@Scan\}}
                            247
                            248
                                   {\LWR@patcherror{fvextra}{FVB@VerbatimWrite}}
                            249
```

\FVB@VerbatimBuffer

Disable santizing HTML while writing the buffer. HTML will be sanitized on \VerbatimInsertBuffer.

\VerbatimInsertBuffer

```
257 \VerifyCommand[lwarp][fvextra]{\VerbatimInsertBuffer}{4582BD54720B56AD050042DD9FC0E289}
259 \renewcommand{\VerbatimInsertBuffer}[1][]{%
260
           \begingroup
           \def\FV@KeyValues{#1}%
           \def\FV@Scan{%
262
263
               \FV@CatCodes
               \xdef\FV@EnvironName{Verbatim}%
264
               265
                    \PackageError{fvextra}%
266
                    {Buffer length counter \FV@bufferlengthname\space is invalid or zero}%
267
268
                      {}%
                    \let\FV@GetLine\relax
269
270
               \fi
271
               \FV@GetLine}%
           \let\FV@CheckScan\relax
273
           \setcounter{FancyVerbBufferIndex}{1}%
           \def\VerbatimInsertBuffer@def@FV@Line##1{%
274
                \FVExtraRetokenizeVArg{\def\FV@Line}{}{##1}%
275
                \LetLtxMacro\tmpb\FV@Line%
                                                                                         lwarn
276
               \I WR@HTML sanitize@tmpb%
                                                                                         lwarn
277
               \LetLtxMacro\FV@Line\tmpb%
278
                                                                                         lwarp
          }%
279
           \def\FancyVerbGetLine{%
280
                \ifnum\value{FancyVerbBufferIndex}>%
281
                         \expandafter\value\expandafter{\FV@bufferlengthname}\relax
282
283
                    \global\let\FV@EnvironName\relax
284
                    \let\next\relax
285
               \else
286
                \ifcsname \FancyVerbBufferLineName\arabic{FancyVerbBufferIndex}\endcsname
                         \expandafter\let\expandafter\FV@Line@Buffer
287
                      \csname\FancyVerbBufferLineName\arabic{FancyVerbBufferIndex}\endcsname
288
                   \expandafter\VerbatimInsertBuffer@def@FV@Line\expandafter{\FV@Line@Buffer}%
289
                         \def\next{\FV@PreProcessLine\FV@GetLine}%
290
291
                         \stepcounter{FancyVerbBufferIndex}%
                    \else
292
                         \def\next{%}
                             \PackageError{fvextra}%
294
295
                                {Buffer with line macro named
                         \verb|`FancyVerbBufferLineName\arabic{FancyVerbBufferIndex}|'' does not exist}|% \end{|} % A substitute of the property of the p
296
                          {Check bufferlinename, bufferlengthname, and globalbuffer settings}%
297
                        }%
298
                    \fi
299
               \fi
300
301
                \next}%
302
           \FVB@Verbatim
```

```
303
                     \FVE@Verbatim
                     \setcounter{FancyVerbBufferIndex}{0}%
                     \endgroup}
         File 204 lwarp-fwlw.sty
        Package fwlw
§313
       fwlw(Pkg) fwlw is ignored.
                  1 \LWR@ProvidesPackageDrop{fwlw}
for HTML output:
                  2 \newbox\FirstWordBox
                                            \global\setbox\FirstWordBox\hbox{}
                                            \global\setbox\NextWordBox\hbox{}
                  3 \newbox\NextWordBox
                  4 \newbox\LastWordBox
                                            \global\setbox\LastWordBox\hbox{}
                  5 \def\ps@fwlwhead{}
                  6 \def\ps@NextWordFoot{}
         File 205 lwarp-gensymb.sty
         Package gensymb
$314
                  (Emulates or patches code by Walter Schmidt.)
    gensymb(Pkg)
                  gensymb works as-is for svg math, and uses the MATHJAX package.
                  1 \LWR@ProvidesPackagePass{gensymb}[2003/07/02]
for HTML output:
                  2 \begin{warpMathJax}
                  3 \CustomizeMathJax{\require{gensymb}}
                  4\end{warpMathJax}
         File 206 lwarp-gentombow.sty
         Package gentombow
§315
  gentombow (Pkg)
                  gentombow is ignored.
                  1 \LWR@ProvidesPackageDrop{gentombow}[2018/05/17]
for HTML output:
                  2 \newcommand{\settombowbanner}[1]{}
                  3 \newcommand{\settombowbannerfont}[1]{}
                  4 \newcommand{\settombowwidth}[1]{}
                  5 \newcommand{\settombowbleed}[1]{}
                  6 \newcommand{\settombowcolor}[1]{}
         File 207 lwarp-geometry.sty
```

(Emulates or patches code by Hideo Umeki.)

Package **geometry**

\$316

geometry(Pkg)

geometry is preloaded by lwarp, but must be nullified as seen by the user's source code.

for HTML output:

Discard all options for lwarp-geometry:

```
1 \LWR@ProvidesPackageDropA{geometry}{2018/04/16}
```

If geometry is never loaded by the user, it will be loaded by lwarp \AtBeginDocument. If this is the case, the page layout should not be changed but the user macros should still be nullified.

```
{\tt 2 \ \ lowanothergeometry} \{ {\tt \%}
```

Assign and set the selected geometry with reset prepended. \AtEndPreamble lwarp will save this, then set its own geometry.

```
3 \edef\LWR@tempone{reset,\@ptionlist{\@currname.\@currext}}%
4 \expandafter\LWR@origgeometry\expandafter{\LWR@tempone}%
5 }{}% LWR@allowanothergeometry
```

The user-level commands are nullified:

```
6\renewcommand*{\geometry}[1]{}
7\renewcommand*{\newgeometry}[1]{}
8\renewcommand*{\restoregeometry}{}
9\renewcommand*{\savegeometry}[1]{}
10\renewcommand*{\loadgeometry}[1]{}
```

File 208 lwarp-ghsystem.sty

§317 Package

Package ghsystem

(Emulates or patches code by Clemens Niederberger.)

ghsystem (Pkg) ghsystem is patched for use by lwarp.

\frac{\lambda}{\lambda} \ghspic images

Images must be provided in svg format, unless JPG is specified. It is recommended to create a local images directory, copy into it the relevent PDF ghsystem images, and then convert them with

```
Enter ⇒ lwarpmk pdftosvg images/*.pdf
```

for HTML output:

```
1 \LWR@ProvidesPackagePass{ghsystem}[2020/02/17]
```

```
2 \ExplSyntaxOn
3
4 \VerifyCommand[lwarp][ghsystem]{\ghsystem_filler:n}{2B8CCE2EC0EC4AB8FA4C4E4A68FFCE70}
5
6 \cs_set_protected:Npn \ghsystem_filler:n #1
7 { \emph { \textless #1 \textgreater } }
8
9 \VerifyCommand[lwarp][ghsystem]{\ghsystem_pic:n}{950F001D9FCDAFF7A9154739DC8025BB}
10
11 \cs_set_protected:Npn \ghsystem_pic:n #1
12 {
13 \__ghsystem_includegraphics:xn
```

File 209 lwarp-gindex.sty

§318 Package gindex

(Emulates or patches code by Javier Bezos.)

gindex (Pkg) gindex is patched for use by lwarp.

See section 8.6.16.

for HTML output: 1 \LWR@ProvidesPackagePass{gindex}[2019/10/07]

Set the index page and range separators. These are set \AtBeginDocument to allow the user to change them. They are then protected so that the lwarp core looks for the tokens instead of their expanded contents, since the *.ind files will contain \indexpagessep and \indexrangesep instead of their literal contents. Finally, lwarp is told of the gindex macros.

```
2 \AtBeginDocument{
3  \robustify{\indexpagessep}
4  \robustify{\indexrangesep}
5  \renewcommand*{\IndexPageSeparator}{\indexpagessep}
6  \renewcommand*{\IndexRangeSeparator}{\indexrangesep}
7 }
```

```
8 \def\addindexitem#1#2{%
9 \indexflushitem
10 \gix@getspecial#1\indexspecial\indexspecial\@@\indexitem{\hyperindexref{#2}}}
11
12 \def\addindexsubitem#1#2{%
13 \stepcounter{indexsubitems}%
14 \gix@getspecial#1\indexspecial\indexspecial\@@\indexsubitem{\hyperindexref{#2}}}
15
16 \def\addindexsubsubitem#1#2{%
17 \gix@getspecial#1\indexspecial\indexspecial\@@\indexsubsubitem{\hyperindexref{#2}}}
```

Uses a <div> of class indexheading:

\hyperindexref is added:

```
18 \renewcommand\indexheading[1]{%
19 \begin{BlockClass}{indexheading}
20 \MakeUppercase{#1}%
21 \end{BlockClass}
22 }
```

File 210 lwarp-gloss.sty

Package gloss \$319

(Emulates or patches code by Jose Luis Díiaz, Javier Bezos.)

gloss (*Pkg*) gloss is patched for use by lwarp.

To process the HTML glossary:

```
bibtex ctname>_html.gls
```

for HTML output:

1 \LWR@ProvidesPackagePass{gloss}[2002/07/26]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
2 \VerifyCommand[lwarp][gloss]{\gls@gloss@iii}{96590CC8FAE12295596B9F664BE4AF8C}
4\xpatchcmd{\gls@gloss@iii}
    {\thepage}
5
    {\theLWR@previousautopagelabel}
6
    {\LWR@patcherror{gloss}{gls@gloss@iii}}
10 \VerifyCommand[lwarp][gloss]{\gls@page@i}{C05FCEACF0A1F96FC09A218684543574}
11
12 \def\gls@page@i#1#2{%
   \endgroup%
13
```

File 211 lwarp-glossaries.sty

§320

Package glossaries

(Emulates or patches code by NICOLA L.C. TALBOT.)

glossaries (Pkg) processing glossaries

GlossaryCmd(Opt)

Default: makeglossaries printglossary (Opt) [lwarpmk] htmlglossary (Opt) [lwarpmk] lwarpmk has the commands lwarpmk printglossary and lwarpmk htmlglossary, which process the glossaries created by the glossaries package using that package's makeglossaries program.

The shell command to execute is set by the lwarp option GlossaryCmd, which defaults to makeglossaries. The print or HTML glossary filename is appended to this command.

makeglossaries not

In some situations it may be required to modify the default command, such as to add the **perl** command in front:

```
\usepackage[
   GlossaryCmd={perl makeglossaries},
] {lwarp}
```

xindy language To set the language to use for processing glossaries with *xindy*:

```
\usepackage[
   GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for makeglossaries may be set as well.

placement and Toc options

The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
...
\printglossaries
```

Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

The default style=item option for glossaries conflicts with lwarp, so the style is forced to index instead.

The page number list in the printed form would become \namerefs in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions

The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

for HTML output:

```
1 \PassOptionsToPackage{xindy}{glossaries}
2
3 \LWR@ProvidesPackagePass{glossaries}[2018/07/23]
4
5 \setupglossaries{nonumberlist}
6 \setglossarystyle{index}
```

Patched to fix Toc pointing to the previous page:

```
7 \VerifyCommand[warp][glossaries]{\@p@glossarysection}{129DC9CFB9484FC34C7B81E32BBB0452}
8
9 \renewcommand*{\@p@glossarysection}[2]{%
10 \glsclearpage
11 \LWR@phantomsection
12 \ifdefempty\@@glossarysecstar
13 {%
14 \csname\@@glossarysec\endcsname{#2}%
15 }%
16 {%
```

In the original, the ToC entry was made before the section, thus linking to the phantomsection in the printed version, but for HTML, this caused the link to point

to the page before the glossaries, which could be a different HTML file. Here, the TOC entry is made after the section is created:

```
17 \csname\@@glossarysec\endcsname*{#2}%
18 \@gls@toc{#1}{\@@glossarysec}% Moved after the previous line.
19 }%
20 \@@glossaryseclabel
21}
```

lwarp's sectioning commands cannot handle robust macros when splitting HTML into named filenames. glossaries uses \translate in sectioning names, and \translate is robust and cannot be expanded. The following pre-expands the translations at this moment, making use of \translatelet.

```
{\tt 22 \ large} {\tt LWR@comp@glossaryname} \{ \tt LWR@comp@glossaryname \} \{ \tt large \{ Glossary \} \} \} 
\translatelet\LWR@translatetemp{Glossary}
26
      \edef\glossaryname{\LWR@translatetemp}
27 }{}
29 \newcommand*{\LWR@comp@acronymname}{\translate{Acronym}}}
31 \ifdefstrequal{\acronymname}{\LWR@comp@acronymname}{
      \translatelet\LWR@translatetemp{Acronym}
33
      \edef\acronymname{\LWR@translatetemp}
34 }{}
35
36\newcommand*{\LWR@comp@glssymbolsgroupname}{\translate{Symbols (glossaries)}}
37
38 \ifdefstrequal{\glssymbolsgroupname}{\LWR@comp@glssymbolsgroupname}{
      \translatelet\LWR@translatetemp{Symbols (glossaries)}
40
      \edef\glssymbolsgroupname{\LWR@translatetemp}
41 }{}
42
43 \newcommand*{\LWR@comp@glsnumbersgroupname}{\translate{Numbers (glossaries)}}
45 \ifdefstrequal{\glsnumbersgroupname}{\LWR@comp@glsnumbersgroupname}{
      \translatelet\LWR@translatetemp{Numbers (glossaries)}
47
      \edef\glsnumbersgroupname{\LWR@translatetemp}
48 }{}
```

File 212 lwarp-gmeometric.sty

```
§321 Package gmeometric
```

```
gmeometric (Pkg) gmeometric is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]
2 \RequirePackageWithOptions{geometry}
```

File 213 lwarp-graphics.sty

§ 322 Package graphics

(Emulates or patches code by D. P. CARLISLE.)

graphics (*Pkg*) graphics is emulated.

for HTML output: 1 \LWR@ProvidesPackagePass{graphics}[2020/08/30]

§ 322.1 Graphics extensions

\DeclareGraphicsExtensions $\{\langle list \rangle\}$

\AtBeginDocument allow svg files instead of PDF:

```
2 \AtBeginDocument{
3 \DeclareGraphicsExtensions{.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
4 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
5 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
6 }
```

Inside a lateximage, allow PDF instead of svg:

```
7\ifpdf
8\appto\LWR@restoreorigformatting{%
9\DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
10}
11\else% \ifpdf
12 \ifXeTeX
13\appto\LWR@restoreorigformatting{%
14\DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
15}
16 \else
17\appto\LWR@restoreorigformatting{%
18\DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
19}
20 \fi
21\fi
```

§ 322.2 Length conversions and graphics options

★ whitespace

A scaled image in LATEX by default takes only as much space on the page as it requires, but HTML browsers use as much space as the original unscaled image would have taken, with the scaled image over- or under-flowing the area.

Used to store the user's selected dimensions and HTML class.

The class defaults to "inlineimage" unless changed by a class=xyx option.

```
22 \newlength{\LWR@igwidth}
23 \newlength{\LWR@igheight}
24 \newcommand*{\LWR@igwidthstyle}{}
25 \newcommand*{\LWR@igheightstyle}{}
26 \newcommand*{\LWR@igorigin}{}
```

```
27 \newcommand*{\LWR@igangle}{}
28 \newcommand*{\LWR@igxscale}{1}
29 \newcommand*{\LWR@igyscale}{1}
30
31 \newbool{LWR@igkeepaspectratio}
32 \boolfalse{LWR@igkeepaspectratio}
33
34 \newcommand*{\LWR@igclass}{inlineimage}

35 \newcommand*{\LWR@igalt}{\ImageAltText}

Set the actions of each of the key/value combinations for \includegraphics. Many are ignored.

If an optional width was given, set an HTML style:

36 \define@key{igraph}{width}{%
37 \setlength{\LWR@igwidth}{#1}%
38 \ifthenelse{\lengthtest{\LWR@igwidth} > 0pt}}%
39 {%
```

Default to use the converted fixed length given:

10 \renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%

If ex or em dimensions were given, use those instead:

```
\IfEndWith{#1}{ex}%
42
      {\renewcommand*{\LWR@igwidthstyle}{width:#1}}% yes ex
43
      {}% not ex
44
      \IfEndWith{#1}{em}%
      {\tt \{\normand*{\tt LWR@igwidthstyle}\{width:\#1\}\}\% \ yes \ em}
45
46
      {}% not em
      \IfEndWith{#1}{\%}%
47
      {\tt \{\normand*{\tt LWR@igwidthstyle}\{width:\#1\}}\% \ yes \ percent}
48
      {}% not percent
49
50
      \IfEndWith{#1}{px}%
      {\renewcommand*{\LWR@igwidthstyle}{width:#1}}% yes px
      {}% not px
53 }{}% end of length > 0pt
54 }
```

If an optional height was given, set an нтмL style:

```
55 \define@key{igraph}{height}{%
56 \setlength{\LWR@igheight}{#1}%
57 \ifthenelse{\lengthtest{\LWR@igheight > 0pt}}%
58 {%
```

Default to use the converted fixed length given:

```
59 \renewcommand*{\LWR@igheightstyle}{%
60 height:\LWR@printlength{\LWR@igheight} % extra space
61 }%
```

If ex or em dimensions were given, use those instead:

```
62 \IfEndWith{#1}{ex}%
```

```
63
      {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes ex
64
      \IfEndWith{#1}{em}%
65
66
      {\tt \{\normand*{\tt LWR@igheightstyle}\{height:\#1\}\}\% \ yes \ em}
67
      {}% not em
68
      \IfEndWith{#1}{\%}%
      {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes percent
69
      {}% not percent
70
      \IfEndWith{#1}{px}%
71
      {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes px
72
      {}% not px
73
74 }{}% end of length > 0pt
75 }
Handle keepaspectratio key:
76 \define@key{igraph}{keepaspectratio}[false]{%
      \booltrue{LWR@igkeepaspectratio}%
78 }
Handle origin key:
79 \define@key{igraph}{origin}[c]{%
      \renewcommand*{\LWR@igorigin}{#1}%
81 }
Handle angle key:
82 \define@key{igraph}{angle}{\renewcommand*{\LWR@igangle}{#1}}
Handle class key:
83 \define@key{igraph}{class}{\renewcommand*{\LWR@igclass}{#1}}
Handle alt key:
84 \define@key{igraph}{alt}{\renewcommand*{\LWR@igalt}{#1}}
It appears that graphicx does not have separate keys for xscale and yscale. scale
adjusts both at the same time.
85 \define@key{igraph}{scale}{%
      \left\{ \frac{\#1}{1} \right\}  must expand #1
87
          \PackageNote{lwarp}{%
          It is recommended to use ''[width=xx\protect\linewidth]''\MessageBreak
88
              instead of ''[scale=yy]'',%
89
90
      }%
91
      \renewcommand*{\LWR@igxscale}{#1}%
92
93
      \renewcommand*{\LWR@igyscale}{#1}%
94 }
Numerous ignored keys:
95 \define@key{igraph}{bb}{}
96 \define@key{igraph}{bbllx}{}
97 \define@key{igraph}{bblly}{}
98 \displaystyle \define@key{igraph}{bburx}{}
```

```
99 \define@key{igraph}{bbury}{}
        100 \define@key{igraph}{natwidth}{}
        101 \define@key{igraph}{natheight}{}
        102 \define@key{igraph}{hiresbb}[true]{}
        103 \define@key{igraph}{viewport}{}
        104 \define@key{igraph}{trim}{}
        105 \define@key{igraph}{totalheight}{}
        106 \define@key{igraph}{clip}[true]{}
        {\tt 107 \backslash define@key\{igraph\}\{draft\}[true]\{\}}
        108 \define@key{igraph}{type}{}
        109 \define@key{igraph}{ext}{}
        110 \define@key{igraph}{read}{}
        111 \define@key{igraph}{command}{}
         New in v1.1a:
        112 \define@key{igraph}{quite}{}
        113 \define@key{igraph}{page}{}
        114 \define@key{igraph}{pagebox}{}
        115 \define@key{igraph}{interpolate}[true]{}
         New in v1.1b:
        116 \define@key{igraph}{decodearray}{}
§ 322.3 Printing HTML styles
           \{\langle prefix \rangle\} \{\langle degrees \rangle\}
         Prints the rotate style with the given prefix.
         prefix is -ms- or -webkit- or nothing, and is used to generate three versions of
          the transform: rotate style.
        117 \newcommand*{\LWR@rotstyle}[2]{%
               \edef\LWR@tempone{#2}%
                \setcounter{LWR@tempcountone}{-1*\real{\LWR@tempone}} % space
        119
               #1transform:rotate(\arabic{LWR@tempcountone}deg); % space
        120
           \{\langle prefix \rangle\} \{\langle xscale \rangle\} \{\langle yscale \rangle\}
         Prints the scale style with the given prefix.
         prefix is -ms- or -webkit- or nothing, and is used to generate three versions of
         the transform: scale style.
        122 \newcommand*{\LWR@scalestyle}[3]{%
               #1transform:scale(#2,#3);
        124 }
```

\LWR@rotstyle

\LWR@scalestyle

§322.4 \includegraphics

\LWR@opacity

For HTML, used only for \includegraphics.

\LWR@opacity may be set by the transparent package.

```
125 \def\LWR@opacity{1}
```

\LWR@imagesizebox

Used to determine the actual image size if needed.

```
126 \newsavebox{\LWR@imagesizebox}
```

\LWR@HTML@Gin@setfile

```
\{\langle w \rangle\} \{\langle h \rangle\} \{\langle filename \rangle\} Sets the parsed filename for HTML output.
```

```
127 \newcommand*{\LWR@HTML@Gin@setfile}[3]{%
128 \xdef\LWR@parsedfilename{#3}%
129 }
```

class (Key) [Gin] CSS class for the image.

Define the new class key for the print-mode version of \includegraphics, which is enabled inside a lateximage.

```
130 \AtBeginDocument{
131 \define@key{Gin}{class}{}
132 }
```

\LWR@replaceEPSSVG

Usually, references to EPS files become SVG files, but if the epstopdf package is being used, it automatically converts EPS to PDF, and the following must NOT be done.

```
133 \AtBeginDocument{
134 \IfPackageLoadedTF{epstopdf}
135 {
136
     \newcommand*{\LWR@replaceEPSSVG}{}
137 }{%
     \newcommand*{\LWR@replaceEPSSVG}{%
138
         \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]%
139
         140
     }
141
142 }%
143 }
```

* $[\langle 2: options \rangle]$ $[\langle 3: options \rangle]$ $\{\langle 4: filename \rangle\}$

\LWR@ig@useactualimagesize

If formatting for a word processor, find and set the actual image size, without rotation, using PDF instead of svG to find the original bounding box:

```
145
     \begingroup%
      \LWR@restoreorigformatting%
146
     \ifpdf%
147
      \appto\LWR@restoreorigformatting{%
148
         \DeclareGraphicsExtensions{%
149
             .pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
150
         }%
151
     }%
152
     \else% \ifpdf
153
            \ifXeTeX%
```

```
155
                  \appto\LWR@restoreorigformatting{%
                             \DeclareGraphicsExtensions{%
156
                                          .pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
157
158
                             }%
159
                  }%
160
                                         \else%
                  \verb|\appto| LWR@restoreorigformatting{%| Constraints of the constraint
161
                             \DeclareGraphicsExtensions{%
162
                                         .eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
163
                             }%
164
                  }%
165
166
                                         \fi%
167
                  \fi% \ifpdf
   For a word processor, do not use rotation:
                  168
                  \IfBooleanTF{#1}%
169
                  {% starred
170
                             \IfValueTF{#3}%
171
                             {%
172
                                         \global\sbox{\LWR@imagesizebox}{%
173
                                                    \LWR@origincludegraphics*[#2][#3]{#4}%
174
175
                                         }%
176
                             }%
177
                             {%
                                         \IfValueTF{#2}%
178
179
                                         {%
                                                     \global\sbox{\LWR@imagesizebox}{%
180
                                                               \LWR@origincludegraphics*[#2]{#4}%
181
                                                    }%
182
                                         }{%
183
                                                    \global\sbox{\LWR@imagesizebox}{%
184
                                                               \LWR@origincludegraphics*{#4}%
185
186
                                                    }%
187
                                         }%
                             }%
188
                  }% starred
189
                  {% not starred
190
                             \IfValueTF{#3}%
191
                             {%
192
                                         \global\sbox{\LWR@imagesizebox}{%
193
                                                    \LWR@origincludegraphics[#2][#3]{#4}%
194
                                         }%
195
196
                             }%
197
                             {%
                                         \IfValueTF{#2}%
198
199
                                         {%
                                                    \global\sbox{\LWR@imagesizebox}{%
200
                                                               \LWR@origincludegraphics[#2]{#4}%
201
                                                    }%
202
                                        }{%
203
                                                    \global\sbox{\LWR@imagesizebox}{%
204
                                                               \LWR@origincludegraphics{#4}%
205
                                                    }%
206
207
                                         }%
208
                             }%
                  }% not starred
209
                   \endgroup%
210
                  \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
211
```

```
212 \global\renewcommand*{\LWR@igwidthstyle}{%
213     width:\LWR@printlength{\LWR@igwidth}%
214  }%
215 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
216 \global\renewcommand*{\LWR@igheightstyle}{%
217     height:\LWR@printlength{\LWR@igheight}%
218  }%
219}
```

\LWR@ig@htmltag

For the HTML reference, add the graphicspath, filename, extension, alt tag, style, and class.

```
220 \newcommand*{\LWR@ig@htmltag}{%
221    img\LWR@indentHTML%
222    src=\textquotedbl%

223    \detokenize\expandafter{\LWR@parsedfilename}%
224    \textquotedbl\LWR@indentHTML%
```

Only include a style tag if a width, height, angle, or scale was given:

```
225
       \ifthenelse{
           \NOT\equal{\LWR@igwidthstyle}{} \OR
226
           \NOT\equal{\LWR@igheightstyle}{} \OR
           \NOT\equal{\LWR@igorigin}{} \OR
229
           \NOT\equal{\LWR@igangle}{} \OR
230
           \NOT\equal{\LWR@igxscale}{1} \OR
           \NOT\equal{\LWR@igyscale}{1}
231
       }%
232
       {%
233
           style=\textquotedbl\LWR@indentHTML
234
           \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{}}%
235
               {\LWR@igwidthstyle;\LWR@indentHTML}{}%
236
           \ \left(\LWR@igheightstyle\right)
238
               {\LWR@igheightstyle;\LWR@indentHTML}{}%
239
           \ifthenelse{\NOT\equal{\LWR@igorigin}{}}%
240
               {%
                    transform-origin: \LWR@originnames{\LWR@igorigin};%
241
                    \verb|\LWR@indentHTML%||
242
               }{}%
243
           \ifthenelse{\NOT\equal{\LWR@igangle}{}}%
244
245
               \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
246
               \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
247
               \LWR@rotstyle{}{\LWR@igangle }\LWR@indentHTML
248
           }{}%
249
           \ifthenelse{%
250
251
               \NOT\equal{\LWR@igxscale}{1}\OR%
                \label{local} $$ NOT \rightarrow {LWR@igyscale}_{1}% $$
252
           }%
253
           {%
254
                \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}%
255
               \LWR@indentHTML
256
               \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}%
257
258
               \LWR@indentHTML
               \LWR@scalestyle{}{\LWR@igxscale}{\LWR@igyscale}%
259
               \LWR@indentHTML
260
261
           }{}%
262
           \left(\NOT\left(\LWR@opacity\right)_{1}\right)
263
```

\LWR@includegraphicsb

294

{\setkeys{igraph}{#2}}%

```
264
                {opacity:\LWR@opacity;\LWR@indentHTML}{}%
           %
265
           \textquotedbl\LWR@indentHTML%
266
       }{}%
267
 Set the class and alt tag:
       class=\textquotedbl\LWR@igclass\textquotedbl\LWR@indentHTML%
268
     alt=\textquotedbl\AltTextOpen\LWR@igalt\AltTextClose\textquotedbl\ \LWR@orignewline%
270}% end of image tags
  * [\langle 2: options \rangle] [\langle 3: options \rangle] \{\langle 4: filename \rangle\}
 graphics syntax is \includegraphics * [\langle llx, lly \rangle] [\langle urx, ury \rangle] {\langle filename \rangle}
 graphicx syntax is \includegraphics [\langle key values \rangle] {\langle filename \rangle}
 If #3 is empty, only one optional argument was given, thus graphicx syntax.
 If using \epsfig or \psfig from the epsfig package, #4 will be \LWR@epsfig@filename,
 which will have been set by the file or figure keys. Therefore, #4 must not be
 used until after the keys have been processed.
271 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
272 {%
 Start the image tag on a new line, allow PDF output word wrap:
273
       \LWR@orignobreakspace \LWR@orignewline%
 Temporarily compute \linewidth, \textwidth, \textheight arguments with a
 6x9 inch size until the next \endgroup.
       \begin{LWR@setvirtualpage}%
 For correct em sizing during the width and height conversions:
275
       \large%
 Temporarily prevent underfull \hbox warnings.
       \hbadness=10000\relax%
 Reset some defaults, possibly will be changed below if options were given:
       277
       \setlength{\LWR@igheight}{0pt}%
278
279
       \renewcommand*{\LWR@igwidthstyle}{}%
       \renewcommand*{\LWR@igheightstyle}{}%
280
       \renewcommand*{\LWR@igorigin}{}%
281
       \renewcommand*{\LWR@igangle}{}%
282
283
       \renewcommand*{\LWR@igxscale}{1}%
284
       \renewcommand*{\LWR@igyscale}{1}%
       \renewcommand*{\LWR@igclass}{inlineimage}%
285
       \boolfalse{LWR@igkeepaspectratio}%
286
       \ifdefvoid{\LWR@ThisAltText}{%
287
288
           \edef\LWR@igalt{\ImageAltText}%
289
       }{%
           \edef\LWR@igalt{\LWR@ThisAltText}%
290
       }%
291
 If #3 is empty, only one optional argument was given, thus graphicx syntax:
       \IfValueF{#3}{%
292
           \IfValueTF{#2}%
293
```

Fully expand and detokenize the filename, changing the file extension to .svg if necessary.

Note that uppercase file extensions are detected and reported as lowercase, so lwarp can only report to the browser lowercase extensions, so all images must have lowercase file extensions.

```
297 \begingroup%
298 \LetLtxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
299 \edef\LWR@tempone{#4}%
```

PDF extensions are removed to allow a search for another graphics format such as SVG or PNG.

```
300 \StrSubstitute{\LWR@tempone}{.pdf}{}[\LWR@tempone]%
301 \StrSubstitute{\LWR@tempone}{.PDF}{}[\LWR@tempone]%
302 \LWR@replaceEPSSVG%
303 \xdef\LWR@parsedfilename{\LWR@tempone}%
304 \Ginclude@graphics{\detokenize\expandafter{\LWR@parsedfilename}}%
305 \endgroup%
306 \filename@parse{\LWR@parsedfilename}%
```

Remove doubled // in the directory path, from the 2020/10/01 LATEX kernel change.

```
307 \StrSubstitute{\LWR@parsedfilename}{//}{/}[\LWR@parsedfilename]%
308 \LWR@traceinfo{LWR@parsedfilename is \LWR@parsedfilename}%
```

If formatting for a word processor, or if using keepaspectratio, find and set the actual image size, without rotation, using PDF instead of svG to find the original bounding box:

```
309 \ifboolexpr{
310    bool {FormatWP} or
311    bool {LWR@igkeepaspectratio}
312 }{\LWR@ig@useactualimagesize{#1}{#2}{#3}{#4}}{}
```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class:

Return to original page size and font size:

```
320 \end{LWR@setvirtualpage}%
```

Clear the single-use alt text:

```
321 \gdef\LWR@ThisAltText{}%
322 \LWR@traceinfo{LWR@includegraphicsb done}%
323 }
```

```
\includegraphics [\langle key=val \rangle] \{\langle filename \rangle\}
```

Handles width and height, converted to fixed width and heights.

The user should always use no file suffix in the document source.

```
324 \AtBeginDocument{
       326 \LWR@traceinfo{Patching includegraphics.}
       328 \LetLtxMacro\LWR@origincludegraphics\includegraphics
       329 \renewrobustcmd*{\includegraphics}
       330 {%
         This graphic should trigger an HTML paragraph even if alone, so ensure that are
         doing paragraph handling:
       331 \LWR@traceinfo{includegraphics}%
       332 \LWR@ensuredoingapar%
       333 \LWR@includegraphicsb%
       334 }% includegraphics
       335 }% AtBeginDocument
§ 322.5 Boxes
          Holds the origin key letters.
       336 \newcommand*{\LWR@rotboxorigin}{}
          \{\langle letter \rangle\}
         Given one LATEX origin key value, translate into an HTML origin word:
       337 \newcommand*{\LWR@originname}[1]{%
              \left\{ \frac{\#1}{t}\right\} 
       338
              \left\{ \begin{array}{l} \left( \#1 \right) & \\ \end{array} \right.
       339
              340
       341
              \left\{ \frac{\#1}{l} \right\} 
       342
              \left\{ \frac{\#1}{r}\right\} 
       343 }
          \{\langle letters \rangle\}
         Given one- or two-letter LATEX origin key values, translate into HTML origin words:
       344 \newcommand*{\LWR@originnames}[1]{%
       345 \StrChar{#1}{1}[\LWR@strresult]%
       346 \LWR@originname{\LWR@strresult}
       347 \StrChar{#1}{2}[\LWR@strresult]%
       348 \LWR@originname{\LWR@strresult}
       349 }
         Handle the origin key for \rotatebox:
       350 \define@key{krotbox}{origin}{%
       351 \renewcommand*{\LWR@rotboxorigin}{#1}%
       352 }
         These keys are ignored:
       353 \define@key{krotbox}{x}{}
       354 \define@key{krotbox}{y}{}
```

355 \define@key{krotbox}{units}{}

\LWR@rotboxorigin

\LWR@originname

\LWR@originnames

```
\rotatebox [\langle keyval \ list \rangle] \{\langle angle \rangle\} \{\langle text \rangle\}
          356 \AtBeginDocument{
            The HTML version:
          357 \NewDocumentCommand{\LWR@HTML@rotatebox}{O{} m +m}{%
            Reset the origin to "none-given":
          358 \renewcommand*{\LWR@rotboxorigin}{}
            Process the optional keys, which may set \LWR@rotateboxorigin:
          359 \setkeys{krotbox}{#1}%
            Select inline-block so that \mbox{\sc html} will transform this span:
          360 \LWR@htmltagc{%
                 span\LWR@indentHTML
          361
                 \verb|style=\textquotedbl\LWR@indentHTML| \\
          362
                 display: inline-block;\LWR@indentHTML
          363
            If an origin was given, translate and print the origin information:
          364
                 \left(\LWR@rotboxorigin)_{}\right)
                   {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
          365
          366
                      {}%
            Print the rotation information:
          367
                  \LWR@rotstyle{-ms-}{#2}\LWR@indentHTML
                 \LWR@rotstyle{-webkit-}{#2}\LWR@indentHTML
                 \label{local-continuity} $$ \LWR@rotstyle{}{\#2}\times \cline{Continuity} $$
          370 }\LWR@orignewline%
            Print the text to be rotated:
          371 \begin{LWR@nestspan}%
          372 #3%
            Close the span:
          373 \LWR@htmltagc{/span}%
          374 \end{LWR@nestspan}%
          375 }
            The high-level interface:
          376 \LWR@formatted{rotatebox}
          378}% AtBeginDocument
 379 \AtBeginDocument{
```

The HTML version:

```
380 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
           Select inline-block so that HTML will transform this span:
         381 \LWR@htmltagc{%
                span\LWR@indentHTML
         382
         383
                style=\textquotedbl\LWR@indentHTML
                display: inline-block;\LWR@indentHTML
         384
           Print the scaling information:
                385
         386
                387
                \textquotedbl\LWR@orignewline
         388
         389 }\LWR@orignewline%
           Print the text to be scaled:
         390 \begin{LWR@nestspan}%
         391 #3%
           Close the span:
         392 \LWR@htmltagc{/span}%
         393 \end{LWR@nestspan}%
         394 }
           The high-level interface:
         395 \LWR@formatted{scalebox}
         397}% AtBeginDocument
\reflectbox \{\langle text \rangle\}
         398 \AtBeginDocument{
         400 \newcommand{\LWR@HTML@reflectbox}[1]{%
                \c = 1 [1]{#1}%
         402}% \reflectbox
         404 \LWR@formatted{reflectbox}
         406}% AtBeginDocument
\resizebox \{\langle h\text{-}length\rangle\} \{\langle v\text{-}length\rangle\} \{\langle text\rangle\}
           Simply prints its text argument.
         407 \AtBeginDocument{
         409 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
         410
         411 }
```

412

413 \LWR@formatted{resizebox}

414

415 }% AtBeginDocument

File 214 lwarp-graphicx.sty

§323 Package graphicx

graphicx (Pkg) graphicx is emulated.

graphicx loads graphics, which also loads lwarp-graphics, which remembers the original graphics definitions for use inside a lateximage, and then patches them \AtBeginDocument for HTML output.

lwarp-graphics handles the syntax of either graphics or graphicx.

for HTML output: 1 \LWR@ProvidesPackagePass{graphicx}[2020/09/09]

File 215 lwarp-grffile.sty

§324 Package grffile

grffile (Pkg)

matching PDF and svG

§325

grffile is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an svg, PNG, or JPG version for HTML.

lwarp-grffile now exists as a placeholder since grffile used to be emulated by lwarp, and thus older versions of lwarp-grffile may exist and should be overwritten by this newer version.

for HTML output: 1 \LWR@ProvidesPackagePass{grffile}[2017/06/30]

File 216 lwarp-grid.sty

Package **grid**

grid (*Pkg*) grid is ignored.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \land \texttt{LWR@ProvidesPackageDrop\{grid\}[2009/06/16]} \\ \end{tabular}$

2 \newenvironment*{gridenv}{}{}

File 217 lwarp-grid-system.sty

§ 326 Package grid-system

(Emulates or patches code by MARCUS BITZL.)

```
grid-system(Pkg)
                  grid-system is patched for use by lwarp.
for HTML output:
                  1 \LWR@ProvidesPackagePass{grid-system}[2014/02/16]
                  (\ifdef is in case the older syntax is removed.)
                  \label{linewidth} $$2 \Lambda EginEnvironment{Row}_{\setlength{\linewidth}{6in}}$
                  4\ifdef{\endrow}{
                       \AtBeginEnvironment{row}{\setlength{\linewidth}{6in}}
                  6 }{}
                  File 218 lwarp-gridset.sty
         Package gridset
§327
    gridset (Pkg) gridset is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{gridset}[2020-02-12]
                  2 \newcommand*{\gridbase}{}
                  3 \newcommand*{\gridinterval}{}
                  4 \newcommand*{\SavePos}[1]{}
                  5\ifLuaTeX
                  6\else
                  7 \let\savepos\SavePos
                  8∖fi
                  9 \newcommand*{\vskipnextgrid}{}
                  10 \newcommand*{\thegridinfo}[1]{(thegridinfo)}
                  11 \newcommand*{\theposinfo}[1]{(theposinfo)}
                  12 \newcommand*{\theypos}[1]{(theypos)}
         File 219 lwarp-hang.sty
         Package hang
§ 328
                  (Emulates or patches code by Andreas Nolda.)
       hang (Pkg) hang is emulated.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{hang}[2017/02/18]
                  2 \newlength{\hangingindent}
                  3\setlength{\hangingindent}{1em}
                  4\newlength{\hangingleftmargin}
                  5\setlength{\hangingleftmargin}{0em}
                  7 \newcommand*{\LWR@findhangingleftmargin}{%
                  8\setlength{\LWR@templengthone}{\hangingleftmargin}%
                  9 \addtolength{\LWR@templengthone}{\hangingindent}%
```

10 }

```
12 \newenvironment{hangingpar}
13 {
               \LWR@findhangingleftmargin%
15
               \BlockClass[%
                      \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}}; %
16
                         \LWR@print@mbox{text-indent:-\LWR@printlength{\hangingindent}}%
17
               1%
18
               {hangingpar}%
19
20 }
21 {\endBlockClass}
23 \newenvironment{hanginglist}
24 {%
                \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}%
25
                \renewcommand*{\LWR@printopenlist}{%
26
                         \verb|\LWR@findhangingleftmargin||% \label{lem:local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
27
                         ul % space
28
29
                         {\tt class=\textquotedbl{} hanging\textquotedbl{} \% \ space}
                         style=\textquotedbl%
30
31
                                   \LWR@print@mbox{list-style-type:none;} % extra space
32
                                   \LWR@print@mbox{%
33
                                             margin-left:\LWR@printlength{\LWR@templengthone}%
                                   } ; % extra space
35
                                   \LWR@print@mbox{%
                                              text-indent:-\LWR@printlength{\hangingindent}%
36
                                   }%
37
                          \textquotedbl%
38
               }%
39
                \LetLtxMacro\item\LWR@itemizeitem%
40
41
               \list{}{}%
42 }
43{\endlist}
45 \newenvironment{compacthang}
46 {\hanginglist}
47 {\endhanginglist}
49 \newlength{\labeledleftmargin}
50 \setlength{\labeledleftmargin}{0em}
52 \newenvironment{labeledpar}[2]
53 {%
54
               \BlockClass[%
55
                         \LWR@findhangingleftmargin%
56
                      \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}}; %
57
                          \label{lem:lembox} $$ LWR@printlength{\hangingindent}} % $$ LWR@printlength{\hangingindent}$
58
               ]{labeledpar}%
               \InlineClass{labeledparlabel}{#2}%
59
60 }
61 {\endBlockClass}
63 \newenvironment{labeledlist}[1]
64 {\hanginglist}
65 {\endhanginglist}
67 \newenvironment{compactlabel}[1]
68 {\hanginglist}
69 {\endhanginglist}
```

File 220 lwarp-hanging.sty

```
Package hanging
            §329
                                hanging is emulated.
                 hanging(Pkg)
             for HTML output:
                                 1 \LWR@ProvidesPackageDrop{hanging}[2009/09/02]
                                 2 \IfClassLoadedTF{memoir}{
                                 3 \let\hangpara\relax
                                 4 \let\hangparas\relax
                                 5 \let\endhangparas\relax
                                 6 \let\hangpunct\relax
                                 7 \let\endhangpunct\relax
                                 8 }{}
                                  \{\langle indent \rangle\} \{\langle afternum \rangle\}
  \hangpara
                                 Use hangparas instead.
                                 9 \newcommand*{\hangpara}[2]{}
                                  \{\langle indent \rangle\} \{\langle afternum \rangle\}
    hangparas
Env
                                10 \newenvironment*{hangparas}[2]
                                11 {%
                                12
                                       \BlockClass[%
                                13
                                           \LWR@print@mbox{margin-left:\LWR@printlength{#1}}; %
                                14
                                           \LWR@print@mbox{text-indent:-\LWR@printlength{#1}}%
                                15
                                16
                                       {hangingpar}%
                                17 }
                                18 {\endBlockClass}
    hangpunct
Env
                                19 \newenvironment*{hangpunct}
                                20 {\BlockClass{hangpunct}}
                                21 {\endBlockClass}
                                22 \newcommand{\nhpt}{.}
                                23 \newcommand{\nhlq}{'}
                                24 \newcommand{\nhrq}{'}
                       File 221 lwarp-hepunits.sty
```

§330 Package hepunits

($Emulates\ or\ patches\ code\ by\ Andy\ Buckley.$)

hepunits (*Pkg*) hepunits is used as-is, and emulated for MATHJAX.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \texttt{\LWR@ProvidesPackagePass\{hepunits\}[2020/04/10]} \\ \end{tabular}$

```
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{hepunits}
5\ifx\@HEPopt@sicmds\@yes
6 \CustomizeMathJax{\newcommand{\micron}{\micro\metre}}
7 \CustomizeMathJax{\newcommand{\mrad}{\milli\radian}}
10 \CustomizeMathJax{\newcommand{\gauss}{\mathrm{G}}}
13 \CustomizeMathJax{\newcommand{\invcmsqpersecond}{\invcmsq\second\tothe{-1}}}
14 \CustomizeMathJax{\newcommand{\invcmsqpersec}{\invcmsqpersecond}}
16 %% (Inverse) cross-sections
17 \CustomizeMathJax{\newcommand{\invbarn}{\barn\tothe{-1}}}
19 \ifx\@HEPopt@noprefixcmds\@empty
20 \CustomizeMathJax{\newcommand{\millibarn}{\milli\barn}}
{\tt 21 \CustomizeMathJax{\newcommand{\microbarn}{\microbarn}}}
22 \CustomizeMathJax{\newcommand{\nanobarn}{\nano\barn}}
23 \CustomizeMathJax{\newcommand{\picobarn}{\pico\barn}}
{\tt 24 \CustomizeMathJax{\newcommand{\femtobarn}{\femtobarn}}}
25 \CustomizeMathJax{\newcommand{\attobarn}{\atto\barn}}
26 \CustomizeMathJax{\newcommand{\zeptobarn}{\zepto\barn}}
27 \CustomizeMathJax{\newcommand{\yoctobarn}{\yocto\barn}}
28 \CustomizeMathJax{\newcommand{\invnanobarn}{\nano\invbarn}}
29 \CustomizeMathJax{\newcommand{\invpicobarn}{\pico\invbarn}}
30 \CustomizeMathJax{\newcommand{\invfemtobarn}{\femto\invbarn}}
31 \CustomizeMathJax{\newcommand{\invattobarn}{\atto\invbarn}}
32 \CustomizeMathJax{\newcommand{\invzeptobarn}{\zepto\invbarn}}
33 \CustomizeMathJax{\newcommand{\invyoctobarn}{\yocto\invbarn}}
34 \CustomizeMathJax{\newcommand{\invnb}{\invnanobarn}}
35 \CustomizeMathJax{\newcommand{\invpb}{\invpicobarn}}
36 \CustomizeMathJax{\newcommand{\invfb}{\invfemtobarn}}
37 \CustomizeMathJax{\newcommand{\invab}{\invattobarn}}
38 \CustomizeMathJax{\newcommand{\invzb}{\invzeptobarn}}
39 \CustomizeMathJax{\newcommand{\invyb}{\invyoctobarn}}
40 \fi
41
44 \CustomizeMathJax{\let\eVc\electronvoltc}
45 \CustomizeMathJax{\let\eVcsq\electronvoltcsq}
47\ifx\@HEPopt@noprefixcmds\@empty
48 \CustomizeMathJax{\newcommand{\meV}{\milli\eV}}
49 \CustomizeMathJax{\newcommand{\keV}{\kilo\eV}}
50 \CustomizeMathJax{\newcommand{\MeV}{\mega\eV}}
51 \CustomizeMathJax{\newcommand{\GeV}{\giga\eV}}
52 \CustomizeMathJax{\newcommand{\TeV}{\tera\eV}}
\label{lem:command} $$ \customizeMathJax{\newcommand{\meVc}{\milli\eVc}} $$
54 \CustomizeMathJax{\newcommand{\keVc}{\kilo\eVc}}
55 \CustomizeMathJax{\newcommand{\MeVc}{\mega\eVc}}
56 \CustomizeMathJax{\newcommand{\GeVc}{\giga\eVc}}
57 \CustomizeMathJax{\newcommand{\TeVc}{\tera\eVc}}
58 \CustomizeMathJax{\newcommand{\meVcsq}{\milli\eVcsq}}
59 \CustomizeMathJax{\newcommand{\keVcsq}{\kilo\eVcsq}}
60 \CustomizeMathJax{\newcommand{\MeVcsq}{\mega\eVcsq}}
61 \CustomizeMathJax{\newcommand{\GeVcsq}{\giga\eVcsq}}
```

File 222 lwarp-hhline.sty

§331 Package hhline

(Emulates or patches code by David Carlisle.)

hhline (*Pkg*) hhline is patched for use by lwarp.

Only a rudimentary emulation is provided so far. If the argument contains any = characters, the result is a double \hline. If none, the result is a single \hline.

for HTML output: 1 \LWR@ProvidesPackagePass{hhline}[2014/10/28]

```
2 \newrobustcmd*{\LWR@HTML@hhline}[1]{%
3    \edef\LWR@tempone{\detokenize\expandafter{#1}}%
4    \IfSubStr[1]{\LWR@tempone}{=}{\hline\hline}{\hline}%
5 }
6% ^^A or:
7% ^^A \newrobustcmd*{\LWR@HTML@hhline}[1]{\LWR@getmynexttoken}
8
9 \AtBeginDocument{\LWR@expandableformatted{hhline}}
```

For MathJax. A simple \hline is used.

```
10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\hhline}[1]{\hline}}
12 \end{warpMathJax}
```

File 223 lwarp-hhtensor.sty

§332 Package hhtensor

(Emulates or patches code by Harald Harders.)

hhtensor (*Pkg*) hhtensor is used as-is, and emulated for MATHJAX.

```
for HTML output: 1 \LWR@ProvidesPackagePass{hhtensor}[2011/12/29]
```

```
2 \begin{warpMathJax}
3\iftensor@bold
   \CustomizeMathJax{\newcommand{\vec}[1]{\boldsymbol{#1}}}
   \CustomizeMathJax{\newcommand{\matr}[1]{\boldsymbol{#1}}}
   \CustomizeMathJax{\newcommand{\tens}[2]{\boldsymbol{#1}}}
7\else
   \iftensor@uline
9
      \CustomizeMathJax{\newcommand{\vec}[1]{\ushort{#1}}}
10
      \CustomizeMathJax{\newcommand{\matr}[1]{\ushortd{#1}}}
      \CustomizeMathJax{\newcommand{\tens}[2]{
11
12
          \underset{
              \raise{.5ex}{\underset{#2}{\sim}}
13
```

```
}{#1}
14
     }}
15
16
17
      \label{lem:customizeMathJax{\newcommand{\matr}[1]{\vec{\vec{#1}}}}}
18
      \CustomizeMathJax{\newcommand{\tens}[2]{
19
          \underset{
              \raise{.5ex}{\underset{#2}{\sim}}
20
          }{#1}
21
     }}
22
23
   \fi
24∖fi
25 \CustomizeMathJax{\newcommand{\dcdot}{\mathrel{\cdot\mkern 0.0mu \cdot}}}
26 \command{\trans}{{}^{\mathrm{T}}}}
27 \end{warpMathJax}
```

File 224 lwarp-hypbmsec.sty

§333 Package hypbmsec

hypbmsec (*Pkg*) hypbmsec is emulated by the lwarp core.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypbmsec}[2016/05/16]

File 225 lwarp-hypcap.sty

§334 Package hypcap

hypcap (Pkg) hypcap is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypcap}[2016/05/16]

```
2 \newcommand*{\capstart}{}
3 \newcommand*{\hypcapspace}{}
4 \newcommand*{\hypcapredef}[1]{}
5 \newcommand*{\capstartfalse}{}
6 \newcommand*{\capstarttrue}{}
```

File 226 lwarp-hypdestopt.sty

§ 335 Package hypdestopt

hypdestopt (Pkg) hypdestopt is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

File 227 lwarp-hypernat.sty

§ 336 Package hypernat

hypernat (*Pkg*) hypernat is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

lwarp-hyperref.sty File 228

Package hyperref §337

(Emulates or patches code by Sebastian Rahtz, Heiko Oberdiek, The LATEX3 Project.)

hyperref (Pkg) hyperref is emulated.

```
1% \LWR@ProvidesPackageDrop{hyperref}% not allowed
for HTML output:
                  2% \ProvidesPackage{lwarp-#1-#2}% not allowed
                  3 \PackageInfo{lwarp}{%
                  4 Using the lwarp HTML version of package 'hyperref', \MessageBreak
                  5 and discarding options except backref, pagebackref.\MessageBreak
                  6 (Not using \protect\ProvidesPackage, so that other packages\MessageBreak
                  7 do not attempt to patch lwarp's version of 'hyperref'.)\MessageBreak}
```

```
8 \SetupKeyvalOptions{family=LWR@hyperref,prefix=LWR@hyperref@}
10 \newcommand{\hypersetup}[1]{\setkeys{LWR@hyperref}{#1}}
12 \define@key{LWR@hyperref}{a4paper}[]{}
13 \define@key{LWR@hyperref}{a5paper}[]{}
14 \define@key{LWR@hyperref}{b5paper}[]{}
15 \define@key{LWR@hyperref}{letterpaper}[]{}
16 \define@key{LWR@hyperref}{legalpaper}[]{}
17 \define@key{LWR@hyperref}{executivepaper}[]{}
18 \define@key{LWR@hyperref}{implicit}[]{}
19 \define@key{LWR@hyperref}{draft}[]{}
20 \define@key{LWR@hyperref}{final}[]{}
21 \define@key{LWR@hyperref}{setpagesize}[]{}
22 \define@key{LWR@hyperref}{debug}[]{}
23 \define@key{LWR@hyperref}{linktocpage}[]{}
24 \define@key{LWR@hyperref}{linktoc}[]{}
25 \define@key{LWR@hyperref}{extension}[]{}
26 \define@key{LWR@hyperref}{verbose}[]{}
27 \define@key{LWR@hyperref}{typexml}[]{}
28 \define@key{LWR@hyperref}{raiselinks}[]{}
29 \define@key{LWR@hyperref}{breaklinks}[]{}
30 \define@key{LWR@hyperref}{localanchorname}[]{}
31 \define@key{LWR@hyperref}{pageanchor}[]{}
32 \define@key{LWR@hyperref}{plainpages}[]{}
33 \define@key{LWR@hyperref}{naturalnames}[]{}
34 \define@key{LWR@hyperref}{hypertexnames}[]{}
35 \define@key{LWR@hyperref}{nesting}[]{}
36 \define@key{LWR@hyperref}{destlabel}[]{}
37 \define@key{LWR@hyperref}{unicode}[]{}
38 \define@key{LWR@hyperref}{pdfencoding}[]{}
39 \define@key{LWR@hyperref}{psdextra}[]{}
40 \define@key{LWR@hyperref}{pdfversion}[]{}
42 \define@key{LWR@hyperref}{driverfallback}[]{}
43 \define@key{LWR@hyperref}{customdriver}[]{}
44 \define@key{LWR@hyperref}{hyperfigures}[]{}
45 \define@key{LWR@hyperref}{hyperfootnotes}[]{}
46 \define@key{LWR@hyperref}{hyperindex}[]{}
```

```
47 \define@key{LWR@hyperref}{encap}[]{}
48 \define@key{LWR@hyperref}{colorlinks}[]{}
49 \define@key{LWR@hyperref}{ocgcolorlinks}[]{}
50 \define@key{LWR@hyperref}{frenchlinks}[]{}
51 \define@key{LWR@hyperref}{bookmarks}[]{}
52 \define@key{LWR@hyperref}{bookmarksopen}[]{}
53 \define@key{LWR@hyperref}{bookmarksdepth}[]{}
54 \define@key{LWR@hyperref}{bookmarksopenlevel}[]{}
55 \define@key{LWR@hyperref}{bookmarkstype}[]{}
56 \define@key{LWR@hyperref}{bookmarksnumbered}[]{}
57 \define@key{LWR@hyperref}{CJKbookmarks}[]{}
58 \define@key{LWR@hyperref}{link}[]{}
59 \define@key{LWR@hyperref}{anchor}[]{}
60 \define@key{LWR@hyperref}{cite}[]{}
61 \define@key{LWR@hyperref}{file}[]{}
62 \define@key{LWR@hyperref}{url}[]{}
63 \define@key{LWR@hyperref}{menu}[]{}
64 \define@key{LWR@hyperref}{run}[]{}
65 \define@key{LWR@hyperref}{linkbordercolor}[]{}
66 \define@key{LWR@hyperref}{anchorbordercolor}[]{}
67 \define@key{LWR@hyperref}{citebordercolor}[]{}
68 \define@key{LWR@hyperref}{filebordercolor}[]{}
69 \define@key{LWR@hyperref}{urlbordercolor}[]{}
70 \define@key{LWR@hyperref}{menubordercolor}[]{}
71 \define@key{LWR@hyperref}{runbordercolor}[]{}
72 \define@key{LWR@hyperref}{pagecolor}[]{}
73 \define@key{LWR@hyperref}{baseurl}[]{}
74 \define@key{LWR@hyperref}{linkfileprefix}[]{}
75 \define@key{LWR@hyperref}{pdfpagetransition}[]{}
76 \define@key{LWR@hyperref}{pdfpageduration}[]{}
77 \define@key{LWR@hyperref}{pdfpagehidden}[]{}
78 \define@key{LWR@hyperref}{pagebordercolor}[]{}
79 \define@key{LWR@hyperref}{allbordercolors}[]{}
80 \define@key{LWR@hyperref}{pdfhighlight}[]{}
81 \define@key{LWR@hyperref}{pdfborder}[]{}
82 \define@key{LWR@hyperref}{pdfborderstyle}[]{}
83 \define@key{LWR@hyperref}{pdfprintpagerange}[]{}
84 \define@key{LWR@hyperref}{pdfusetitle}[]{}
85 \define@key{LWR@hyperref}{pdftitle}[]{}
86 \define@key{LWR@hyperref}{pdfauthor}[]{}
{\tt 87 \setminus define@key\{LWR@hyperref\}\{pdfproducer\}[]\{\}}\\
88 \define@key{LWR@hyperref}{pdfcreator}[]{}
89 \define@key{LWR@hyperref}{addtopdfcreator}[]{}
90 \define@key{LWR@hyperref}{pdfcreationdate}[]{}
91 \define@key{LWR@hyperref}{pdfmoddate}[]{}
92 \define@key{LWR@hyperref}{pdfsubject}[]{}
93 \define@key{LWR@hyperref}{pdfkeywords}[]{}
94 \define@key{LWR@hyperref}{pdftrapped}[]{}
95 \define@key{LWR@hyperref}{pdfinfo}[]{}
96 \define@key{LWR@hyperref}{pdfview}[]{}
97 \define@key{LWR@hyperref}{pdflinkmargin}[]{}
98 \define@key{LWR@hyperref}{pdfstartpage}[]{}
99 \define@key{LWR@hyperref}{pdfstartview}[]{}
100 \define@key{LWR@hyperref}{pdfremotestartview}[]{}
101 \define@key{LWR@hyperref}{pdfpagescrop}[]{}
102 \define@key{LWR@hyperref}{pdftoolbar}[]{}
103 \define@key{LWR@hyperref}{pdfmenubar}[]{}
104 \define@key{LWR@hyperref}{pdfwindowui}[]{}
105 \define@key{LWR@hyperref}{pdffitwindow}[]{}
106 \define@key{LWR@hyperref}{pdfcenterwindow}[]{}
```

```
107 \define@key{LWR@hyperref}{pdfdisplaydoctitle}[]{}
108 \define@key{LWR@hyperref}{pdfa}[]{}
109 \define@key{LWR@hyperref}{pdfnewwindow}[]{}
110 \define@key{LWR@hyperref}{pdflang}[]{}
111 \define@key{LWR@hyperref}{pdfpagelabels}[]{}
112 \define@key{LWR@hyperref}{pdfescapeform}[]{}
113 \define@key{LWR@hyperref}{english}[]{}
114 \define@key{LWR@hyperref}{UKenglish}[]{}
115 \define@key{LWR@hyperref}{british}[]{}
116 \define@key{LWR@hyperref}{USenglish}[]{}
118 \define@key{LWR@hyperref}{german}[]{}
119 \define@key{LWR@hyperref}{austrian}[]{}
120 \define@key{LWR@hyperref}{ngerman}[]{}
121 \define@key{LWR@hyperref}{naustrian}[]{}
122 \define@key{LWR@hyperref}{russian}[]{}
123 \define@key{LWR@hyperref}{brazil}[]{}
124 \define@key{LWR@hyperref}{brazilian}[]{}
125 \define@key{LWR@hyperref}{portuguese}[]{}
126 \define@key{LWR@hyperref}{spanish}[]{}
127 \define@key{LWR@hyperref}{catalan}[]{}
128 \define@key{LWR@hyperref}{afrikaans}[]{}
129 \define@key{LWR@hyperref}{french}[]{}
130 \define@key{LWR@hyperref}{frenchb}[]{}
131 \define@key{LWR@hyperref}{francais}[]{}
132 \define@key{LWR@hyperref}{acadian}[]{}
133 \define@key{LWR@hyperref}{canadien}[]{}
134 \define@key{LWR@hyperref}{italian}[]{}
135 \define@key{LWR@hyperref}{magyar}[]{}
136 \define@key{LWR@hyperref}{hungarian}[]{}
137 \define@key{LWR@hyperref}{greek}[]{}
138 \define@key{LWR@hyperref}{dutch}[]{}
139 \define@key{LWR@hyperref}{tex4ht}[]{}
140 \define@key{LWR@hyperref}{pdftex}[]{}
141 \define@key{LWR@hyperref}{luatex}[]{}
142 \define@key{LWR@hyperref}{nativepdf}[]{}
143 \define@key{LWR@hyperref}{dvipdfm}[]{}
144 \define@key{LWR@hyperref}{dvipdfmx}[]{}
145 \define@key{LWR@hyperref}{xetex}[]{}
146 \define@key{LWR@hyperref}{pdfmark}[]{}
147 \define@key{LWR@hyperref}{dvips}[]{}
148 \define@key{LWR@hyperref}{hypertex}[]{}
149 \define@key{LWR@hyperref}{vtex}[]{}
150 \define@key{LWR@hyperref}{vtexpdfmark}[]{}
151 \define@key{LWR@hyperref}{dviwindo}[]{}
152 \define@key{LWR@hyperref}{dvipsone}[]{}
153 \define@key{LWR@hyperref}{textures}[]{}
154 \define@key{LWR@hyperref}{latex2html}[]{}
155 \define@key{LWR@hyperref}{ps2pdf}[]{}
156 \define@key{LWR@hyperref}{vietnamese}[]{}
157 \define@key{LWR@hyperref}{vietnam}[]{}
158 \define@key{LWR@hyperref}{arabic}[]{}
159 \define@key{LWR@hyperref}{hidelinks}[]{}
160 \define@key{LWR@hyperref}{draft}[]{}
161 \define@key{LWR@hyperref}{nolinks}[]{}
162 \define@key{LWR@hyperref}{final}[]{}
163 \define@key{LWR@hyperref}{pdfa}[]{}
164 \define@key{LWR@hyperref}{pdfversion}[]{}
165 \define@key{LWR@hyperref}{typexml}[]{}
166 \define@key{LWR@hyperref}{tex4ht}[]{}
```

```
167 \define@key{LWR@hyperref}{pdftex}[]{}
168 \define@key{LWR@hyperref}{nativepdf}[]{}
169 \define@key{LWR@hyperref}{dvipdfm}[]{}
170 \define@key{LWR@hyperref}{dvipdfmx}[]{}
171 \define@key{LWR@hyperref}{dvipdfmx-outline-open}[]{}
172 \define@key{LWR@hyperref}{pdfmark}[]{}
173 \define@key{LWR@hyperref}{dvips}[]{}
174 \define@key{LWR@hyperref}{hypertex}[]{}
175 \define@key{LWR@hyperref}{vtex}[]{}
176 \define@key{LWR@hyperref}{vtexpdfmark}[]{}
177 \define@key{LWR@hyperref}{dviwindo}[]{}
178 \define@key{LWR@hyperref}{dvipsone}[]{}
179 \define@key{LWR@hyperref}{textures}[]{}
180 \define@key{LWR@hyperref}{latex2html}[]{}
181 \define@key{LWR@hyperref}{ps2pdf}[]{}
182 \define@key{LWR@hyperref}{xetex}[]{}
183 \define@key{LWR@hyperref}{driverfallback}[]{}
184 \define@key{LWR@hyperref}{customdriver}[]{}
185 \define@key{LWR@hyperref}{pdfversion}[]{}
186 \define@key{LWR@hyperref}{bookmarks}[]{}
187 \define@key{LWR@hyperref}{ocgcolorlinks}[]{}
188 \define@key{LWR@hyperref}{colorlinks}[]{}
189 \define@key{LWR@hyperref}{frenchlinks}[]{}
190 \define@key{LWR@hyperref}{backref}[]{}
191 \define@key{LWR@hyperref}{pagebackref}[]{}
192 \define@key{LWR@hyperref}{destlabel}[]{}
193 \define@key{LWR@hyperref}{pdfpagescrop}[]{}
194 \define@key{LWR@hyperref}{pdfpagemode}[]{}
195 \define@key{LWR@hyperref}{pdfnonfullscreenpagemode}[]{}
196 \define@key{LWR@hyperref}{pdfdirection}[]{}
197 \define@key{LWR@hyperref}{pdfviewarea}[]{}
198 \define@key{LWR@hyperref}{pdfviewclip}[]{}
199 \define@key{LWR@hyperref}{pdfprintarea}[]{}
200 \define@key{LWR@hyperref}{pdfprintclip}[]{}
201 \define@key{LWR@hyperref}{pdfprintscaling}[]{}
202 \define@key{LWR@hyperref}{pdfduplex}[]{}
203 \define@key{LWR@hyperref}{pdfpicktraybypdfsize}[]{}
204 \define@key{LWR@hyperref}{pdfprintpagerange}[]{}
205 \define@key{LWR@hyperref}{pdfnumcopies}[]{}
206 \define@key{LWR@hyperref}{pdfstartview}[]{}
207 \define@key{LWR@hyperref}{pdfstartpage}[]{}
208 \define@key{LWR@hyperref}{pdftoolbar}[]{}
209 \define@key{LWR@hyperref}{pdfmenubar}[]{}
210 \define@key{LWR@hyperref}{pdfwindowui}[]{}
211 \define@key{LWR@hyperref}{pdffitwindow}[]{}
212 \define@key{LWR@hyperref}{pdfcenterwindow}[]{}
213 \define@key{LWR@hyperref}{pdfdisplaydoctitle}[]{}
214 \define@key{LWR@hyperref}{pdfpagelayout}[]{}
215 \define@key{LWR@hyperref}{pdflang}[]{}
216 \define@key{LWR@hyperref}{baseurl}[]{}
217 \define@key{LWR@hyperref}{pdfusetitle}[]{}
218 \define@key{LWR@hyperref}{pdfpagelabels}[]{}
219 \define@key{LWR@hyperref}{hyperfootnotes}[]{}
220 \define@key{LWR@hyperref}{hyperfigures}[]{}
221 \define@key{LWR@hyperref}{hyperindex}[]{}
222 \define@key{LWR@hyperref}{encap}[]{}
223 \define@key{LWR@hyperref}{linkcolor}[]{}
224 \define@key{LWR@hyperref}{anchorcolor}[]{}
225 \define@key{LWR@hyperref}{citecolor}[]{}
226 \define@key{LWR@hyperref}{filecolor}[]{}
```

```
227 \define@key{LWR@hyperref}{urlcolor}[]{}
                            228 \define@key{LWR@hyperref}{menucolor}[]{}
                            229 \define@key{LWR@hyperref}{runcolor}[]{}
                            230 \define@key{LWR@hyperref}{allcolors}[]{}
                            231
                            232 \DeclareStringOption[false]{backref}[section]
                            234 \DeclareBoolOption{pagebackref}
                            236 \DeclareDefaultOption{}
                            238 \ProcessKeyvalOptions*\relax
                              Maybe load backref:
                            239 \ifdefstring{\LWR@hyperref@backref}{section}
                                    {\RequirePackage{backref}}
                            240
                            241
                                    {}
                            242
                            243 \ifdefstring{\LWR@hyperref@backref}{slide}
                            244
                                    {\RequirePackage{backref}}
                            245
                            247 \ifdefstring{\LWR@hyperref@backref}{page}
                            248
                                    {\RequirePackage{backref}}
                            249
                            250
                            251 \ifLWR@hyperref@pagebackref
                                    \RequirePackage{backref}
                            252
                            253\fi
                            254 \LetLtxMacro\href\LWR@href
                            255 \LetLtxMacro\nolinkurl\LWR@nolinkurl
                            256 \LetLtxMacro\url\LWR@url
                            257 \LetLtxMacro\phantomsection\LWR@phantomsection
                            258 \newcommand*{\hyperbaseurl}[1]{}
                              No application for lwarp:
                            259 \newcommand*{\HyperDestNameFilter}[1]{#1}
                            260 \newcommand*{\HyperDestLabelReplace}[1]{#1}
                            261 \newcommand*{\HyperDestRename}[2]{}
                              No application for lwarp:
                            262 \newcommand*{\hyperget}[2]{}
                               \{\langle URL \rangle\} \{\langle alt \ text \rangle\}
\hyperimage
                              Insert an image with alt text:
                            263 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
                            264
                                    \LWR@ensuredoingapar%
                                    \left( \frac{1}{m} \right)
                            265
                                    \LWR@HTMLsanitize@tmpb%
                            266
                                    \LWR@htmltag{%
                                        img src=\textquotedbl\tmpb\textquotedbl\ %
                            268
```

```
alt=\textquotedbl#2\textquotedbl\ %
269
270
            class=\textquotedbl{}hyperimage\textquotedbl%
271
272
       \LWR@ensuredoingapar%
       \endgroup%
273
274 }
275
276 \newrobustcmd*{\hyperimage}{%
       \begingroup%
277
278
       \LWR@linkcatcodes%
279
       \LWR@hyperimageb%
280 }
281
   \{\langle 1: category \rangle\} \{\langle 2: name \rangle\} \{\langle 3: text \rangle\}
 Creates an HTML anchor to category. name with the given text.
282 \MewDocumentCommand{\LWR@hyperdefb}{m m +m}{\%}
283
       \LWR@ensuredoingapar%
       \LWR@label@createtag{#1.#2}%
284
285
286
       \endgroup%
287 }
289 \newcommand*{\hyperdef}{%
290
       \begingroup%
       \LWR@linkcatcodes%
291
       \LWR@hyperdefb%
292
293 }
294
   \{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\}
 Creates an HTML link to URL#category.name with the given text.
295 \newcommand{\LWR@hyperreffinish}[1]{%
       \begingroup%
296
       297
       #1%
298
       \endgroup%
299
       \LWR@htmltag{/a}%
300
301 }
302
303 \newcommand*{\LWR@hyperrefbb}[3]{%
304
       \LWR@htmltag{%
305
            a href=\textquotedbl%
                \detokenize\expandafter{#1}\LWR@hashmark%
306
                \detokenize\expandafter{#2}.\detokenize\expandafter{#3}%
307
            \textquotedbl%
308
            \LWR@addlinktitle%
309
       }%
310
       \endgroup%
311
       \LWR@hyperreffinish%
312
313 }
315 \newrobustcmd*{\LWR@hyperrefb}{%
316
       \begingroup%
       \LWR@linkcatcodes%
317
       \LWR@hyperrefbb%
318
319 }
```

\hyperdef

\LWR@hyperrefb

```
[\langle label \rangle] \{\langle text \rangle\}
\LWR@hyperrefc
                                  Creates text as an HTML link to the LATEX label.
                                320 \NewDocumentCommand{\LWR@hyperrefcb}{O{label}}{%
                                        \LWR@startref{#1}%
                                322
                                        \endgroup%
                                        \LWR@hyperreffinish%
                                323
                                324 }
                                325
                                326 \newcommand*{\LWR@hyperrefc}{%
                                        \begingroup%
                                327
                                        \LWR@linkcatcodes%
                                328
                                        \LWR@hyperrefcb%
                                329
                                330 }
                                   \{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\} - or -
\hyperref
                                  [\langle 1: label \rangle] \{\langle 2: text \rangle\}
                                331 \DeclareRobustCommand*{\hyperref}{%
                                        \LWR@ensuredoingapar%
                                333
                                        \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
                                334 }
                                   \{\langle name \rangle\} \{\langle text \rangle\}
\hypertarget
                                  Creates an anchor to name with the given text.
                                335 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%}
                                        \label{LWR-ht-#1}%
                                336
                                        #2%
                                337
                                        \endgroup%
                                338
                                339 }
                                340
                                341 \newcommand*{\hypertarget}{%
                                        \LWR@ensuredoingapar%
                                343
                                        \begingroup%
                                344
                                        \LWR@linkcatcodes%
                                345
                                        \LWR@hypertargetb%
                                346 }
\hyperlink
                                   \{\langle name \rangle\} \{\langle text \rangle\}
                                  Creates a link to the anchor created by hypertarget, with the given link text.
                                  Declared because also defined by memoir.
                                347 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
                                        \ifbool{LWR@insidemathcomment}%
                                349
                                             {\endgroup}%
                                             {\LWR@hyperrefcb[LWR-ht-#1]}%
                                350
                                351 }
                                352
                                353 \DeclareDocumentCommand{\hyperlink}{}{%
                                        \LWR@ensuredoingapar%
                                354
                                355
                                        \begingroup%
                                356
                                        \LWR@linkcatcodes%
                                        \LWR@hyperlinkb%
                                357
                                358 }
```

```
lwarp 882
```

```
\{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\} - or -
\LWR@nullify@hyperref
                               [\langle 1: label \rangle] \{\langle 2: text \rangle\}
                              359 \newcommand{\LWR@nullify@hyperrefb}[2][]{}
                              361 \newcommand*{\LWR@nullify@hyperref}{%
                                     \@ifnextchar[\LWR@nullify@hyperrefb\@fourthoffour%
                              362
                              363 }
                               To nullify in a lateximage or svG math. \hypertarget must be left active for
                               references to work, and does not harm.
                              364 \appto\LWR@restoreorigformatting{%
                                      \LetLtxMacro\hyperdef\@thirdofthree
                                     \LetLtxMacro\hyperlink\@secondoftwo%
                                     \LetLtxMacro\hyperref\LWR@nullify@hyperref%
                              367
                              368 }
                                 * \{\langle label \rangle\}
\autoref
                               For HTML, \cleveref is used instead.
                              369 \NewDocumentCommand{\autoref}{s m}{%
                                     \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
                              371 }
                                 \{\langle label \rangle\}
\autopageref
                               For HTML, \cleveref is used instead.
                              372 \MewDocumentCommand{\autopageref}{s m}{%}
                                     373
                              374 }
                               Default names:
                              375 \def\equationautorefname{Equation}%
                              376 \def\footnoteautorefname{footnote}%
                              377 \def\itemautorefname{item}%
                              378 \def\figureautorefname{Figure}%
                              379 \def\tableautorefname{Table}%
                              380 \def\partautorefname{Part}%
                              381 \def\appendixautorefname{Appendix}%
                              382 \def\chapterautorefname{chapter}%
                              383 \def\sectionautorefname{section}%
                              384 \def\subsectionautorefname{subsection}%
                              385 \def\subsubsectionautorefname{subsubsection}%
                              386 \def\paragraphautorefname{paragraph}%
                              387 \def\subparagraphautorefname{subparagraph}%
                              388 \def\FancyVerbLineautorefname{line}%
                              389 \def\theoremautorefname{Theorem}%
                              390 \def\pageautorefname{page}%
\pdfstringdef
                                 \{\langle macroname \rangle\} \{\langle T_EXstring \rangle\}
                              391 \newcommand{\pdfstringdef}[2]{}
                                 [\langle level \rangle] \{\langle text \rangle\} \{\langle name \rangle\}
\pdfbookmark
                              392 \newcommand{\pdfbookmark}[3][]{}
```

```
\{\langle text \rangle\} \{\langle name \rangle\}
  \currentpdfbookmark
                                    393 \newcommand{\currentpdfbookmark}[2]{}
  \subpdfbookmark
                                        \{\langle text \rangle\} \{\langle name \rangle\}
                                    \belowpdfbookmark
                                        \{\langle text \rangle\} \{\langle name \rangle\}
                                    395 \newcommand{\belowpdfbookmark}[2]{}
  \texorpdfstring
                                        \{\langle T_E X string \rangle\} \{\langle PDF string \rangle\}
                                    396 \let\texorpdfstring\relax
                                    397 \newcommand{\texorpdfstring}[2]{#1}
                                        \{\langle commands \rangle\}
\pdfstringdefDisableCommands
                                    398 \newcommand{\pdfstringdefDisableCommands}[1]{}
  \hypercalcbp
                                        \{\langle dimen \rangle\} From hyperref.
                                    399 \def\hypercalcbp#1{%
                                             \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
                                    401 }%
                                        \{\langle menuoption \rangle\} \{\langle text \rangle\}
  \Acrobatmenu
                                    402 \newcommand{\Acrobatmenu}[2]{}
                                        [\langle parameters \rangle] \{\langle label \rangle\}
  \TextField
                                    403 \DeclareRobustCommand{\TextField}[2][]{}
  \CheckBox
                                        [\langle parameters \rangle] \{\langle label \rangle\}
                                    404 \DeclareRobustCommand{\CheckBox}[2][]{}
                                        [\langle parameters \rangle] \{\langle label \rangle\} \{\langle choices \rangle\}
  \ChoiceMenu
                                    405 \DeclareRobustCommand{\ChoiceMenu}[3][]{}
  \PushButton
                                        [\langle parameters \rangle] \{\langle label \rangle\}
                                    [\langle parameters \rangle] \{\langle label \rangle\}
  \Submit
                                    407 \DeclareRobustCommand{\Submit}[2][]{}
                                        [\langle parameters \rangle] \{\langle label \rangle\}
  \Reset
```

```
[\langle parameters \rangle] \{\langle label \rangle\}
\Gauge
                                 409 \DeclareRobustCommand{\Gauge}[2][]{}
\LayoutTextField
                                    \{\langle label \rangle\} \{\langle field \rangle\}
                                 410 \newcommand*{\LayoutTextField}[2]{}
                                    \{\langle label \rangle\} \{\langle field \rangle\}
\LayoutChoiceField
                                 411 \newcommand*{\LayoutChoiceField}[2]{}
                                    \{\langle label \rangle\} \{\langle field \rangle\}
\LayoutCheckField
                                 412 \newcommand*{\LayoutCheckField}[2]{}
                                    \{\langle width \rangle\} \{\langle height \rangle\}
\MakeRadioField
                                 413 \newcommand*{\MakeRadioField}[2]{}
\MakeCheckField
                                    \{\langle width \rangle\} \{\langle height \rangle\}
                                 414 \newcommand*{\MakeCheckField}[2]{}
\MakeTextField
                                    \{\langle width \rangle\} \{\langle height \rangle\}
                                 415 \newcommand*{\MakeTextField}[2]{}
                                    \{\langle width \rangle\} \{\langle height \rangle\}
\MakeChoiceField
                                 416 \newcommand*{\MakeChoiceField}[2]{}
\MakeFieldButton
                                    \{\langle text \rangle\}
                                 417 \newcommand{\MakeFieldButton}[1]{}
                       File 229 lwarp-hyperxmp.sty
                                 hyperxmp
           §338
                      Package
                hyperxmp(Pkg)
                                  hyperxmp is ignored.
                                   Discard all options for lwarp-hyperxmp:
            for HTML output:
                                   1 \LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]
                                   3 \define@key{LWR@hyperref}{pdfdate}[]{}
                                   4 \define@key{LWR@hyperref}{pdfmetadate}[]{}
                                   5 \define@key{LWR@hyperref}{pdfcopyright}[]{}
                                   6 \define@key{LWR@hyperref}{pdftype}[]{}
                                   7 \define@key{LWR@hyperref}{pdflicenseurl}[]{}
                                   8 \define@key{LWR@hyperref}{pdfauthortitle}[]{}
```

9 \define@key{LWR@hyperref}{pdfcaptionwriter}[]{}

```
10 \define@key{LWR@hyperref}{pdfmetalang}[]{}
11 \define@key{LWR@hyperref}{pdfapart}[]{}
12 \define@key{LWR@hyperref}{pdfaconformance}[]{}
13 \define@key{LWR@hyperref}{pdfuapart}[]{}
14 \define@key{LWR@hyperref}{pdfxstandard}[]{}
15 \define@key{LWR@hyperref}{pdfsource}[]{}
16 \define@key{LWR@hyperref}{pdfdocumentid}[]{}
{\tt 17 \setminus define@key\{LWR@hyperref\}\{pdfinstanceid\}[]\{\}}\\
18 \define@key{LWR@hyperref}{pdfversionid}[]{}
19 \define@key{LWR@hyperref}{pdfrendition}[]{}
20 \define@key{LWR@hyperref}{pdfpublication}[]{}
21 \define@key{LWR@hyperref}{pdfpubtype}[]{}
22 \define@key{LWR@hyperref}{pdfbytes}[]{}
23 \define@key{LWR@hyperref}{pdfnumpages}[]{}
24 \define@key{LWR@hyperref}{pdfissn}[]{}
25 \define@key{LWR@hyperref}{pdfeissn}[]{}
26 \define@key{LWR@hyperref}{pdfisbn}[]{}
27 \define@key{LWR@hyperref}{pdfbookedition}[]{}
{\tt 28 \backslash define@key\{LWR@hyperref\}\{pdfpublisher\}[]\{\}}\\
29 \define@key{LWR@hyperref}{pdfvolumenum}[]{}
30 \define@key{LWR@hyperref}{pdfissuenum}[]{}
31 \define@key{LWR@hyperref}{pdfpagerange}[]{}
32 \define@key{LWR@hyperref}{pdfdoi}[]{}
33 \define@key{LWR@hyperref}{pdfurl}[]{}
34 \define@key{LWR@hyperref}{pdfidentifier}[]{}
35 \define@key{LWR@hyperref}{pdfsubtitle}[]{}
36 \define@key{LWR@hyperref}{pdfpubstatus}[]{}
37 \define@key{LWR@hyperref}{pdfcontactaddress}[]{}
38 \define@key{LWR@hyperref}{pdfcontactcity}[]{}
39 \define@key{LWR@hyperref}{pdfcontactregion}[]{}
40 \define@key{LWR@hyperref}{pdfcontactpostcode}[]{}
41 \define@key{LWR@hyperref}{pdfcontactcountry}[]{}
42 \define@key{LWR@hyperref}{pdfcontactphone}[]{}
43 \define@key{LWR@hyperref}{pdfcontactemail}[]{}
44 \define@key{LWR@hyperref}{pdfcontacturl}[]{}
45 \define@key{LWR@hyperref}{keeppdfinfo}[]{}
46 \define@key{LWR@hyperref}{pdfauthor}[]{}
47 \define@key{LWR@hyperref}{pdfkeywords}[]{}
```

File 230 lwarp-hyphenat.sty

§ 339 Package hyphenat

hyphenat (*Pkg*) hyphenat is emulated during HTML output, while the print-mode version is used inside a lateximage.

for HTML output: 1 \LWR@ProvidesPackagePass{hyphenat}[2009/09/02]

```
2 \LetLtxMacro\LWRHYNAT@origtextnhtt\textnhtt
3 \LetLtxMacro\LWRHYNAT@orignhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@orignohyphens\nohyphens
5 \LetLtxMacro\LWRHYNAT@origbshyp\bshyp
6 \LetLtxMacro\LWRHYNAT@origfshyp\fshyp
7 \LetLtxMacro\LWRHYNAT@origdothyp\dothyp
8 \LetLtxMacro\LWRHYNAT@origcolonhyp\colonhyp
9 \LetLtxMacro\LWRHYNAT@orighyp\hyp
```

```
11 \LetLtxMacro\textnhtt\texttt
12 \LetLtxMacro\nhttfamily\ttfamily
14 \renewcommand{\nohyphens}[1]{#1}
15 \renewrobustcmd{\bshyp}{%
      \ifmmode\backslash\else\textbackslash\fi%
17 }
18 \renewrobustcmd{\fshyp}{/}
19 \renewrobustcmd{\dothyp}{.}
20 \renewrobustcmd{\colonhyp}{:}
21 \renewrobustcmd{ \hyp}{-}
23 \appto\LWR@restoreorigformatting{%
{\tt 24 \LetLtxMacro \textnhtt\LWRHYNAT@origtextnhtt\%}
25 \LetLtxMacro\nhttfamily\LWRHYNAT@orignhttfamily%
{\tt 26 \ LetLtxMacro \ nohyphens \ LWRHYNAT@orignohyphens\%}
27 \LetLtxMacro\bshyp\LWRHYNAT@origbshyp%
28 \LetLtxMacro\fshyp\LWRHYNAT@origfshyp%
29 \LetLtxMacro\dothyp\LWRHYNAT@origdothyp%
30 \LetLtxMacro\colonhyp\LWRHYNAT@origcolonhyp%
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }
```

File 231 lwarp-idxlayout.sty

§340 Package idxlayout

($Emulates\ or\ patches\ code\ by\ Thomas\ Titz.$)

idxlayout (*Pkg*) idxlayout is emulated.

for HTML output:

Discard all options for lwarp-idxlayout:

 ${\tt 1 \LWR@ProvidesPackageDrop\{idxlayout\}[2012/03/30]}$

2 \newcommand{\LWR@indexprenote}{}

\AtBeginDocument to help with package load order.

```
3 \AtBeginDocument{
      \preto\printindex{
5
      \LWR@maybe@orignewpage
6
      \LWR@startpars
7
8
9
      \LWR@indexprenote
10
11
      }
12 }
13 \newcommand{\setindexprenote}[1]{\renewcommand{\LWR@indexprenote}{#1}}
14 \newcommand*{\noindexprenote}{\renewcommand{\LWR@indexprenote}{}}
15
16 \newcommand{\idxlayout}[1]{}
17 \newcommand*{\indexfont}{}
18 \newcommand*{\indexjustific}{}
19 \newcommand*{\indexsubsdelim}{}
```

20 \newcommand*{\indexstheadcase}{}

File 232 lwarp-ifoddpage.sty

§ 341 Package

Package ifoddpage

(Emulates or patches code by Martin Scharrer.)

ifoddpage (Pkg)

ifoddpage is emulated.

for HTML output:

Discard all options for lwarp-ifoddpage:

1 \LWR@ProvidesPackageDrop{ifoddpage}[2016/04/23]

```
2 \newif\ifoddpage
3
4 \newif\ifoddpageoroneside
5
6 \DeclareRobustCommand{\checkoddpage}{\oddpagetrue\oddpageoronesidetrue}
7
8 \def\oddpage@page{1}
9
10 \def\@ifoddpage{%
11     \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpageoroneside{%
15     \expandafter\@firstoftwo
16 }
```

File 233 lwarp-imakeidx.sty

§ 342 Package

Package imakeidx

(Emulates or patches code by Enrico Gregorio.)

imakeidx(Pkg)

imakeidx is patched for use by lwarp.

letter headings

When using *makeindex*, to match the print and HTML output's display of index letter headings, specify the lwarp.ist style:

```
\makeindex[options={-s lwarp.ist}]
```

(For HTML the lwarp.ist style is used automatically, which displays letter headings. When using *xindy* the default style also displays letter headings.)

index setup

See section 8.6.19 for how to setup *lwarpmk* to process the indexes with imakeidx, both with and without shell escape.

for HTML output:

1 \LWR@ProvidesPackagePass{imakeidx}[2016/10/15]

Use the new HTML suffix:

```
2 \catcode '\_=12%
```

```
4 \catcode'\_=8%
                         The HTML version of \printindex:
\printindex
                        5 \catcode '\_=12%
                        7\renewcommand*{\printindex}[1][\imki@jobname]{%
                        8 \LWR@maybe@orignewpage%
                        9 \LWR@startpars%
                        \@ifundefined{#1@idxfile}{%
                        11
                                 \imki@error{#1}%
                        12
                        13
                             }{%
                                 \imki@putindex{#1}%
                        14
                        15
                             }%
                        16 }{%
                        19 }
                        20
                        21 \catcode'\_=8%
\@index
                          The HTML version of \@index:
                        22 \ Verify Command [lwarp] [imakeidx] \\ \{443B697F3326243540BE3FB7665606F6\} \\
                        23
                        24 \catcode '\_=12%
                        25
                        26 \def\@index[#1]{%
                        27
                             \ifstrequal{#1}{\imki@jobname}%
                        28
                                 \@ifundefined{#1@idxfile}%
                        29
                        30
                                 {%
                                    \PackageWarning{lwarp-imakeidx}{Undefined index file '#1'}%
                        31
                                    \begingroup
                        32
                                    \@sanitize
                        33
                                    \imki@nowrindex%
                        34
                                 }%
                        35
                                 {%
                        36
                                    \edef\@idxfile{#1}%
                        37
                        38
                                    \begingroup
                        39
                                    \@sanitize
                                    \@wrindex\@idxfile%
                        40
                                 }%
                        41
                             }%
                        42
                        43
                             {%
                                 \@ifundefined{#1_html@idxfile}%
                        44
                        45
                                 {%
                                    \PackageWarning{lwarp-imakeidx}{Undefined index file '#1_html'}%
                        46
                                    \begingroup
                        47
                        48
                                    \@sanitize
                                    \imki@nowrindex%
                        49
                                 }%
                        50
                                 {%
                        51
                                    \edef\@idxfile{#1_html}%
                        52
                                    \begingroup
                        53
                                    \@sanitize
                        54
```

\@wrindex\@idxfile%

55

```
56
                                          }%
                                     }%
                              57
                              58 }
                              59
                              60 \catcode '\_=8%
\item
\subitem
\subsubitem
                                HTML versions of \item, etc.:
                              61 \appto\theindex{%
                                     \LetLtxMacro\item\LWR@indexitem%
                              63
                                     \LetLtxMacro\subitem\LWR@indexsubitem%
                                     \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
                              64
                              65 }
\imki@wrindexentrysplit
                                \{\langle file \rangle\} \{\langle entry \rangle\} \{\langle page \rangle\}
\imki@wrindexentryunique
                                \{\langle file \rangle\} \{\langle entry \rangle\} \{\langle page \rangle\}
                               While writing index entries, adds an HTML label, and writes the label's index instead
                               of the page number:
                              66 \VerifyCommand[lwarp][imakeidx]{\imki@wrindexentrysplit}{D8ABE70A4355F52E36723AFAB74F71E7}
                              68 \renewcommand\imki@wrindexentrysplit[3]{%
                                     \addtocounter{LWR@autoindex}{1}%
                                     \expandafter\protected@write\csname#1@idxfile\endcsname{}%
                              70
                                          {\string\indexentry{#2}{\arabic{LWR@autoindex}}}%
                              71
                               The label is assigned after the file write to avoid conflict with cleveref.
                              72
                                     \label{LWRindex-\arabic{LWR@autoindex}}%
                              73 }
                              74
                              75 \VerifyCommand[lwarp][imakeidx]{\imki@wrindexentryunique}{9131E144394D273F316D03FA91BA0E2B}
                              77 \renewcommand\imki@wrindexentryunique[3]{%
                                     \addtocounter{LWR@autoindex}{1}%
                                     \protected@write\@indexfile{}%
                              79
                                          \label{local-prop} $$ \operatorname{LWR@autoindex}}\
                              80
                               The label is assigned after the file write to avoid conflict with cleveref.
                                     \label{LWRindex-\arabic{LWR@autoindex}}%
                              82 }
\LWR@imki@setxdydefopts
                               Sets the xindy HTML options, ignoring the user's settings.
                              83 \newcommand*{\LWR@imki@setxdydefopts}{%
                                     \edef\imki@options{ \space %
                              84
                                          -M \space \LWR@xindyStyle\space %
                              85
                                          -L \space \LWR@xindyLanguage\space %
                              86
                              87
                                          -C \space \LWR@xindyCodepage\space %
                              88
                                     }%
                              89 }
\LWR@imki@setdefopts
                                \{\langle user\ options \rangle\}
```

Sets the HTML options, added to the user's settings, depending on whether *makeindex* or *xindy* are used.

For *makeindex*, the user's choice is ignored, and only the lwarp version is used. (Only one style at a time is possible.)

For *xindy*, multiple modules may be specified, and the lwarp version is appended.

```
90 \newcommand*{\LWR@imki@setdefopts}[1]{%
91 \ifblank{#1}{%
92  \edef\imki@options{\space -s \space \LWR@makeindexStyle \space}%
93  \ifdefstring{\imki@progdefault}{\xindy}{\LWR@imki@setxdydefopts}{}%
94  \ifdefstring{\imki@progdefault}{\texindy}{\LWR@imki@setxdydefopts}{}%
95  \ifdefstring{\imki@progdefault}{\truexindy}{\LWR@imki@setxdydefopts}{}%
96 }{%
97  \edef\imki@options{\space #1 \space}%
98 }%
99 }
```

\imki@makeindex

Use the new HTML options:

Use the new HTML options.

 $\label{localized} \mbox{107 \ensuremath{\mbox{\mbox{\mbox{1}}}} \ensuremath{\mbox{\mbox{\mbox{1}}}} \ensuremath{\mbox{\mbox{\mbox{1}}}} \ensuremath{\mbox{\mbox{\mbox{1}}}} \ensuremath{\mbox{\mbox{1}}} \ens$

\imki@resetdefaults

Use the new HTML options:

theindex was already defined \AtBeginDocument by the lwarp core, so it must be redefined here similarly, but patched for imakeidx:

Env theindex

```
115 \AtBeginDocument{
116 \renewenvironment*{theindex}{%
117 \imki@maybeaddtotoc
118 \imki@indexlevel{\indexname}
119 \LetLtxMacro\item\LWR@indexitem%
120 \LetLtxMacro\subitem\LWR@indexsubitem%
121 \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
122 }{}
123 }% AtBeginDocument
```

Update to the new defaults:

```
124 \imki@resetdefaults
```

Update to the new patches:

```
125 \ifimki@splitindex
126 \let\imki@startidx\imki@startidxunique
    \AtBeginDocument{\let\@wrindex\imki@wrindexunique}
    \let\imki@putindex\imki@putindexunique
    \let\imki@wrindexentry\imki@wrindexentryunique
129
    \let\imki@startidxsplit\@undefined
131 \let\imki@wrindexsplit\@undefined
132 \let\imki@putindexsplit\@undefined
133 \else
134 \let\imki@startidx\imki@startidxsplit
135 \AtBeginDocument{\let\@wrindex\imki@wrindexsplit}
136 \let\imki@putindex\imki@putindexsplit
137 \let\imki@wrindexentry\imki@wrindexentrysplit
138 \let\imki@startidxunique\@undefined
139 \let\imki@wrindexunique\@undefined
140 \let\imki@putindexunique\@undefined
141\fi
```

File 234 lwarp-impnattypo.sty

§343 Package impnattypo

impnattypo (Pkg) impnattypo is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{impnattypo}[2019/03/04]

File 235 lwarp-index.sty

§344 Package index

(Emulates or patches code by David M. Jones.)

index (*Pkg*) index is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{index}[2004/01/20]

Use \theLWR@autoindex instead of \thepage. \@tempswatrue is used to force an immediate write to the index file instead of waiting until the end of the page.

```
13 \VerifyCommand[lwarp][index]{\renewindex}{B81B08BFE7A2F5CA7D84D4A5A40E7A44}
15 \xpatchcmd{\renewindex}
      {\x@renewindex[thepage]}
17
      {%
          \@tempswatrue%
18
          \x@renewindex[theLWR@autoindex]%
19
      }
20
21
      {}
22
      {\LWR@patcherror{index}{renewindex}}
Patched to set a new autoindex:
23 \VerifyCommand[lwarp][index]{\C58C10ACFC42D711D0DA8F4759BA951D}
25 \xpatchcmd{\@wrindex}
      {\begingroup}
27
      {%
          \addtocounter{LWR@autoindex}{1}%
                                                                lwarp
28
          \label{LWRindex-\arabic{LWR@autoindex}}%
29
                                                       lwarp
          \begingroup%
30
      }
31
32
      {}
      {\LWR@patcherror{index}{@wrindex}}
\AtBeginDocument lwarp core \lets \@wrindex to \LWR@wrindex. Since the index
package has been loaded, \let to its version instead:
34 \let\LWR@index@wrindex\@wrindex
36 \AtBeginDocument{
37 \let\@wrindex\LWR@index@wrindex
38 }
Modified to add \index@prologue:
39 \AtBeginDocument{
40 \renewenvironment*{theindex}{%
      \LWR@indexsection{\indexname}%
41
      \ifx\index@prologue\@empty\else
42
43
          \index@prologue
          \bigskip
44
45
      \LetLtxMacro\item\LWR@indexitem%
      \LetLtxMacro\subitem\LWR@indexsubitem%
47
      \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
48
49 }{}
50 }% AtBeginDocument
Disabled:
51 \def\@showidx#1{}
52 \let\@texttop\relax
53 \renewcommand*{\raggedbottom}{}
54 \renewcommand*{\flushbottom}{}
55 \renewcommand*{\markboth}[2]{}
56 \renewcommand*{\markright}[1]{}
```

File 236 lwarp-inputtrc.sty

§ 345 Package inputtrc

(Emulates or patches code by Uwe Lück.)

inputtrc (*Pkg*) inputtrc is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{inputtrc}[2012/10/10]

Patched to remove extraneous spaces, which sometimes showed up in logos inside a lateximage.

```
2 \VerifyCommand[lwarp][inputtrc]{\IT@prim@input}{03F74081468CFB6308896BDEB61D1E23}
4\renewcommand*{\IT@prim@input}[1]{%
5 \typeout{\IT@indent\IT@currfile INPUTTING #1}%
6% ... TODO: option to write to '.log' only.
   \xdef\IT@filestack{{\IT@currfile}\IT@filestack}%
   \xdef\IT@currfile{#1}%
    \expandafter \gdef\expandafter \IT@indent\expandafter{%
     \IT@indent \IT@indent@unit}%
10
                                                  lwarp
    \@@input#1%
11
   \expandafter\IT@pop@indent\IT@indent \@nil% lwarp
    \expandafter\IT@pop@file \IT@filestack\@nil% lwarp
14
   \IT@maybe@returnmessage%% v0.2
15 }
```

File 237 lwarp-intopdf.sty

§346 Package intopdf

intopdf (*Pkg*) intopdf is emulated.

The filespec, MIME type, and description are ignored for now.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{intopdf}[2019/05/28]
```

```
2 \NewDocumentCommand{\attachandlink}{o m o m m}{%
3    \LWR@href{#2}{#5}%
4 }
```

File 238 lwarp-isomath.sty

§347 Package isomath

(Emulates or patches code by Günter Milde.)

isomath (*Pkg*) isomath is used as-is for svg math, and emulated for MATHJAX.

∆ MathJax sans

MATHJAX does not provide a sans math font, so sans is typeset as roman.

for HTML output: 1 \LWR@ProvidesPackagePass{isomath}[2012/09/04]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\let\mathbfit\boldsymbol}
4 \CustomizeMathJax{\let\mathsfbfit\mathbfit}% not sans
5 \CustomizeMathJax{\let\mathsfit\mathbfit} not sans
6 \CustomizeMathJax{\let\vectorsym\mathbfit}
7 \CustomizeMathJax{\let\matrixsym\mathbfit}
8 \CustomizeMathJax{\let\tensorsym\mathsfbfit}
9 \CustomizeMathJax{\let\mathboldsans\mathsfbfit}
10 \CustomizeMathJax{\let\mathbold\mathbfit}
11 \CustomizeMathJax{\let\mathsold\mathbfit}
11 \CustomizeMathJax{\let\mathsold\mathbfit}
not sans

File 239 lwarp-isotope.sty

12 \end{warpMathJax}

§ 348 Package

Package isotope

(Emulates or patches code by Heiko Bauke.)

isotope (*Pkg*) isotope is patched for use by lwarp with svg math, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{isotope}[2011/08/26]

```
2 \newcommand{\LWR@HTML@isotope@two}[2][]{%
      \renewcommand{\isotope@atomicnumber}{#1}%
3
4
      \edef\LWR@isotope@alttag{%
5
          \textbackslash(
6
          \textbackslash{}isotope
7
          [\isotope@nucleonnumber]%
8
          [\isotope@atomicnumber]%
9
          \{#2\}
          \textbackslash)%
10
      }%
11
    \ifbool{mathjax}%
12
      {\LWR@isotope@alttag}%
13
      {% SVG
14
          \m@th%
15
          \LWR@subsingledollar*%
16
17
          {% alt tag
              \LWR@isotope@alttag%
18
19
          }%
20
          {isotope}% add'l hashing
          {% contents
21
              \settowidth\@tempdimb{%
22
                   \ensuremath{\scriptstyle\isotope@nucleonnumber}%
23
              }%
24
              \settowidth\@tempdimc{%
25
                   \ensuremath{\scriptstyle\isotope@atomicnumber}%
26
27
              \ifdim\@tempdimb<\@tempdimc\@tempdimb=\@tempdimc\fi%
28
29
              \ensuremath{
30
                   {}%
                   ^{\makebox[\@tempdimb][r]{%
31
                       \ensuremath{%
32
```

```
\scriptstyle\isotope@nucleonnumber%
33
                      }% ensuremath
34
                  }}%
                  _{\makebox[\@tempdimb][r]{%
36
37
                      \ensuremath{%
                           \verb|\scriptstyle| isotope@atomicnumber%| \\
38
                      }% ensuremath
39
                  }}%
40
                  \isotopestyle{#2}%
41
              }% ensuremath
42
43
          }% contents
44
      }% SVG
45
    \endgroup%
46 }%
47 \LWR@formatted{isotope@two}
49 \begin{warpMathJax}
50 \CustomizeMathJax{%
      \newcommand{\LWRisotopetwo}[2][]{%
51
          {%
52
              \vphantom{\mathrm{#2}}%
53
              {}^{\LWRisotopenucleonnumber}_{#1}%
54
              \mathbf{42}%
55
56
          }%
57
      }%
58 }
59
60 \CustomizeMathJax{%
      61
          \def\LWRisotopenucleonnumber{#1}%
62
63
          \LWRisotopetwo%
      }%
64
65 }
66 \end{warpMathJax}
```

File 240 lwarp-jurabib.sty

§349 Package jurabib

13 }

(Emulates or patches code by Jens Berger.)

jurabib (*Pkg*) jurabib is patched for use by lwarp.

```
15 \VerifyCommand[lwarp][jurabib]{\jbarchsig}{8D821FA370CBD0A61325D5A278E0A369}
17 \renewrobustcmd{\jbarchsig}[2]{%
      \ifjbweareinbib
         \settowidth{\jb@subarchitemwidth}{\jbsamesubarchindent+#1}%
19
       \setlength{\jb@subarchentrywidth}{\textwidth-\jb@subarchitemwidth-4em}%
20
        21 %
            #1\ifjb@dot\unskip\unskip\unskip.\fi
22
23 %
             \quad%
                        lwarp
24
25
             \ifthenelse{\equal{#2}{}}{\jbarchnameformat{#2}}%
26\,\%
           \end{tabular}
27
      \fi
28 }%
31 \VerifyCommand[lwarp][jurabib]{\jb@do@post@item}{4FD79AF40E8460C52306C33CF825B63F}
33 \xpatchcmd{\jb@do@post@item}
     34
35
     {}
36
     {}
     {\LWR@patcherror{jurabib}{jb@do@post@item 1}}
37
39 \xpatchcmd{\jb@do@post@item}
40
     {\multicolumn{2}{p{\columnwidth}}{\jb@@name}}
     {\jb@@name}
41
42
     {}
     {\LWR@patcherror{jurabib}{jb@do@post@item 2}}
43
44
45 \xpatchcmd{\jb@do@post@item}
     {\jb@biblaw@item & \jb@@fulltitle}
46
47
     {\jb@biblaw@item \quad \jb@@fulltitle}
48
     {}
     {\LWR@patcherror{jurabib}{jb@do@post@item 3}}
49
51 \xpatchcmd{\jb@do@post@item}
     {\end{tabular}}
52
     {}
53
54
     {}
     {\LWR@patcherror{jurabib}{jb@do@post@item 4}}
55
57 \xpatchcmd{\jb@do@post@item}
     {\begin{minipage}[t]{\bibnumberwidth}}
58
59
     {}
60
61
     {\LWR@patcherror{jurabib}{jb@do@post@item 5}}
62
63 \xpatchcmd{\jb@do@post@item}
     {\end{minipage}}
64
     {\quad}
65
66
     {}
     {\LWR@patcherror{jurabib}{jb@do@post@item 6}}
67
```

File 241 lwarp-karnaugh-map.sty

§350 Package karnaugh-map

(Emulates or patches code by Mattias Jacobsson.)

karnaugh-map (*Pkg*) karnaugh-map is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{karnaugh-map}[2017/02/20]

 \&

}%

40

41

This patch is needed only because lwarp changes the definition of &, and the original uses \inf to compare \emptyset with &. It is hard to patch this environment, so the entire thing is redefined here, with the lwarp modifications identified in comments.

```
2 \VerifyEnvironment[lwarp][karnaugh-map]{karnaugh-map}
      {FFA0270032620E79C8344E63AEDBF925}{08A76B622DBB34F033284513743C5F8C}
5 \RenewDocumentEnvironment{karnaugh-map}{s 0{4} 0{4} 0{1} 0{$X_1X_0$} 0{$X_3X_2$} 0{$X_5X_4$}} {%
    \begingroup
      % store map size {[START]
        \renewcommand{\@karnaughmap@var@mapsizex@}{#2}%
8
        \renewcommand{\@karnaughmap@var@mapsizey@}{#3}%
9
        \renewcommand{\@karnaughmap@var@mapsizez@}{#4}%
10
      % [FND]}
11
      % determinate if markings should be color or black and white
12
      \IfBooleanTF{#1}{%
13
        % should be black and white
14
        \renewcommand{\@karnaughmap@var@bw@}{1}%
15
16
17
        % should be color
18
        \renewcommand{\@karnaughmap@var@bw@}{0}%
19
      }%
20
      % find matching matrix template and alignment parameters {[START]
21
      \newcommand{\@karnaughmap@local@matrixtemplate@}{0}% '0' is considered as missing matrix template
22
        \newcommand{\@karnaughmap@local@maprealignmentx@}{0}%
23
        \newcommand{\@karnaughmap@local@maprealignmenty@}{0}%
24
      \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=221
25
          \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
26
27
                                        0 \&
                                                             1 \& \phantom{0} \\
                0 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \&
28
                                                                                   11
                1 \& |(000010)| \phantom{0} \& |(000011)| \phantom{0} \&
29
                                                                                   //
          \lambda \
                                                                              11
30
                                            \&
          }%
31
        \fi
32
      \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=241
33
          \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
34
                   \&
                                                            1 \& \phantom{00} \\
35
                00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \&
                                                                                    11
36
                01 \& |(000010)| \phantom{0} \& |(000011)| \phantom{0} \&
                                                                                    11
37
                11 \& |(000110)| \phantom{0} \& |(000111)| \phantom{0} \&
                                                                                    //
38
                10 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \&
39
                                                                                    //
```

۱&

//

\&

```
42
            \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=421
 43
                   \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
 44
                                                              00 \&
                                                                                                                                     11 \&
                                                                                                                                                                        10 \& \pha
 45
                             46
                             47
                 \phantom{00} \&
                                                                          \&
                                                                                                            \&
                                                                                                                                             \&
 48
                   }%
 49
                \fi
 50
            \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=441
 51
                   \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
 52
 53
                                                              00 \&
                                                                                                                                                                        10 \& \pha
 54
                             00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(00
 55
                             01 \ |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(000100)|
                             11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(00
 56
                             10 \ \| (001000) \| \rho (0) \ \ \| (001001) \| \rho (0) \ \ \| (001011) \| \rho (0) \ \ \| (001011) \| \rho (0) \ \ \| (001001) \| \rho (0) \ \ \| \rho (0
 57
                 \phantom{00} \&
                                                                         \&
                                                                                                           \&
                                                                                                                                             \&
 58
                                                                                                                                                                               \&
                   }%
 59
               \fi
 60
            \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=442
 61
                   \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
 62
                                \&
                                                                                                                                     11 \&
                                                                                                                                                                        10 \& \pha
 63
                             00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(00
 64
                             01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(00
 65
                             11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(00
 66
                             10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(00
 67
 68
                 \phantom{00} \&
                                                                          \&
                                                                                                                                             \&
                                                                                                                                                                               \&
 69
                   }%
                   \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
 70
 71
            \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=444
 72
 73
                   \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
                                                                                                                                                                        10 \& \pha
 74
                             00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(000010)|
 75
                             01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(00
 76
                             11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(00
 77
                             10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(001001)|
 78
                 \phantom{00} \&
                                                                         \&
                                                                                                           \&
 79
                                                                                                                                             \&
                                                                                                                                                                               \&
                             00 \& |(100000)| \phantom{0} \& |(100001)| \phantom{0} \& |(100011)| \phantom{0} \& |(10
 80
                             01 \& |(100100)| \phantom{0} \& |(100101)| \phantom{0} \& |(100111)| \phantom{0} \& |(100100)|
 81
                             11 \& |(101100)| \phantom{0} \& |(101101)| \phantom{0} \& |(101111)| \phantom{0} \& |(10
 82
                             10 \& |(101000)| \phantom{0} \& |(101001)| \phantom{0} \& |(101011)| \phantom{0} \& |(10
 83
                 \phantom{00} \&
                                                                                                                                             \&
 84
 85
                   \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
 86
                   \renewcommand{\@karnaughmap@local@maprealignmenty@}{-2.5}%
 87
               \fi
 88
            % [END]}
 89
         % test if a matrix template is found or not(aka "\@karnaughmap@local@matrixtemplate@" equals to '0')
 90
            \ifdefstring{\@karnaughmap@local@matrixtemplate@}{0}{% lwarp
 91
                \ifnum0=\@karnaughmap@local@matrixtemplate@% original
 92 %
               % print error if no template could be found
 93
                \PackageError{lwarp-karnaugh-map}{%
 94
                   Can not find a template fitting your specification
 95
              (\@karnaughmap@var@mapsizex@\space x \@karnaughmap@var@mapsizey@\space x
 96
                   \@karnaughmap@var@mapsizez@)%
 97
               }{%
 98
                   Existing templates have the following dimensions:
 99
                   2x2x1, 2x4x1, 4x2x1, 4x4x1, 4x4x2, and 4x4x4.
100
101
               }%
```

```
102 %
         \fi original
103
       }{\relax}%
                     lwarp
       \begin{tikzpicture}
104
         % grid
105
         % for all dimensions
106
107
       \draw[color=black, ultra thin] (0,0) grid (\@karnaughmap@var@mapsizex@,\@karnaughmap@var@mapsizey
108
         % when there are 2 sub maps
         \ifnum\@karnaughmap@var@mapsizez@=2
109
           \draw[color=black, ultra thin] (5,0) grid (9,4);
110
         \fi
111
         % when there are 4 sub maps
112
113
         \ifnum\@karnaughmap@var@mapsizez@=4
114
           \draw[color=black, ultra thin] (5,0) grid (9,4);
115
           \draw[color=black, ultra thin] (0,-5) grid (4,-1);
116
           \draw[color=black, ultra thin] (5,-5) grid (9,-1);
         \fi
117
         % labels
118
         % for all dimensions
119
       \node[above] at (\@karnaughmap@var@mapsizex@*0.5,\@karnaughmap@var@mapsizey@+0.9) {\small{#5}};
120
         \node[left] at (-0.9,\@karnaughmap@var@mapsizey@*0.5) {\small{#6}};
121
         % when there are 2 sub maps
122
         \ifnum\@karnaughmap@var@mapsizez@=2
123
124
           \node[above] at (7,4.9) {\small{#5}};
           % extra sub maps labels
125
           \node[below] at (2,-0.1) {\small{#7$=0$}};
126
127
           \node[below] at (7,-0.1) {\small{#7$=1$}};
128
         \fi
129
         % when there are 4 sub maps
130
         \ifnum\@karnaughmap@var@mapsizez@=4
131
           \node[above] at (7,4.9) {\small{#5}};
           \node[left] at (-0.9,-3) {\small{#6}};
132
           % extra sub maps labels
133
134
           \node[below] at (2,-0.1) {\small{#7$=00$}};
135
           \node[below] at (7,-0.1) {\small{#7$=01$}};
           \node[below] at (2,-5.1) {\small{#7$=10$}};
136
           \node[below] at (7,-5.1) {\small{#7$=11$}};
137
         \fi
138
         % data
139
         \matrix[
140
           matrix of nodes,
141
           ampersand replacement=\&,
142
           column sep={1cm,between origins},
143
           row sep={1cm,between origins},
144
       ] at (\@karnaughmap@var@mapsizex@*0.5+\@karnaughmap@local@maprealignmentx@,\@karnaughmap@var@map
145
           \@karnaughmap@local@matrixtemplate@%
146
147
         };
148 }{
149
       \end{tikzpicture}
150
    \endgroup
151 }
```

File 242 lwarp-keyfloat.sty

§351 Package keyfloat

(Emulates or patches code by Brian Dunn.)

keyfloat (Pkg) keyfloat is supported with a considerable amount of hacking. (It's a mashup of

lwarp, keyfloat, and tocdata.)

keywrap

If placing a \keyfig[H] inside a keywrap, use an absolute width for \keyfig, instead of lw-proportional widths. (The [H] option forces the use of a minipage, which internally adjusts for a virtual 6-inch wide minipage, which then corrupts the lw option.)

For wrapped figures, overhang and number of lines are ignored.

```
for HTML output:
```

```
1 \LWR@ProvidesPackagePass{keyfloat}[2019/09/23]
3 \IfPackageAtLeastTF{keyfloat}{2019/09/23}{\relax}{
      \PackageError{lwarp-keyfloat}
5
          The keyfloat package is out of date.\MessageBreak
6
          Update to keyfloat v2.01 2019/09/23 or later%
7
     }
8
     {%
9
          Please update the keyfloat package. It's worth it!%
10
11
      }
12 }
```

After keyfloat has loaded:

13 \AtBeginDocument{

\KFLT@LWR@hook@boxouter (Hook) [keyfloat]

Integration for keyfloat.

```
14 \providecommand*{\KFLT@LWR@hook@boxouter}{}
16 \renewcommand*{\KFLT@LWR@hook@boxouter}{%
      \ifbool{KFLT@keywrap}{%
17
18
          \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
19
              \setlength{\linewidth}{6in}%
20
21
              \setlength{\textwidth}{6in}%
22
              \setlength{\textheight}{9in}%
23
          }{}%
      3%
24
```

\KFLT@LWR@hook@keysubfloats (*Hook*) [keyfloat]

Integration for keyfloat.

\normalcolor%

 ${\tt 27 \ LetLtxMacro\ KFLT@LWR@hook@keysubfloats\ KFLT@LWR@hook@boxouter}$

```
\KFLT@LWR@hook@keyfloatsminipagentegration for keyfloat.
```

25 26 }

```
(Hook) [keyfloat]
```

```
28 \let\KFLT@LWR@hook@keyfloatsminipage\relax
29 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
30 \newenvironment*{KFLT@LWR@hook@keyfloatsminipage}[1]{}{}
```

(Hook) [keyfloat]

\KFLT@LWR@hook@keyfloats Integration for keyfloat.

```
{\tt 31 \ LetLtxMacro\ KFLT@LWR@hook@keyfloats\ KFLT@LWR@hook@boxouter}
```

```
33 \VerifyCommand[lwarp][keyfloat]{\KFLT@maybeendfloatrow}{ABD652AC104E3CF79D66B92BC7E4E2D7}
```

```
35 \renewcommand*{\KFLT@maybeendfloatrow}{%
                 \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}%
37
                            {}% thiscol < numcols
38
                            {% >=
                                       \defcounter{KFLT@thiscol}{0}%
39
                            }%
40
41 }%
42
43 \end{[warp][keyfloat]} \{\hspace{linewidth} 17F751691BBEDD3459F494B072DC2F11\} \} The state of the property 
45 \renewcommand{\KFLT@trackrows}%
  If are nested inside a keyfloats or a subfloat:
                 \ifboolexpr{%
47
                            test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
48
49
                            bool{KFLT@inkeysubfloats}%
                }%
50
                 {% nested
51
  Tracks row start and end:
                            \KFLT@maybestartfloatrow%
  Possibly fill space between columns:
                            \ifnumgreater{\value{KFLT@thiscol}}{1}%
53
                                       {%
54
55 %
                                                        \hfill%
56
                                       }%
57
                                       {}%
58
                 }% nested
59
                 {}% not nested
60 }
 61 \end{cases}  \{C14A907612A43563404BEEC3F9FB10A8\} 
63 \RenewDocumentCommand{\KFLT@onefigureimage}{m}
64 {%
65 \LWR@traceinfo{KFLT@onefigureimage}%
66% \begin{lrbox}{\KFLT@envbox}%
67 \ifthenelse{\NOT\equal{\KFLT@lw}{}}%
                {%
                            69
70
                                       \KFLT@frame{%
71
                                                   \includegraphics%
72
                                                   [%
73
                                                              scale=\KFLT@s,%
74
                                                              width=\KFLT@imagewidth,%
75
                                                              height=\KFLT@h,%
76
77
                                                              \KFLT@keepaspectratio,%
                                                  ]{#1}%
78
                                      }%
79
                            }%
80
                            {%
81
```

```
82
               \KFLT@frame{\includegraphics%
               [scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}%
83
           }%
84
85
      }%
86
      {% not linewidth
           \left( \KFLT@w \right) 
87
           {% width is given
88
               \left( \KFLT@h \right) 
89
               {% w and h
90
                   \KFLT@frame{\includegraphics[%
91
                       scale=\KFLT@s,%
92
93
                       width=\KFLT@imagewidth,%
94
                       height=\KFLT@h,%
95
                       \KFLT@keepaspectratio,%
96
                   ]{#1}}%
               }% w and h
97
               {% only w
98
                   \KFLT@frame{\includegraphics%
99
                   [scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}%
100
               }% only w
101
           }% width is given
102
           {% width is not given
103
               \left( \left( KFLT@h \right) \right) 
104
105
               {%
106
                   \KFLT@frame{\includegraphics%
107
                   [scale=\KFLT@s,height=\KFLT@h]{#1}}%
108
               }%
               {%
109
                   \KFLT@frame{\includegraphics%
110
                   [scale=\KFLT@s]{#1}}%
111
               }%
112
           }% width is not given
113
      }% not linewidth
114
115% \end{lrbox}%
116% \unskip%
117% \KFLT@findenvboxwidth%
118% \begin{turn}{\KFLT@r}%
119 % \KFLT@frame{\usebox{\KFLT@envbox}}%
120% \unskip%
121 % \end{turn}%
122 \LWR@traceinfo{KFLT@onefigureimage: done}%
123 }
124 \VerifyEnvironment[lwarp][keyfloat]{KFLT@boxinner}
      {44BA9E3F4EA1B3E533F47377BA47F145}{590DE3AADA8DF85EF6E1589B41F0D4F6}
125
126
127 \RenewDocumentEnvironment{KFLT@boxinner}{}
128 {%
129
       \LWR@traceinfo{KFLT@boxinner}%
      \LWR@stoppars%
130
      \minipagefullwidth%
131
      \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
132
           \fminipage{\KFLT@imagewidth}%
133
134
      }{%
135
           \minipage{\KFLT@imagewidth}%
136
      }%
137 }
138 {%
      \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
139
           \endfminipage%
140
```

```
141
       }{%
142
           \endminipage%
143
144
       \LWR@startpars%
       \LWR@traceinfo{KFLT@boxinner: done}%
145
146 }
147 \newcommand*{\LWR@KFLT@settextalign}[1]{%
       148
       \ifcsstring{KFLT@#1textalign}{\centering}%
149
           {\def\LWR@KFLT@textalign{center}}%
150
151
           {}%
       \ifcsstring{KFLT@#1textalign}{\raggedleft}%
152
           {\def\LWR@KFLT@textalign{right}}%
153
154
           {}%
155
       \ifcsstring{KFLT@#1textalign}{\raggedright}%
156
           {\def\LWR@KFLT@textalign{left}}%
157
           {}%
158 }
159
160 \VerifyCommand[lwarp][keyfloat]{\KFLT@addtext}{C086CC818525A9B03EDEACC02609A3BE}
162 \renewcommand{\KFLT@addtext}[1]
163 {%
 Is there text to add?
       \ifcsempty{KFLT@#1t}%
164
       {}% no text
165
       {% text to add
166
           {% local
167
 Add some space, then create a <div> to contain the text:
           \addvspace{\smallskipamount}%
168
           \LWR@KFLT@settextalign{#1}%
169
170
           \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
 Set the alignment and some text parameters:
171 %
             \csuse{KFLT@#1textalign}%
172 %
             \footnotesize%
173
           \left\{ \begin{array}{l} \left( 1.5ex \right) \end{array} \right\}
174
           \setlength{\parindent}{0em}%
 Typeset the actual text:
175
           \csuse{KFLT@#1t}%
 Close it all out with a little more space:
           \end{BlockClass}%
176
177 %
             \par\addvspace{2ex}%
           }% local
178
       }% text to add
179
180 }
{\tt 182 \setminus IfPackageLoadedTF\{tocdata\}}
```

183 { }

```
184 {% tocdata not loaded
                         186
                                 \newcommand*{\LWR@KFLT@setnamealign}[1]{%
                         187
                                     \def\LWR@KFLT@textalign{justify}%
                         188
                                     \ifstrequal{#1}{\centering}%
                                         {\def\LWR@KFLT@textalign{center}}%
                         189
                                         {}%
                         190
                                     \ifstrequal{#1}{\raggedleft}%
                         191
                                         {\def\LWR@KFLT@textalign{right}}%
                         192
                         193
                                         {}%
                         194
                                     \ifstrequal{#1}{\raggedright}%
                         195
                                         {\def\LWR@KFLT@textalign{left}}%
                         196
                         197
                                 }
                         198
                               \VerifyCommand[lwarp][keyfloat]{\KFLT@@addartisttext}{35968ED08D9BE09FF1B45E1E40AFE9A7}
                         199
                         200
                                 \renewcommand*{\KFLT@@addartisttext}[3]{%
                         201
                           Add space and create the name inside a <div>:
                         202 %
                                       \addvspace{\medskipamount}%
                         203 %
                                   \begin{minipage}{\linewidth}%
                         204
                                     \LWR@KFLT@setnamealign{#3}%
                         205
                                     \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
                           Text alignment is #3, and depends on artist or author:
                         206 %
                                   #3%
                           #1 is empty or 'subgrp'
                           #2 is empty for artist, 'u' for author:
                                     \footnotesize\textsc{%
                         207
                                         \KFLT@optionalname{\csuse{KFLT@#1a#2p}}%
                         208
                                         \KFLT@optionalname{\csuse{KFLT@#1a#2f}}%
                         209
                                         \csuse{KFLT@#1a#2l}%
                         210
                                         \csuse{KFLT@#1a#2s}%
                         211
                                     }%
                         212
                         213 %
                                   \end{minipage}%
                         214
                                     \end{BlockClass}
                         215 %
                                       \par\addvspace{2ex}%
                         216
                         217
                         218}% tocdata not loaded
                            [\langle offset \rangle] \{\langle type \rangle\}
KFLT@marginfloat
                         219 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
                         220 {%
                                 \uselengthunit{PT}%
                         221
                                 \LWR@BlockClassWP%
                         222
                                     {float:right; width:2in; margin:10pt}%
                         225
                                     (note)%
                                     \{ {\tt marginblock} \} \%
                         226
                         227
                                 \renewcommand*{\@captype}{#2}%
                                 228
```

```
229
       230 }
231 {%
232
       \endminipage%
233
       \endLWR@BlockClassWP%
234 }
235 \DeclareDocumentEnvironment{marginfigure}{o}
       {\begin{KFLT@marginfloat}{figure}}
236
       {\end{KFLT@marginfloat}}
237
238
239 \DeclareDocumentEnvironment{margintable}{o}
       {\begin{KFLT@marginfloat}{table}}
240
       {\end{KFLT@marginfloat}}
241
  \{\langle width \rangle\} \{\langle keyfloat \rangle\}
242 \DeclareDocumentEnvironment{keywrap}{m +m}
243 {%
       \begin{LWR@setvirtualpage}*
244
       \setlength{\LWR@templengthone}{#1}%
245
       \begin{LWR@BlockClassWP}%
246
           {%
247
           float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
248
               margin:10pt%
249
           }%
250
251
           {}%
252
           (note)%
253
           {marginblock}%
       \setlength{\linewidth}{.95\LWR@templengthone}%
254
       \booltrue{KFLT@keywrap}%
255
256
       \end{LWR@BlockClassWP}%
257
       \end{LWR@setvirtualpage}%
258
259 }
260 {}
261 }% AtBeginDocument
```

File 243 lwarp-keystroke.sty

```
§ 352 Package keystroke
```

for HTML output:

keywrap

(Emulates or patches code by Werner Fink.)

keystroke (*Pkg*) keystroke is patched for use by lwarp.

```
2 \newcommand*{\LWR@HTML@keystroke}[1]{
3  \InlineClass{keystroke}{#1}
4 }
5 \LWR@formatted{keystroke}
6
7
8 \newcommand*{\LWR@HTML@Return}{\keystroke{\HTMLunicode{021A9}}}
```

1 \LWR@ProvidesPackagePass{keystroke}[2010/04/23]

```
9 \LWR@formatted{Return}
12 \LWR@formatted{BSpace}
15 \LWR@formatted{Tab}
18 \LWR@formatted{UArrow}
20 \newcommand*{\LWR@HTML@DArrow}{\keystroke{\HTMLunicode{02193}}}
21 \LWR@formatted{DArrow}
23 \newcommand*{\LWR@HTML@LArrow}{\keystroke{\HTMLunicode{02190}}}
24 \LWR@formatted{LArrow}
26 \newcommand*{\LWR@HTML@RArrow}{\keystroke{\HTMLunicode{02192}}}
27 \LWR@formatted{RArrow}
29% Preserves the language options:
30 \VerifyCommand[lwarp][keystroke]{\Shift}{F86359C350A5BC1D264A4997F86C2DC2}
32 \LetLtxMacro\LWR@HTML@Shift\Shift
33 \xpatchcmd{\LWR@HTML@Shift}
     {$\Uparrow$}
35
     {\HTMLunicode{21D1}}
36
     {}
37
     {}
38 \LWR@formatted{Shift}
39
40 \VerifyCommand[lwarp][keystroke]{\PgUp}{CBB81948EFB5940DAD2B51644BB4B2BF}
41
42 \LetLtxMacro\LWR@HTML@PgUp\PgUp
43 \xpatchcmd{\LWR@HTML@PgUp}
     {$\uparrow$}
45
     {\HTMLunicode{2191}}
46
     {}
47
     {}
48 \LWR@formatted{PgUp}
50 \VerifyCommand[lwarp][keystroke]{\PgDown}{B55C849642BE07904975EC7E4D649CAD}
52 \LetLtxMacro\LWR@HTML@PgDown\PgDown
53 \xpatchcmd{\LWR@HTML@PgDown}
     {$\downarrow$}
     {\HTMLunicode{2193}}
     {}
57
     {}
58 \LWR@formatted{PgDown}
```

File 244 lwarp-kpfonts.sty

§353 Package kpfonts

(Emulates or patches code by Christophe Caignaert.)

kpfonts (*Pkg*) kpfonts is used as-is for svg math, and is emulated for MATHJAX.

∆ limitations

The MathJax emulation honors the options uprightRoman for \D only, classicReIm, frenchstyle for Greek only, upright for Greek only, uprightgreeks, slantedGreeks, and mathcalasscript.

The dedicated macros for Greek work correctly.

svg math should appear the same as the printed output.

for HTML output:

```
1 \LWR@ProvidesPackagePass{kpfonts}[2010/08/20]
\verb| 3 \land LWR@infoprocessing mathjax{kpfonts}| \\
5 \LWR@origRequirePackage{lwarp-common-mathjax-newpxtxmath}
7 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
9 \begin{warpMathJax}
10
11 \ifkp@calasscr
      \CustomizeMathJax{\let\LWRorigmathscr\mathscr}
      \CustomizeMathJax{\let\LWRorigmathcal\mathcal}
13
      \CustomizeMathJax{\let\mathscr\LWRorigmathcal}
14
      \CustomizeMathJax{\let\mathcal\LWRorigmathscr}
15
16\fi
17
18 \ifkp@upgrk % lowercase
      \LWR@mathjax@addgreek@l@up{}{}
19
20
      \LWR@mathjax@addgreek@l@it{other}{}
21 \else
      \LWR@mathjax@addgreek@l@up{other}{}
22
23 \fi
24
25 \ifkp@slGrk
      \LWR@mathjax@addgreek@u@it*{}{}
26
27
      \LWR@mathjax@addgreek@u@up*{other}{}
      \LWR@mathjax@addgreek@u@up*{var}{}
28
29 \else
      \LWR@mathjax@addgreek@u@it*{other}{}
31
      \LWR@mathjax@addgreek@u@it*{var}{}
32\fi
34 \LWR@mathjax@addgreek@u@up*{}{up}
35 \LWR@mathjax@addgreek@l@up{}{up}
37 \LWR@mathjax@addgreek@u@it*{}{sl}
38 \LWR@mathjax@addgreek@l@it{}{sl}
40 \CustomizeMathJax{\newcommand{\partialsl}{\mathord{\unicode{x1D715}}}}
41 \CustomizeMathJax{\let\partialup\uppartial}% not upright
43 \ifkp@oldReIm
44 \else
      \CustomizeMathJax{\renewcommand{\Re}_{\mathbb{R}e}}
45
46
      \CustomizeMathJax{\renewcommand{\Im}{\mathfrak{Im}}}
47\fi
49 \ifkp@Dcommand
      \ifkp@upRm%
50
          \CustomizeMathJax{
51
52
              \def\D#1{\mathbf{d}}\#1
```

```
53
          }
      \else
54
           \CustomizeMathJax{
               \label{lem:lose} $$ \def\D#1{\mathcal{d}}\#1$
56
57
      \fi
58
59\fi
60
61 \CustomizeMathJax{\let\pounds\mathsterling}
62 \CustomizeMathJax{\let\kppounds\mathsterling}
64 \CustomizeMathJax{\newcommand{\mathup}[1]{\mathrm{#1}}}% never sans
65 \CustomizeMathJax{\let\mathupright\mathup}
67 \end{warpMathJax}
```

File 245 lwarp-kpfonts-otf.sty

§ 354 Package

kpfonts-otf

(Emulates or patches code by Daniel Flipo.)

kpfonts-otf (Pkg) kpfonts-o

kpfonts-otf is used as-is for svg math, and is emulated for MATHJAX.

The MathJax emulation honors the options fancyReIm, mathcal, frenchstyle for Greek only, and mathcalasscript.

Also see the options for unicode-math, which is loaded by kpfonts-otf.

The unicode-math dedicated macros for Greek work correctly.

⚠ \mathversion

The MathJax emulation does not change with the use of \mathversion. Whatever emulation is established at the begin of the document will remain.

svg math should appear the same as the printed output.

```
for\ HTML\ output:
```

```
1 \LWR@ProvidesPackagePass{kpfonts-otf}[2020/06/20]
3 \LWR@infoprocessingmathjax{kpfonts-otf}
5 \LWR@origRequirePackage{lwarp-common-mathjax-nonunicode}
7 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
9 \begin{warpMathJax}
10
11 \ifkp@calasscr
      \CustomizeMathJax{\let\mathscr\mathcal}
12
13 \else
      \CustomizeMathJax{\let\mathcal\mathscr}
14
15\fi
16
17 \ifkp@frenchstyle
      \LWR@mathjax@addgreek@l@up{}{}
      \LWR@mathjax@addgreek@u@up*{}{}
19
20\fi
22 \ifkp@oldReIm
```

```
23
     \CustomizeMathJax{\renewcommand{\Re}_{\mathbb{R}e}}
     \CustomizeMathJax{\renewcommand{\Im}{\mathfrak{Im}}}
25 \else
26\fi
27
28 \ifkp@Dcommand
     \CustomizeMathJax{
29
         \label{lem:lose} $$ \def\D#1{\mathbb{Q}}\#1$
30
31
     }
32\fi
33
34 \CustomizeMathJax{\let\varint\int}
35 \CustomizeMathJax{\let\variint\iint}
36 \CustomizeMathJax{\let\variiint\iiint}
37 \CustomizeMathJax{\let\variiiint\iiiint}
38 \CustomizeMathJax{\let\varidotsint\idotsint}
40 \CustomizeMathJax{\newcommand{\varointctrclockwise}{%
     41
42 }}
44 \CustomizeMathJax{\newcommand{\oiintclockwise}{%
     \mathop{\unicode{x0222F}\!\!\unicode{x2938}}%
46 }}
47
48 \CustomizeMathJax{\newcommand{\oiintctrclockwise}{%
49
     \mathcal{X}^{\unicode} x2939 \!\ \unicode \x0222F}\
50 }}
51
52 \CustomizeMathJax{\newcommand{\varoiintclockwise}{%
     \mathop{\unicode{x0222F}\!\!\unicode{x2938}}%
53
54 }}
55
56 \CustomizeMathJax{\newcommand{\varoiintctrclockwise}{%
     \mathop{\unicode{x2939}\!\!\unicode{x0222F}}%
58 }}
60 \CustomizeMathJax{\newcommand{\oiiintclockwise}{%
     \mathbf{x02230}\
61
62 }}
63
64 \CustomizeMathJax{\newcommand{\oiiintctrclockwise}{%
     \mathop{\unicode{x2939}\!\!\unicode{x02230}}%
65
66 }}
68 \CustomizeMathJax{\newcommand{\varoiiintclockwise}{%
     \mathbf{x02230}!\!\unicode{x2938}}%
70 }}
71
72 \CustomizeMathJax{\newcommand{\varoiiintctrclockwise}{%
     \mathop{\unicode{x2939}\!\!\unicode{x02230}}%
73
74 }}
75
76 \CustomizeMathJax{\newcommand{\sqiint}{%
     \mathbf{x2A16}\!\
77
78 }}
80 \CustomizeMathJax{\newcommand{\sqiiint}{%
     81
82 }}
```

```
84 \CustomizeMathJax{\let\widearc\overparen}
                 85 \CustomizeMathJax{\let\widearcarrow\overrightarrow}
                 86 \CustomizeMathJax{\let\overrightarc\overrightarrow}
                 88 \end{warpMathJax}
        File 246 lwarp-layaureo.sty
        Package layaureo
   layaureo (Pkg) layaureo is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{layaureo}[2004/09/16]
        File 247 lwarp-layout.sty
        Package layout
    layout (Pkg)
                 layout is ignored.
                  Discard all options for lwarp-layout:
for HTML output:
                  1 \LWR@ProvidesPackageDrop{layout}[2014/10/28]
                  {\tt 2 \NewDocumentCommand\{\layout\}\{s\}\{\}}\\
        File 248 lwarp-layouts.sty
        Package layouts
    layouts (Pkg) layouts is ignored.
```

1 \LWR@ProvidesPackageDrop{layouts}[2009/09/02]

2 \newif\ifoddpagelayout 3 \oddpagelayouttrue 4 \newif\iftwocolumnlayout 5 \twocolumnlayoutfalse 6 \newif\ifdrawmarginpars 7 \drawmarginparstrue 8 \newif\ifdrawparameters 9 \drawparameterstrue 10 \newif\iflistaspara 11 \listasparatrue 12 \newif\ifruninhead 13 \runinheadfalse 14 \newif\ifprintparameters 15 \printparameterstrue 16 \newif\ifdrawdimensions 17 \drawdimensionsfalse

§355

§ 356

§357

for HTML output:

```
18 \newif\ifprintheadings
19 \printheadingstrue
20 \newcommand{\testdrawdimensions}{}
22 \newcommand{\setlabelfont}[1]{}
23 \newcommand{\setparametertextfont}[1]{}
24 \newcommand{\setvaluestextsize}[1]{}
25 \newcommand{\setlayoutscale}[1]{}
26 \newcommand{\setuplayouts}{}
27 \newcommand{\printinunitsof}[1]{}
28 \newcommand{\prntlen}[1]{}
29 \newcommand{\trypaperwidth}[1]{}
30 \newcommand{\trypaperheight}[1]{}
31 \newcommand{\tryhoffset}[1]{}
32 \newcommand{\tryvoffset}[1]{}
33 \newcommand{\trytopmargin}[1]{}
34 \newcommand{\tryheadheight}[1]{}
35 \newcommand{\tryheadsep}[1]{}
36 \newcommand{\trytextheight}[1]{}
37 \rightarrow {\t tryfootskip}[1]{\}
38 \newcommand{\tryoddsidemargin}[1]{}
39 \newcommand{\tryevensidemargin}[1]{}
40 \newcommand{\trytextwidth}[1]{}
41 \newcommand{\trymarginparsep}[1]{}
42 \newcommand{\trymarginparwidth}[1]{}
43 \newcommand{\trymarginparpush}[1]{}
44 \newcommand{\trycolumnsep}[1]{}
45 \newcommand{\trycolumnseprule}[1]{}
46 \newcommand{\setfootbox}[2]{}
47 \newcommand{\currentpage}{}
48 \newcommand{\drawpage}{(draw page)}
49 \newcommand{\pagediagram}{(page diagram)}
50 \newcommand{\pagedesign}{(page design)}
51 \newcommand{\pagevalues}{(page values)}
52 \newcommand{\trystockwidth}[1]{}
53 \newcommand{\trystockheight}[1]{}
54 \newcommand{\trytrimedge}[1]{}
55 \newcommand{\trytrimtop}[1]{}
56 \newcommand{\tryuppermargin}[1]{}
57 \newcommand{\tryspinemargin}[1]{}
58 \newcommand{\currentstock}{}
59 \newcommand{\drawstock}{(draw stock)}
60 \newcommand{\stockdiagram}{(stock diagram)}
61 \newcommand{\stockdesign}{(stock design)}
62 \newcommand{\stockvalues}{(stock values)}
63 \newcommand{\tryitemindent}[1]{}
64 \newcommand{\trylabelwidth}[1]{}
65 \newcommand{\trylabelsep}[1]{}
66 \newcommand{\tryleftmargin}[1]{}
67 \newcommand{\tryrightmargin}[1]{}
68 \newcommand{\trylistparindent}[1]{}
69 \newcommand{\trytopsep}[1]{}
70 \newcommand{\tryparskip}[1]{}
71 \newcommand{\trypartopsep}[1]{}
72 \newcommand{\tryparsep}[1]{}
73 \newcommand{\tryitemsep}[1]{}
74 \newcommand{\currentlist}{}
75 \newcommand{\drawlist}{(draw list)}
76 \newcommand{\listdiagram}{(list diagram)}
77 \newcommand{\listdesign}{(list design)}
```

```
78 \newcommand{\listvalues}{(list values)}
79 \newcommand{\tryfootins}[1]{}
80 \newcommand{\tryfootnotesep}[1]{}
81 \newcommand{\tryfootnotebaseline}[1]{}
82 \newcommand{\tryfootruleheight}[1]{}
83 \newcommand{\tryfootrulefrac}[1]{}
84 \newcommand{\currentfootnote}{}
85 \newcommand{\drawfootnote}{(draw footnote)}
86 \newcommand{\footnotediagram}{(footnote diagram)}
87 \newcommand{\footnotedesign}{(footnote design)}
88 \newcommand{\footnotevalues}{(footnote values)}
89 \newcommand{\tryparindent}[1]{}
90 \newcommand{\tryparlinewidth}[1]{}
91 \newcommand{\tryparbaselineskip}[1]{}
92 \newcommand{\currentparagraph}{}
93 \newcommand{\drawparagraph){(draw paragraph)}
94 \newcommand{\paragraphdiagram}{(paragraph diagram)}
95 \newcommand{\paragraphdesign}{(paragraph design)}
96 \newcommand{\paragraphvalues}{(paragraph values)}
97 \newcommand{\trybeforeskip}[1]{}
98 \newcommand{\tryafterskip}[1]{}
99 \newcommand{\tryindent}[1]{}
100 \newcommand{\currentheading}{}
101 \newcommand{\drawheading}[1]{(draw heading)}
102 \newcommand{\headingdiagram}[1]{(heading diagram)}
103 \newcommand{\headingdesign}[1]{(heading design)}
104 \newcommand{\headingvalues}{(heading values)}
105 \newcommand{\trytextfloatsep}[1]{}
106 \newcommand{\tryfloatsep}[1]{}
107 \newcommand{\tryintextsep}[1]{}
108 \newcommand{\trytopfigrule}[1]{}
109 \newcommand{\trybotfigrule}[1]{}
110 \newcommand{\currentfloat}{}
111 \newcommand{\drawfloat}{(draw float)}
112 \newcommand{\floatdiagram}{(float diagram)}
113 \newcommand{\floatdesign}{(float design)}
114 \newcommand{\floatvalues}{(float values)}
115 \newcommand{\trytotalnumber}[1]{}
116 \newcommand{\trytopnumber}[1]{}
117 \newcommand{\trybottomnumber}[1]{}
118 \newcommand{\trytopfraction}[1]{}
119 \newcommand{\trytextfraction}[1]{}
120 \newcommand{\trybottomfraction}[1]{}
121 \newcommand{\currentfloatpage}{}
122 \newcommand{\drawfloatpage}{(draw floatpage)}
123 \newcommand{\floatpagediagram}{(floatpage diagram)}
124 \newcommand{\floatpagedesign}{(floatpage design)}
125 \newcommand{\floatpagevalues}{(floatpage values)}
126 \newcommand{\trytocindent}[1]{}
127 \newcommand{\trytocnumwidth}[1]{}
128 \newcommand{\trytoclinewidth}[1]{}
129 \newcommand{\trytocrmarg}[1]{}
130 \newcommand{\trytocpnumwidth}[1]{}
131 \newcommand{\trytocdotsep}[1]{}
132 \newcommand{\currenttoc}{}
133 \newcommand{\drawtoc}{(draw toc)}
134 \newcommand{\tocdiagram}{(toc diagram)}
135 \newcommand{\tocdesign}{(toc design)}
136 \newcommand{\tocvalues}{(toc values)}
137 \newcommand{\drawaspread}[8][0]{(a spread)}
```

```
138\newcommand{\drawfontframe}[1]{(font frame)}
139\newcommand{\drawfontframelabel}[1]{}
```

File 249 lwarp-leading.sty

§358 Package leading

leading (Pkg) leading is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]

2 \newcommand\leading[1]{}

File 250 lwarp-leftidx.sty

§359 Package leftidx

(Emulates or patches code by Harald Harders.)

leftidx (Pkg) leftidx works as-is with svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{leftidx}[2003/09/24]

2 \begin{warpMathJax}

 $\label{lem:command} $$ \customizeMathJax{\newcommand{\leftidx}[3]{{\vphantom{#2}}$#1#2#3}} $$

5 \end{warpMathJax}

File 251 lwarp-letterspace.sty

§ 360 Package letterspace

(Emulates or patches code by R SCHLICHT.)

letterspace (*Pkg*) letterspace is a subset of microtype, which is pre-loaded by lwarp. All user options and macros are ignored and disabled.

_.

for HTML output: Discard all options for lwarp-letterspace:

1 \LWR@ProvidesPackageDrop{letterspace}[2018/01/14]

2 \newcommand*\lsstyle{}

3 \newcommand\textls[2][]{}

4 \def\textls#1#{}

5 \newcommand*\lslig[1]{#1}

File 252 lwarp-lettrine.sty

§361 Package lettrine

(Emulates or patches code by Daniel Flipo.)

lettrine (Pkg) lettrine is emulated.

for HTML output:

Discard all options for lwarp-lettrine:

```
1 \LWR@ProvidesPackageDrop{lettrine}[2018-08-28]
```

The initial letter is in a \leq span \geq of class lettrine, and the following text is in a \leq span \geq of class lettrinetext. \lettrine $[\langle keys \rangle] \{\langle letter \rangle\} \{\langle letter \rangle\}$

```
2 \DeclareDocumentCommand{\lettrine}{o m m}{%
      \InlineClass{lettrine}{#2}\InlineClass{lettrinetext}{#3} % extra space
4 }
6 \newcounter{DefaultLines}
7\setcounter{DefaultLines}{2}
8 \newcounter{DefaultDepth}
9 \newcommand*{\DefaultOptionsFile}{\relax}
10 \newcommand*{\DefaultLoversize}{0}
11 \newcommand*{\DefaultLraise}{0}
12 \newcommand*{\DefaultLhang}{0}
13 \newdimen\DefaultFindent
14 \setlength{\DefaultFindent}{\z@}
15 \newdimen\DefaultNindent
16 \setlength{\DefaultNindent}{0.5em}
17 \newdimen\DefaultSlope
18 \setlength{\DefaultSlope}{\z@}
19 \newdimen\DiscardVskip
20 \setlength{\DiscardVskip}{0.2\p@}
21 \newif\ifLettrineImage
22 \newif\ifLettrineOnGrid
23 \newif\ifLettrineRealHeight
25 \newcommand*{\LettrineTextFont}{\scshape}
26 \newcommand*{\LettrineFontHook}{}
{\tt 27 \ lectrineFont}[1] {\tt InlineClass{lettrine}{\#1}} \\
28 \newcommand*{\LettrineFontEPS}[1]{\includegraphics[height=1.5ex]{\#1}}
```

File 253 lwarp-libertinust1math.sty

§ 362 Package

Package libertinust1math

(Emulates or patches code by Michael Sharpe.)

libertinust1math (Pkg)

libertinust1math is used as-is for svg math, and is emulated for MATHJAX.

The MathJax emulation honors frenchmath for Greek but not Latin characters, and slantedGreek, uprightGreek, and ISO also adjust Greek characters. MathJax cannot yet honor options for adjusting Latin characters.

The dedicated macros for upright and italic Greek letters do work correctly.

Some of the symbol font macros such as \mathsfbf do not use a sans font because MathJax does not yet have sans Greek.

svg math honors all font choices, and should appear the same as the printed output.

for HTML output:

```
1 \LWR@ProvidesPackagePass{libertinust1math}[2020/06/10]
 3 \LWR@infoprocessingmathjax{libertinust1math}
 4 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
 6 \begin{warpMathJax}
 8 \iflibus@slantedG
              \LWR@mathjax@addgreek@u@it*{}{}
10 \else
              \LWR@mathjax@addgreek@u@up*{}{}
11
12\fi
14 \LWR@mathjax@addgreek@u@it*{}{it}
15 \LWR@mathjax@addgreek@u@up*{up}{}
16 \LWR@mathjax@addgreek@u@up*{}{up}
18 \iflibus@frenchm
             \LWR@mathjax@addgreek@l@up{}{}
19
20 \else
              \LWR@mathjax@addgreek@l@it{}{}
21
22\fi
23
24 \LWR@mathjax@addgreek@l@it{}{it}
25 \LWR@mathjax@addgreek@l@up{}{up}
26 \LWR@mathjax@addgreek@l@up{up}{}
28 \CustomizeMathJax{\let\uppartial\partial}% not upright
29 \CustomizeMathJax{\let\mathsfbf\mathbf}% not sans
30% \CustomizeMathJax{\newcommand{\mathsfbf}[1]{%
31 %
                  \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}% not greek
32 % }}% not sans
34% \CustomizeMathJax{\newcommand{\mathbfit}[1]{\boldsymbol{#1}}}
35 \CustomizeMathJax{\let\mathbfit\boldsymbol}
36% \CustomizeMathJax{\newcommand{\mathsfbfit}[1]{\boldsymbol{#1}}}% not sans
37 \CustomizeMathJax{\left<text> not sans
38% \CustomizeMathJax{\newcommand{\mathsfbfit}[1]{%
39 %
                  \mmlToken{mi}[mathvariant="sans-serif-bold-italic"]{#1}% not greek
40 % }}%
41 \CustomizeMathJax{\let\mathsfit\mathit}% not sans
42 % \CustomizeMathJax{\newcommand{\mathsfit}[1]{%
                  \label{lem:local_mathvariant="sans-serif-italic"]{#1}% not greek} % \label{lem:local_mathvariant} % \label{local_mathvariant} % \label{l
43 %
44 % }}
46 \CustomizeMathJax{\let\vectorsym\mathbfit}
47 \CustomizeMathJax{\let\matrixsym\mathbfit}
48 \CustomizeMathJax{\let\tensorsym\mathsfbfit}
49 \CustomizeMathJax{\let\mathboldsans\mathsfbfit}
50 \CustomizeMathJax{\let\mathbold\mathbfit}
```

```
51 \CustomizeMathJax{\let\dlb\lBrack}
 52 \CustomizeMathJax{\let\drb\rBrack}
 54 \CustomizeMathJax{\let\sqrtsign\sqrt}
 56 \CustomizeMathJax{\let\smallintsl\smallint}
 57\CustomizeMathJax{\newcommand{\smalliintsl}{\mathop{\unicode{x222C}}\limits}}
 58 \costomizeMathJax{newcommand{\smalliiintsl}{\mathop{\unicode{x222D}}}\limits}}
 59 \CustomizeMathJax{\newcommand{\smalliiiintsl}{\mathop{\unicode{x2A0C}}\limits}}
  61 \costomizeMathJax{newcommand{\smalloiintsl}{\mathop{\unicode{x222F}}\limits}} \\
 63 \CustomizeMathJax{\let\smallintup\smallint}
 \label{linear} $$ 64 \subset \mathcal{X}_{\alpha}(\) $$ 64 \subset \mathcal{X}_{\alpha}(\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $$ (\) $
 65 \CustomizeMathJax{\newcommand{\smalliiintup}{\mathop{\unicode{x222D}}\\limits}}
 68 \CustomizeMathJax{\newcommand{\smalloiintup}{\mathop{\unicode{x222F}}\limits}}
 70 \CustomizeMathJax{\let\intslop\int}
 71 \CustomizeMathJax{\newcommand{\iintslop}{\mathop{\unicode{x222C}}\limits}}
 72 \CustomizeMathJax{\newcommand{\iiintslop}{\mathop{\unicode{x222D}}\limits}}
 73 \CustomizeMathJax{\newcommand{\iiiintslop}{\mathop{\unicode{x2A0C}}\limits}}
 74 \CustomizeMathJax{\let\ointslop\oint}
 75 \CustomizeMathJax{\newcommand{\oiintslop}{\mathop{\unicode{x222F}}\limits}}
 76 \CustomizeMathJax{\newcommand{\oiiintslop}{\mathop{\unicode{x2230}}\limits}}
 78 \CustomizeMathJax{\let\intupop\int}
 79 \CustomizeMathJax{\newcommand{\iintupop}{\mathop{\unicode{x222C}}\limits}}
 80 \costomizeMathJax{\newcommand{\iiintupop}{\mathop{\unicode{x222D}}\limits}}
  81 \customize MathJax {\newcommand \iiiintupop} {\newcommand \iiintupop} {\newcommand \iiintupop} {\newcommand \iiintupop} {\newcommand \iintupop} {\newcomma
 82 \CustomizeMathJax{\let\ointupop\oint}
 83 \CustomizeMathJax{\newcommand{\oiintupop}{\mathop{\unicode{x222F}}\limits}}
 84 \CustomizeMathJax{\newcommand{\oiiintupop}{\mathop{\unicode{x2230}}\limits}}
 86 \CustomizeMathJax{\newcommand{\smalliint}{\mathop{\unicode{x222C}}\limits}}
 87 \customizeMathJax{\newcommand{\smalliiint}{\mathop{\unicode{x222D}}\limits}}
 88 \costomizeMathJax{\newcommand{\smalliiiint}{\mathop{\unicode{x2A0C}}\limits}} \\
 89 \CustomizeMathJax{\newcommand{\smalloint}{\mathop{\unicode{x222E}}\limits}}
 90 \costomizeMathJax{\newcommand{\smalloiint}{\mode{x222F}}\limits}}
 92 \CustomizeMathJax{\let\intop\int}
 93 \CustomizeMathJax{\newcommand{\iintop}{\mathop{\unicode{x222C}}}\limits}}
 94 \CustomizeMathJax{\newcommand{\iiintop}{\mathop{\unicode{x222D}}\limits}}
 95 \CustomizeMathJax{\newcommand{\iiiintop}{\mathop{\unicode{x2A0C}}\limits}}
 96 \CustomizeMathJax{\let\ointop\oint}
 97 \CustomizeMathJax{\newcommand{\oiintop}{\mathop{\unicode{x222F}}\limits}}
 98 \CustomizeMathJax{\newcommand{\oiiintop}{\mathop{\unicode{x2230}}\limits}}
100 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicode{x222F}}\limits}}
\label{local-continuity} $$102 \subset \mathcal{X}_{newcommand}\simeq \mathcal{X}_{newcommand}\
\label{loss} 103 \land CustomizeMathJax{\newcommand{\bigsqcap}{\mathop{\unicode{x2A05}}}} \\
\label{local_newcommand_lambda} $$104 \code{x29F8}}\}
\label{loss} $$105 \code{x29F9}}$
106 \CustomizeMathJax{\let\prodop\prod}
107 \CustomizeMathJax{\let\coprodop\coprod}
108 \CustomizeMathJax{\let\sumop\sum}
109 \CustomizeMathJax{\let\bigwedgeop\bigwedge}
110 \CustomizeMathJax{\let\bigveeop\bigvee}
```

```
111 \CustomizeMathJax{\let\bigcapop\bigcap}
112 \CustomizeMathJax{\let\bigcupop\bigcup}
113 \CustomizeMathJax{\let\xsolop\xsol}
114 \CustomizeMathJax{\let\xbsolop\xbsol}
115 \CustomizeMathJax{\let\bigodotop\bigodot}
116 \CustomizeMathJax{\let\bigoplusop\bigoplus}
117 \CustomizeMathJax{\let\bigotimesop\bigotimes}
118 \CustomizeMathJax{\let\bigcupdotop\bigcupdot}
119 \CustomizeMathJax{\let\biguplusop\biguplus}
{\tt 120 \ CustomizeMathJax\{\ let\ bigsqcapop\ bigsqcap)}}
121 \CustomizeMathJax{\let\bigsqcupop\bigsqcup}
\label{localize} $$123 \subset \mathcal{H}_{\infty}[1]_{\mathcal{H}_{\infty}}(0)$ $$123 \subset \mathcal{H}_{\infty}(0)$ $$123 \subset \mathcal{H}_{\infty}(0
125 \CustomizeMathJax{\newcommand{\oturnedcomma}[1]{\mathord{#1\unicode{x00312}}}}
\label{localize} $$126 \subset \mathcal{M}_{newcommand}(\operatorname{locommatopright}_{1}_{\mathbf{mathord}_{1}\subseteq \mathcal{M}_{1}})$$
128 \CustomizeMathJax{\newcommand{\leftharpoonaccent}[1]{\mathord{#1\unicode{x020D0}}}}}
\label{local-cont} $$129 \subset \mathcal{I}_{newcommand{righthar poon accent}[1]_{\mathbf{1}_{newcommand{x020D1}}}}$$
131 \CustomizeMathJax{\let\rightarrowaccent\vec}
132
133 \CustomizeMathJax{\newcommand{\leftrightarrowaccent}[1]{\mathord{#1\unicode{x020E1}}}}}
134 \CustomizeMathJax{\newcommand{\annuity}[1]{\mathord{#1\unicode{x020E7}}}}
135 \CustomizeMathJax{\newcommand{\widebridgeabove}[1]{\mathord{#1\unicode{x020E9}}}}
136 \CustomizeMathJax{\newcommand{\asteraccent}[1]{\mathord{#1\unicode{x020F0}}}}
138% neutralized:
139 \CustomizeMathJax{\newcommand{\braceld}{}}
140 \CustomizeMathJax{\newcommand{\bracerd}{}}
141 \CustomizeMathJax{\newcommand{\bracelu}{}}
142 \CustomizeMathJax{\newcommand{\braceru}{}}
143 \CustomizeMathJax{\newcommand{\braceex}{}}
144 \CustomizeMathJax{\newcommand{\bracemu}{}}
145 \CustomizeMathJax{\newcommand{\bracemd}{}}
146 \CustomizeMathJax{\newcommand{\parenld}{}}
147 \CustomizeMathJax{\newcommand{\parenrd}{}}
148 \CustomizeMathJax{\newcommand{\parenlu}{}}
149 \CustomizeMathJax{\newcommand{\parenru}{}}
150 \CustomizeMathJax{\newcommand{\bracketld}{}}
151 \CustomizeMathJax{\newcommand{\bracketrd}{}}
{\tt 152 \CustomizeMathJax{\newcommand{\bracketlu}{}}}
153 \CustomizeMathJax{\newcommand{\bracketru}{}}
154 \CustomizeMathJax{\newcommand{\bracketex}{}}
155 \CustomizeMathJax{\newcommand{\parenex}{}}
157 \CustomizeMathJax{\newcommand{lhook}{~}}
158 \CustomizeMathJax{\newcommand{rhook}{~}}
159 \CustomizeMathJax{\newcommand{relbar}{-}}
160 \CustomizeMathJax{\newcommand{Relbar}{=}}
162 \CustomizeMathJax{\newcommand{\mapstochar}{\mathrel{\unicode{x21A6}}}}
164 \code{x0001B5}))
165 \CustomizeMathJax{\newcommand{\notchar}{\mathrel{\unicode{x000AC}}}}
166 \CustomizeMathJax{\newcommand{\upbackepsilon}{\mathord{\unicode{x03F6}}}}
167 \CustomizeMathJax{\newcommand{\smblkcircle}{\mathbin{\unicode{x02022}}}}
169 \CustomizeMathJax{\newcommand{\unicodeellipsis}{\mathord{\unicode{x02026}}}}}
170 \CustomizeMathJax{\newcommand{\mathellipsis}{\mathinner{\unicode{x02026}}}}
```

```
173 \CustomizeMathJax{\newcommand{\backdprime}{\mathord{\unicode{x02036}}}}
175 \CustomizeMathJax{\newcommand{\caretinsert}{\mathord{\unicode{x02038}}}}
176 \CustomizeMathJax{\newcommand{\Exclam}{\mathord{\unicode{x0203C}}}}
179 \CustomizeMathJax{\newcommand{\fracslash}{\mathbin{\unicode{x02044}}}}
183 \CustomizeMathJax{\newcommand{\vertoverlay}{\mathrel{\unicode{x020D2}}}}}
184 \costomizeMathJax{\newcommand{\neclosecircle}{\neclosecircle}{} \costomizeMathJax{\newcommand{\neclosecircle}}}) \\
185 \CustomizeMathJax{\newcommand{\enclosesquare}{\mathord{\unicode{x020DE}}}}}
\label{lem:losetriangle} $$186 \subset Mathord_{\unicode{x020E4}}} $$
188 \customizeMathJax{newcommand{\turnediota}{\mathord{\unicode{x02129}}}})
192 \CustomizeMathJax{\newcommand{\sansLmirrored}{\mathord{\unicode{x02143}}}}
193 \CustomizeMathJax{\newcommand{\Yup}{\mathord{\unicode{x02144}}}}
194 \CustomizeMathJax{\newcommand{\upand}{\mathbin{\unicode{x0214B}}}}
195 \CustomizeMathJax{\newcommand{\increment}{\mathord{\unicode{x02206}}}}
196 \CustomizeMathJax{\newcommand{\smallin}{\mathrel{\unicode{x0220A}}}}
197 \CustomizeMathJax{\newcommand{\nni}{\mathrel{\unicode{x0220C}}}}
200 \colone{200} \colone{200}
{\tt 201 \ Customize Math Jax \{\ newcommand \{\ vysmwhtcircle\} \{\ mathbin \{\ unicode \{x02218\}\}\}\}}
203 \CustomizeMathJax{\newcommand{\rightangle}{\mathord{\unicode{x0221F}}}}}
205 \CustomizeMathJax{\newcommand{\Colon}{\mathrel{\unicode{x02237}}}}
206 \continus {\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\continus}{\cont
207 \CustomizeMathJax{\newcommand{\dashcolon}{\mathrel{\unicode{x02239}}}}
\label{lem:cond} $$208 \subset \mathcal{N}_{\mathbf{x}^2}(\mathbf{x}^2) + \mathcal{N
209 \CustomizeMathJax{\newcommand{\kernelcontraction}{\mathrel{\unicode{x0223B}}}}}
 210 \compared {\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{
212 \CustomizeMathJax{\newcommand{\sinewave}{\mathord{\unicode{x0223F}}}}
214 \CustomizeMathJax{\newcommand{\simneqq}{\mathrel{\unicode{x02246}}}}
215 \CustomizeMathJax{\newcommand{\napprox}{\mathrel{\unicode{x02249}}}}
216 \CustomizeMathJax{\newcommand{\approxident}{\mathrel{\unicode{x0224B}}}}
217 \CustomizeMathJax{\newcommand{\backcong}{\mathrel{\unicode{x0224C}}}}}
{\tt 219 \compart} white {\tt unicode{x0226D}}) \\
221 \CustomizeMathJax{\newcommand{\ngtrsim}{\mathrel{\unicode{x02275}}}}
225 \CustomizeMathJax{\newcommand{\nsubset}{\mathrel{\unicode{x02284}}}}
228 \CustomizeMathJax{\newcommand{\cupleftarrow}{\mathbin{\unicode{x0228C}}}}}
\label{lem:condition} $230 \subset Mathbin_{\newcommand{\circledequal}{\mathbb{\Sigma}_{\newcommand{\circledequal}}} $
```

```
232 \CustomizeMathJax{\newcommand{\assert}{\mathrel{\unicode{x022A6}}}}
233 \CustomizeMathJax{\newcommand{\VDash}{\mathrel{\unicode{x022AB}}}}
234 \customizeMathJax{\newcommand{\prurel}{\mathrel{\unicode{x022B0}}}}
236 \CustomizeMathJax{\newcommand{\origof}{\mathrel{\unicode{x022B6}}}}
237 \CustomizeMathJax{\newcommand{\smallprod}{\mathop{\unicode{x0220F}}}}} % not small
238 \CustomizeMathJax{\newcommand{\smallcoprod}{\mathop{\unicode{x02210}}}}% not small
239 \CustomizeMathJax{\newcommand{\smallsum}{\mathop{\unicode{x02211}}}}}% not small with the continuous cont
240 \compared {\tt hfraktur} {\tt hord} {
241 \code{x029F6})})
242 \CustomizeMathJax{\newcommand{\rsolbar}{\mathbin{\unicode{x029F7}}}}
244 \customizeMathJax{\newcommand{\eqless}{\mathrel{\unicode{x022DC}}}}}
245 \CustomizeMathJax{\newcommand{\eqgtr}{\mathrel{\unicode{x022DD}}}}}
246 \CustomizeMathJax{\newcommand{\npreccurlyeq}{\mathrel{\unicode{x022E0}}}}}
{\tt 247 \customizeMathJax{\newcommand{\nsucccurlyeq}{\mathrel{\unicode{x022E1}}}}}
248 \CustomizeMathJax{\newcommand{\nsqsubseteq}{\mathrel{\unicode{x022E2}}}}}
249 \CustomizeMathJax{\newcommand{\nsqsupseteq}{\mathrel{\unicode{x022E3}}}}
{\tt 250 \ CustomizeMathJax{\ newcommand{\ sqsubsetneq}{\ mathrel{\ unicode{x022E4}}}}}
{\tt 251 \ CustomizeMathJax{\ newcommand{\ sqsupsetneq}{\ mathrel{\ unicode{x022E5}}}}}
252 \CustomizeMathJax{\newcommand{\nvartriangleleft}{\mathrel{\unicode{x022EA}}}}}
253 \CustomizeMathJax{\newcommand{\nvartriangleright}{\mathrel{\unicode{x022EB}}}}}
255 \CustomizeMathJax{\newcommand{\vdotsmath}{\mathrel{\unicode{x022EE}}}}}
256 \CustomizeMathJax{\newcommand{\unicodecdots}{\mathord{\unicode{x022EF}}}}}
257 \CustomizeMathJax{\newcommand{\adots}{\mathrel{\unicode{x022F0}}}}
258 \CustomizeMathJax{\newcommand{\succneq}{\mathrel{\unicode{x02AB2}}}}
259 \CustomizeMathJax{\newcommand{\preceqq}{\mathrel{\unicode{x02AB3}}}}
260 \CustomizeMathJax{\newcommand{\succeqq}{\mathrel{\unicode{x02AB4}}}}
261 \code{x02AB1})})
262
263 \continuous MathJax{\newcommand{\mapsfrom}{\mathrel{\unicode{x021A4}}}}
265 \verb|\CustomizeMathJax{\newcommand{\longmapsfrom}{\mathrel{\unicode{x027FB}}}}|
267 \CustomizeMathJax{\newcommand{\diameter}{\mathord{\unicode{x02300}}}}
268 \coloneq{{\coloneq}{\mathrel{\code{x02254}}}}}
269 \CustomizeMathJax{\newcommand{\eqcolon}{\mathrel{\unicode{x02255}}}}
270 \CustomizeMathJax{\newcommand{\arceq}{\mathrel{\unicode{x02258}}}}
271 \code{x02259})})
\label{lem:code} $$272 \subset \mathcal{x}(x) = \mathcal{x}(x) + \mathcal{x}(x) +
274 \CustomizeMathJax{\newcommand{\stareq}{\mathrel{\unicode{x0225B}}}}}
275 \CustomizeMathJax{\newcommand{\eqdef}{\mathrel{\unicode{x0225D}}}}}
276 \CustomizeMathJax{\newcommand{\measeq}{\mathrel{\unicode{x0225E}}}}
277 \CustomizeMathJax{\newcommand{\questeq}{\mathrel{\unicode{x0225F}}}}
278 \CustomizeMathJax{\newcommand{\nequiv}{\mathrel{\unicode{x02262}}}}
279 \CustomizeMathJax{\newcommand{\Equiv}{\mathrel{\unicode{x02263}}}}
281 \CustomizeMathJax{\newcommand{\house}{\mathord{\unicode{x02302}}}}
283 \customizeMathJax{\newcommand{\musicalnote}{\musicalnote}{\newcommand{\nusicalnote}}}) \\
284 \CustomizeMathJax{\newcommand{\degree}{\mathord{\unicode{x000B0}}}}}
285 \customize MathJax {\newcommand {\mathsection} {\newcommand {\newcommand {\mathsection} }}}) \\
286 \CustomizeMathJax{\newcommand{\mathparagraph}{\mathord{\unicode{x000B6}}}}
287 \CustomizeMathJax{\newcommand{\checkmarkmath}{\mathord{\unicode{x02713}}}}}
288 \CustomizeMathJax{\newcommand{\invnot}{\mathord{\unicode{x02310}}}}
```

```
292 \CustomizeMathJax{\newcommand{\mdlgwhtsquare}{\mathord{\unicode{x025A1}}}}
294 \costomizeMathJax{\newcommand{\bigblacktriangleup}{\mbox{unicode}\{x025B2\}\}}} \\
295 \CustomizeMathJax{\newcommand{\varbigtriangleup}{\mathord{\unicode{x025B3}}}}
297 \CustomizeMathJax{\newcommand{\bigblacktriangledown}{\mathord{\unicode{x025BC}}}}
298 \CustomizeMathJax{\newcommand{\varbigtriangledown}{\mathord{\unicode{x025BD}}}}}
299 \CustomizeMathJax{\newcommand{\Longmapsfrom}{\mathrel{\unicode{x027FD}}}}}
301% bug in print font:
\label{lem:code} $302 \subset \mathcal{N}_{\alpha}(\mathbb{S}^{2506})} $
\label{lem:cond} $$304 \hookrightarrow {\mathbf \mathbb{X}}_{newcommand} \
305 \CustomizeMathJax{\newcommand{\Longmapsto}{\mathrel{\unicode{x027FE}}}}
\label{lem:code} $$306 \customizeMathJax{\newcommand{\fisheye}{\mathord{\unicode{x025C9}}}}$
307 \CustomizeMathJax{\newcommand{\mdlgwhtlozenge}{\mathord{\unicode{x025CA}}}}}
308 \CustomizeMathJax{\newcommand{\mdlgwhtcircle}{\mathbin{\unicode{x025CB}}}}}
{\tt 309 \ CustomizeMathJax \{\ newcommand \{\ bullseye\} \{\ mathord \{\ v025CE\}\}\}\}}
{\tt 310 \ CustomizeMathJax{\ newcommand{\ mdlgblkcircle}{\ mathord{\ unicode{x025CF}}}}}
311
312 \CustomizeMathJax{\newcommand{\Nwarrow}{\mathrel{\unicode{x021D6}}}}
313 \CustomizeMathJax{\newcommand{\Nearrow}{\mathrel{\unicode{x021D7}}}}
314 \CustomizeMathJax{\newcommand{\Searrow}{\mathrel{\unicode{x021D8}}}}
315 \CustomizeMathJax{\newcommand{\Swarrow}{\mathrel{\unicode{x021D9}}}}
316
317 \CustomizeMathJax{\newcommand{\Mapsfrom}{\mathord{\unicode{x02906}}}}
318 \CustomizeMathJax{\newcommand{\smwhtcircle}{\mathord{\unicode{x025E6}}}}
319 \CustomizeMathJax{\newcommand{\smwhtdiamond}{\mathbin{\unicode{x022C4}}}}
\label{lem:code} $$320 \customizeMathJax{\newcommand{\Mapsto}_{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\
322 \CustomizeMathJax{\let\ngets\nleftarrow}
323 \CustomizeMathJax{\let\nsimeq\nsime}
324 \CustomizeMathJax{\let\nle\nleq}
325 \CustomizeMathJax{\let\nge\ngeq}
327 \end{warpMathJax}
```

File 254 lwarp-lineno.sty

```
§363 Package lineno
```

10

(Emulates or patches code by Stephan I. Böttcher.)

lineno (*Pkg*) lineno is partly emulated, but mostly ignored.

```
11 \@namedef{linenumbers*}{\par\linenumbers*}
12 \@namedef{runninglinenumbers*}{\par\runninglinenumbers*}
14 \def\endlinenumbers{\par}
15 \let\endrunninglinenumbers\endlinenumbers
16 \let\endpagewiselinenumbers\endlinenumbers
17\expandafter\let\csname endlinenumbers*\endcsname\endlinenumbers
18 \expandafter\let\csname endrunninglinenumbers*\endcsname\endlinenumbers
19 \let\endnolinenumbers\endlinenumbers
21 \def\pagewiselinenumbers{\linenumbers\setpagewiselinenumbers}
23 \def\runninglinenumbers{\setrunninglinenumbers\linenumbers}
25 \def\setpagewiselinenumbers{}
27 \def\setrunninglinenumbers{}
29 \def\linenomath{}%
30 \@namedef{linenomath*}{}%
31 \def\endlinenomath{}
32 \expandafter\let\csname endlinenomath*\endcsname\endlinenomath
34 \let\linelabel\label
36 \def\switchlinenumbers{\@ifstar{}{}}
37 \def\setmakelinenumbers#1{\@ifstar{}{}}
39 \def\leftlinenumbers{\@ifstar{}{}}
40 \def\rightlinenumbers{\@ifstar{}{}}
41
42 \newcounter{linenumber}
43 \newcount\c@pagewiselinenumber
44 \let\c@runninglinenumber\c@linenumber
46 \def\runningpagewiselinenumbers{}
47 \def\realpagewiselinenumbers{}
48
50 \NewDocumentCommand\modulolinenumbers{s o}{}
52 \chardef\c@linenumbermodulo=5
53 \modulolinenumbers[1]
55 \newcommand*\firstlinenumber[1]{}
57 \newcommand\internallinenumbers{}
58 \let\endinternallinenumbers\endlinenumbers
59 \@namedef{internallinenumbers*}{\internallinenumbers}
60 \expandafter\let\csname endinternallinenumbers*\endcsname\endlinenumbers
62 \newcommand*{\linenoplaceholder}[1]{% redefine per language
63
      (line number reference for \detokenize\expandafter{#1})
64 }
66 \newcommand*{\lineref}[2][]{\linenoplaceholder{#2}}
67 \newcommand*{\linerefp}[2][]{\linenoplaceholder{#2}}
68 \newcommand*{\linerefr}[2][]{\linenoplaceholder{#2}}
70 \newcommand\quotelinenumbers
```

```
{\@ifstar\linenumbers{\@ifnextchar[\linenumbers*\}}}
71
73 \newdimen\linenumbersep
74 \newdimen\linenumberwidth
75 \newdimen\quotelinenumbersep
77 \quotelinenumbersep=\linenumbersep
78 \let\quotelinenumberfont\linenumberfont
80 \def\linenumberfont{\normalfont\tiny\sffamily}
83 \linenumberwidth=10pt
84 \linenumbersep=10pt
86 \def\thelinenumber{}
88 \def\LineNumber{}
89 \def\makeLineNumber{}
90 \def\makeLineNumberLeft{}
91 \def\makeLineNumberRight{}
92 \def\makeLineNumberOdd{}
93 \def\makeLineNumberEven{}
94 \def\makeLineNumberRunning{}
96
97 \newenvironment{numquote}
                                  {\quote}{\endquote}
98 \newenvironment{numquotation} {\quotation}{\endquotation}
99 \newenvironment{numquote*}
                                  {\quote}{\endquote}
100 \newenvironment{numquotation*}{\quotation}{\endquotation}
102 \newdimen\bframerule
103 \bframerule=\fboxrule
105 \newdimen\bframesep
106 \bframesep=\fboxsep
108 \newenvironment{bframe}
109 {%
      \LWR@forceminwidth{\bframerule}%
110
      \BlockClass[
111
           border:\LWR@printlength{\LWR@atleastonept} solid black ; %
112
113
          padding:\LWR@printlength{\bframesep}%
      ]{bframe}
114
116 {\endBlockClass}
```

File 255 lwarp-lips.sty

§364 Package lips

(Emulates or patches code by MATT SWIFT.)

lips (Pkg) lips is emulated.

```
1% \LWR@ProvidesPackageDrop{lips}
2 \LWR@ProvidesPackageDrop{lips}[2001/08/31]
```

```
4 \NewDocumentCommand{\Lips}{}{\textellipsis}
\label{limits} {\tt 6 \ NewDocumentCommand{\BracketedLips}{\tt \{\{[\textellipsis]\}}$} \\
8 \let\lips\Lips
9 \let\olips\lips
11 \DeclareOption*{}
12 \DeclareOption{mla}{
13 \let\lips\BracketedLips
15 \ProcessOptions\relax
17 \newcommand \LPNobreakList {}
```

File 256 lwarp-lipsum.sty

§ 365

Package lipsum

(Emulates or patches code by Patrick Happel.)

lipsum (*Pkg*) lipsum is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{lipsum}[2021-03-03]

2 \SetLipsumParListItemEnd{% \LWR@closeparagraph%

\leavevmode\LWR@orignewline%

5 }

File 257 lwarp-listings.sty

\$366

Package listings

(Emulates or patches code by Carsten Heinz, Brooks Moses, Jobst Hoffmann.)

listings (Pkg) listings is supported with some limitations. Text formatting and escape characters are not yet supported.

1 \LWR@ProvidesPackagePass{listings}[2023/02/27]

Force flexible columns. Fixed columns inserts spaces in the PDF output.

2 \lst@column@flexible

Patches to embed listings inside pre tags:

```
{\tt 3 \ let \ LWR@origlst@Init \ lst@Init}\\
4 \let\LWR@origlst@DeInit\lst@DeInit
```

```
6 \let\LWR@origlsthkEveryPar\lsthk@EveryPar
\{\langle options \rangle\}
Use the listings literate option to replace HTML entities:
9 \def\lstset@#1{\endgroup%
10 % \ifx\@empty#1%
         \@empty%
11 %
12 %
      \else%
        \setkeys{lst}{%
13
           #1%
14
           .literate=%
15
```

The ampersand is not treated here, as the result is inconsistent spacing. It is nevertheless converted to & elsewhere. Sanitizing the double quote interferes with listings' conversion of visible spaces inside strings.

```
20 }%
21% \fi%
22}
```

16

18

19

\lst@Init

\lstset

 $\{\langle backslash-processing \rangle\}$ Done at the start of a listing.

{<}{\HTMLentity{lt}}{4}%
{>}{\HTMLentity{gt}}{4}%

{'}{\HTMLentity{apos}}{6}%

{'}{\HTMLentity{grave}}{7}%

```
23 \VerifyCommand[lwarp][listings]{\lst@Init}{A4D103298A6AC8230F525C61F1E1E541} 24  
25 \renewcommand{\lst@Init}[1]{%
```

Perform the listings initialization:

```
26 \LWR@traceinfo{lst@Init}%  lwarp
```

\LWR@forcenewpage is moved to the start to avoid a spurrious bug with paragraph handling and conditionals.

```
27 \lst@ifdisplaystyle% lwarp
28 \LWR@forcenewpage% lwarp
29 \fi% lwarp
```

Escapes do not work yet, and are disabled:

```
30 \leftarrow 1st@ifmathescape iffalse%
31 \let\lst@DefEsc\relax%
                                        lwarp
32 \def\lst@escapebegin{}%
                                        lwarp
33 \def\lst@escapeend{}%
                                        lwarp
34\renewcommand*{\@captype}{lstlisting}%
                                                lwarp
      \let\lst@aboveskip\z@\let\lst@belowskip\z@%
                                                         lwarp
35
36
      \gdef\lst@boxpos{t}%
                                        lwarp
      \let\lst@frame\@empty%
37
                                        lwarp
      \let\lst@frametshape\@empty%
                                        lwarp
      \let\lst@framershape\@empty%
                                        lwarp
39
40
      \let\lst@framebshape\@empty%
                                        lwarp
41
      \let\lst@framelshape\@empty%
                                        lwarp
      \lstframe@\lst@frameround ffff\relax%
42
                                                lwarp
      \lst@multicols\@empty% lwarp
43
```

44 \begingroup%

\else

96

Inside the listing, temporarily prevent underfull \hbox warnings.

```
\hbadness=10000\relax%
46
      \ifx\lst@float\relax\else%
          \edef\@tempa{\noexpand\lst@beginfloat{lstlisting}[\lst@float]}%
47
          \expandafter\@tempa%
48
      \fi%
49
      \ifx\lst@multicols\@empty\else%
50
          \edef\lst@next{\noexpand\multicols{\lst@multicols}}%
51
          \expandafter\lst@next%
52
53
54
      \ifhmode\ifinner \lst@boxtrue \fi\fi%
55
      \lst@ifbox%
          \lsthk@BoxUnsafe%
56
57
          \hbox to\z@\bgroup%
               $\if t\lst@boxpos \vtop%
58
          \else \if b\lst@boxpos \vbox%
59
          \else \vcenter \fi\fi%
60
          \bgroup \par\noindent%
61
      \else%
62
63
          \lst@ifdisplaystyle%
              \lst@EveryDisplay%
64
              \par\penalty-50\relax%
65
              \vspace\lst@aboveskip%
66
67
          \fi%
      \fi%
68
69
      \normalbaselines%
70
      \abovecaptionskip\lst@abovecaption\relax%
      \belowcaptionskip\lst@belowcaption\relax%
71
      \lst@MakeCaption t%
72
Use the overall listing label instead of the line number label:
73 \LWR@traceinfo{lst@Init: defining current label !\@currentlabel!}%
      \let\LWR@listings@currentlabel\@currentlabel%
75 \LWR@traceinfo{lst@Init: defining current label !\cref@currentlabel!}%
      \let\LWR@listings@cref@currentlabel\cref@currentlabel%
77 \LWR@traceinfo{lst@Init: preinit and init}%
      \lsthk@PreInit \lsthk@Init%
78
      \let\@currentlabel\LWR@listings@currentlabel%
                                                                  lwarp
79
80
      \let\cref@currentlabel\LWR@listings@cref@currentlabel%
                                                                  lwarp
81 \LWR@traceinfo{lst@Init: M}%
      \lst@ifdisplaystyle
83
          \global\let\lst@ltxlabel\@empty
          \if@inlabel
84
              \lst@ifresetmargins
85
                  \leavevmode
86
              \else
87
                  \xdef\lst@ltxlabel{\the\everypar}%
88
                  \lst@AddTo\lst@ltxlabel{%
89
                       \global\let\lst@ltxlabel\@empty
90
                       \everypar{\lsthk@EveryLine\lsthk@EveryPar}}%
91
              \fi
92
          \fi
93
          \everypar\expandafter{\lst@ltxlabel
94
                                 \lsthk@EveryLine\lsthk@EveryPar}%
95
```

```
97
           \everypar{}
           \let\lst@NewLine\@empty
98
      \fi
100 \LWR@traceinfo{lst@Init: P}%
      \lsthk@InitVars \lsthk@InitVarsBOL
      102
      \let\lst@Backslash#1%
103
      \lst@EnterMode{\lst@Pmode}{\lst@SelectCharTable}%
104
      \lst@InitFinalize%
105
106 \LWR@traceinfo{lst@Init: S}%
 Avoids extra horizontal space:
107 \def\lst@framelr{}%
                           lwarp
108 \LWR@traceinfo{lst@Init: finished origlst@Init}%
109 \lst@ifdisplaystyle%
                           lwarp
 Creating a display.
 Disable line numbers, produce the , then reenable line numbers.
       \LWR@traceinfo{lst@Init: About to create verbatim.}% lwarp
111
      \let\lsthk@EveryPar\relax%
                                                   lwarp
112
      \LWR@atbeginverbatim{programlisting}%
                                                   lwarp
113
      \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
114
                                                   lwarp
115 \else%
                                                    lwarp
 Inline, so open a <span>:
      \ifbool{LWR@verbtags}{\LWR@htmltag{%
                                                    lwarp
117
          span class=\textquotedbl{}inlineprogramlisting\textquotedbl%
                                                                          lwarp
                                                   lwarp
118
      }}{}%
119\fi%
                                                   lwarp
120 \LWR@traceinfo{lst@Init: done}%
121 }
122 \def\LWR@listings@synaxdolloar{$}% lwarp editor synax highlighting
     Done at the end of a listing.
123 %\renewcommand*{\lst@DeInit}{%
124 \xpretocmd{\lst@DeInit}
125 {%
126 \LWR@traceinfo{lst@DeInit}%
127 \lst@ifdisplaystyle%
 Creating a display.
 Disable line numbers, produce the , then reenable line numbers:
       \let\lsthk@EveryPar\relax%
      \LWR@afterendverbatim%
129
      \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
130
131 \else%
 Inline, so create the closing </span>:
      \ifbool{LWR@verbtags}{\noindent\LWR@htmltag{/span}}{}%
132
133 \fi%
134 }
135 {}
136 {\LWR@patcherror{listings}{lst@DeInit}}
```

\lst@DeInit

```
\lst@MakeCaption
```

```
\{\langle t/b \rangle\}
```

This is called BOTH at the top and at the bottom of each listing. Patched for lwarp.

```
137 \VerifyCommand[lwarp][listings]{\lst@MakeCaption}{58505F418EA5E42B63D92AD0ED0C433C}
139 \def\lst@MakeCaption#1{%
140 \LWR@traceinfo{lst@MakeCaption at #1}%
    \lst@ifdisplaystyle
142 \LWR@traceinfo{lst@MakeCaption: making a listings display caption}%
      \ifx #1t%
144
          145
                                 \expandafter\refstepcounter
146
          \fi {lstlisting}%
147% \LWR@traceinfo{About to assign label: !\lst@label!}%
           148 %
149% \label{\lst@label}\fi
150% \LWR@traceinfo{Finished assigning the label.}%
         \let\lst@arg\lst@intname \lst@ReplaceIn\lst@arg\lst@filenamerpl
151
          \global\let\lst@name\lst@arg \global\let\lstname\lst@name
152
153
          \lst@ifnolol\else
             \ifx\lst@@caption\@empty
155
                 \ifx\lst@caption\@empty
156
                     \ifx\lst@intname\@empty
157
                     \else
                        \def\lst@temp{ }%
158
159
                        \ifx\lst@intname\lst@temp \else
```

This code places a contents entry for a non-float. This would have to be modified for lwarp:

```
160 \LWR@traceinfo{lst@MakeCaption: addcontents lst@name: -\lst@name-}%
161 % \addcontentsline{lol}{lstlisting}{\lst@name}
162 \fi
163 \fi
164 \fi
165 \else
```

This would have to be modified for lwarp:

```
166 \LWR@traceinfo{lst@MakeCaption: addcontents lst@@caption: -\lst@@caption-}%
                    \addcontentsline{lol}{lstlisting}%
167
168 {\protect\numberline{\thelstlisting}%
169 {\protect\ignorespaces \LWR@isolate{\lst@@caption} \protect\relax}}%
170
171
            \fi
        ۱fi
172
       \ifx\lst@caption\@empty\else
173
174 \LWR@traceinfo{lst@MakeCaption: lst@caption not empty-}%
           \lst@IfSubstring #1\lst@captionpos
175
               {\begingroup
176
177 \LWR@traceinfo{lst@MakeCaption: at the selected position}%
```

These space and box commands are not needed for HTML output:

```
178 % \let\@@vskip\vskip
179 % \def\vskip{\afterassignment\lst@vskip \@tempskipa}%
180 % \def\lst@vskip{\nobreak\@@vskip\@tempskipa\nobreak}%
181 % \par\@parboxrestore\normalsize\normalfont % \noindent (AS)
182 % \ifx #1t\allowbreak \fi
183 \ifx\lst@title\@empty
```

New lwarp code to create a caption:

```
184
                        \LWR@stoppars%
                                            lwarp
                   \lst@makecaption\fnum@lstlisting{\ignorespaces \lst@caption}
185
                \else
186
 New lwarp code to create a title:
                      \lst@maketitle\lst@title % (AS)
188 \LWR@traceinfo{lst@MakeCaption: Making title: \lst@title}%
189 \begin{BlockClass}{lstlistingtitle}%
                                            lwarp
190 \lst@maketitle\lst@title%
                                            lwarp
191 \end{BlockClass}%
                                            lwarp
193 \LWR@traceinfo{lst@MakeCaption: About to assign label: !\lst@label!}%
           \ifx\lst@label\@empty\else%
195 \leavevmode% gets rid of bad space factor error
196 \GetTitleStringExpand{\lst@caption}%
197 \edef\LWR@lntemp{\GetTitleStringResult}%
198 \edef\@currentlabelname{\detokenize\expandafter{\LWR@Intemp}}%
199 \label{\lst@label}\fi%
200 \LWR@traceinfo{lst@MakeCaption: Finished assigning the label.}%
 Not needed for lwarp:
201 %
                  \ifx #1b\allowbreak \fi
                \endgroup}{}%
202
203
       \fi
204 \LWR@traceinfo{lst@MakeCaption: end of making a listings display caption}%
206 \LWR@traceinfo{lst@MakeCaption: INLINE}%
208 \LWR@traceinfo{lst@MakeCaption: done at #1}%
209 }
210
211 \renewcommand{\lst@maketitle}[1]{%
       \LWR@isolate{#1}%
212
```

line numbers Patched to keep left line numbers outside of the left margin, and place right line numbers in a field \VerbatimHTMLWidth wide.

```
215 \lst@Key{numbers}{none}{%
216    \let\lst@PlaceNumber\@empty
217    \lstKV@SwitchCases{#1}%
218    {none:\\%
219     left:\def\lst@PlaceNumber{%
```

213 }% 214

For now, lwarp places left line numbers inline. Ideally the entire line would be moved to the right, but conflicts with list indenting occurs.

```
220 %
             \LWR@origllap{
221
               \LWR@orignormalfont%
222
               \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
223 %
       }\\%
224
        right:\def\lst@PlaceNumber{\LWR@origrlap{\LWR@orignormalfont
225
                   \kern 6in \kern\lst@numbersep
226
                   \lst@numberstyle{\thelstnumber}}}%
227
228
       }{\PackageError{lwarp-listings}{Numbers #1 unknown}\@ehc}}
```

File 258 lwarp-listliketab.sty

```
listliketab
        Package
§367
listliketab (Pkg)
                  listliketab is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{listliketab}[2005/01/09]
                  2 \newcommand*{\storestyleof}[1]{}
                  3 \newcommand*{\storeliststyle}{}
                  4\newenvironment{listliketab}{}{}
         File 259 lwarp-lltjext.sty
                 lltjext
        Package
$368
                  (Emulates or patches code by The LuaTeX-ja project team.)
    lltjext(Pkg)
                  lltjext is patched for use by lwarp.
for HTML output:
                  1 \LWR@ProvidesPackagePass{lltjext}[2018/10/07]
                  2 \protected\def\yoko{%
                  3 \directlua{luatexja.direction.set_list_direction(4, 'yoko')}%
                  4 }
                  5 \protected\def\tate{\yoko}
                  6 \protected\def\dtou{\yoko}
                  7 \protected\def\utod{\yoko}
                  9\define@key[ltj]{japaram}{direction}{}
                 10
                 11\yoko
                 13 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}
                 15 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
                 17 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
                 19 \LetLtxMacro\pcaption\caption
                 21 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}
                 23 \let\captiondir\relax
                 24 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{} O{t} m}
                       {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
                       {\endLWR@HTML@sub@minipage}
                 30 \LWR@traceinfo{parbox of width #4}%
```

31 \begin{minipage}[#2][#3][#4]{#5}%

```
32 #6
33 \end{minipage}%
34 }
35
36 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
37 \global\booltrue{LWR@minipagefullwidth}%
38 \parbox{#2}{#4}%
39 }
```

File 260 lwarp-lltjp-siunitx.sty

§ 369 Package

lltjp-siunitx

(Emulates or patches code by The LuaTeX-ja project team.)

lltjp-siunitx (*Pkg*) lltjp-siunitx is patched for use by lwarp.

for HTML output:

 ${\tt 1 \LWR@ProvidesPackagePass\{lltjp-siunitx\}\%~2022-12-14,~no~date~assigned~in~file~assign$

This is the siunitx v3 file, as patched by lltip-siunitx.

```
2 \ExplSyntaxOn
4 \VerifyCommand[lwarp][lltjp-siunitx]\\siunitx_print_text:n}{A248D4314D135CB0AC3E6678F331CFF2}
6\cs_set_protected:Npn \siunitx_print_text:n #1
7
      \text
8
9
          \ltj@allalchar % <--- LuaTeX-ja</pre>
10
          \bool_if:NT \l__siunitx_print_text_family_bool
11
12
            { \fontfamily { \familydefault } }
13
          \bool_if:NT \l__siunitx_print_text_series_bool
14
            { \fontseries { \seriesdefault } }
15
          \bool_if:NT \l__siunitx_print_text_shape_bool
            { \fontshape { \shapedefault } }
16
          \bool_lazy_any:nT% lwarp: factors for a single \selectfont
17
18
            {%
              { \l__siunitx_print_text_family_bool }% lwarp
19
              { \l_siunitx_print_text_series_bool }% lwarp
20
              { \l__siunitx_print_text_shape_bool }% lwarp
21
            }%
22
                                                         lwarp
23
            { \selectfont }%
                                                         lwarp
          \tl_use:N \l__siunitx_print_text_font_tl%
24
                                                         lwarp
25
        \exp_args:NnV \tl_if_head_eq_meaning:nNTF {#1} \l_siunitx_unit_fraction_tl% lwarp
26
             {%
                                                         lwarp
                  _siunitx_print_text_fraction:Nnn #1%
27
                                                        lwarp
             }%
28
                                                         lwarp
             {%
29
                                                         lwarp
                 _siunitx_print_text_replace:n {#1}%
                                                        ORIGINAL
30
                                                         lwarp
31
32
        }
33
    }
35 \ExplSyntaxOff
```

File 261 lwarp-lltjp-tascmac.sty

§370

Package Iltip-tascmac

lltip-tascmac is a patch for tascmac, and is ignored. lltjp-tascmac(Pkg)

for HTML output:

1 \LWR@ProvidesPackageDrop{lltjp-tascmac}[2020/12/24]

File 262 lwarp-longtable.sty

§371

Package longtable

(Emulates or patches code by David Carlisle.)

longtable is emulated. longtable (Pkg)

for HTML output:

1 \LWR@ProvidesPackageDrop{longtable}[2014/10/28]

Use one of either \endhead or \endfirsthead for both print and HTML, and use a \warpprintonly macro to disable the other head phrase, and also the \endfoot and \endfirstfoot phrases. (See section 8.10.4 if using threeparttablex.)

```
\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{
                        % not used in HTML
  [ \dots ] \endhead
                       % or \endfirsthead
  [ . . . ] \endfoot
  [ <lastfoot macros> ] \endlastfoot
. . . table contents . . .
\warpHTMLonly{
  [ <lastfoot macros> ] % HTML last footer, without \endfoot
                                            % or \endlastfoot.
\end{longtable}
```

Misplaced \noalign Use the \warpprintonly macro instead of the warpprint environment. Doing so helps avoid "Misplaced \noalign." when using \begin{warpprint}.

\kill is ignored, place a \kill line inside

\begin{warpprint} . . . \end{warpprint}

or place it inside \warpprintonly.

longtable is not supported inside a lateximage.

http://tex.stackexchange.com/questions/43006/ why-is-input-not-expandable

Used to detect more than one of $\end{\endfirst}$ head in use for $\end{\endfirst}$ the same time.

```
2 \newbool{LWR@longtable@havehead}
3 \boolfalse{LWR@longtable@havehead}
```

longtable (env) * [$\langle horizalignment \rangle$] { $\langle colspec \rangle$ } Emulates the longtable environment.

Per the caption package, the starred version steps the counter per caption. The unstarred version steps the counter once at the beginning, but not at each caption.

Options [c], [l], and [r] are ignored.

```
4\newenvironment{longtable*}[2][]{%
      \LWR@floatbegin{table}%
      \ifdef{\setcaptiontype}{% caption package:
6
7
          \setcaptiontype{\LTcaptype}%
8
          \caption@setoptions{longtable}%
9
          \caption@setoptions{@longtable}%
10
          \caption@LT@setup%
11
      }{% w/o caption package:
12
          \renewcommand*{\@captype}{\LTcaptype}%
13
      \booltrue{LWR@starredlongtable}%
14
      \boolfalse{LWR@longtable@havehead}%
15
      \let\captionlistentry\LWR@LTcaptionlistentry%
16
      \tabular{#2}%
17
18 }
19 {\endtabular\LWR@floatend}
21 \newenvironment{longtable}[2][]{%
      \LWR@floatbegin{table}%
23
      \ifdef{\setcaptiontype}{% caption package:
24
          \setcaptiontype{\LTcaptype}%
25
          \caption@setoptions{longtable}%
26
          \caption@setoptions{@longtable}%
          \caption@LT@setup%
27
      }{% w/o caption package:
28
          \renewcommand*{\@captype}{\LTcaptype}%
29
30
      \refstepcounter{\LTcaptype}%
31
32
      \boolfalse{LWR@longtable@havehead}%
33
      \let\captionlistentry\LWR@LTcaptionlistentry%
34
      \tabular{#2}%
35 }
36 {\endtabular\LWR@floatend}
```

Provided for compatibility, but ignored:

```
37 \newcounter{LTchunksize}
```

Error for heads which should have been in \warpprintonly:

```
38 \newcommand*{\LWR@longtable@headerror}{%
39 \PackageError{lwarp-longtable}
40 {For longtable:\MessageBreak
41 1: Keep either one of an \protect\endhead\space or\MessageBreak
42 \space\protect\endfirsthead\space phrase as-is,\MessageBreak
```

```
43
          \space to be used by both print and HTML.\MessageBreak
      2: Place any other \protect\end... phrases inside a\MessageBreak
44
          \space\protect\warpprintonly\space macro,
45
              to be ignored by \mbox{HTML.}\mbox{\sc MessageBreak}
46
47
      3: At the end of the table, \MessageBreak
48
          \space add a final footer for HTML\MessageBreak
          \space inside a \protect\warpHTMLonly\space macro.
49
              This can be\MessageBreak
50
          \space a copy of an \protect\endfoot\space or
51
              \protect\endfirstfoot\MessageBreak
52
          \space phrase, but without the actual \protect\endfoot\MessageBreak
53
54
          \space or \protect\endfirstfoot\space macros.\MessageBreak
55
          \space If using threeparttablex, add\MessageBreak
          \space \protect\insertTableNotes\space here,
57
              optionally with\MessageBreak
58
          \space \protect\UseMinipageWidths\space in front.\MessageBreak
      See the Lwarp documentation regarding\MessageBreak
59
      longtables and threeparttablex}
60
      {See the Lwarp documentation regading longtables and threeparttablex.}
61
62 }
Error if more than one of \endhead or \endfirsthead is outside of warpprintonly.
63 \newcommand*{\LWR@longtable@maybeheaderror}{%
64 \ifbool{LWR@longtable@havehead}%
      {\LWR@longtable@headerror}%
65
66
      {%
67
          \booltrue{LWR@longtable@havehead}
68
          \LWR@tabularendofline% throws away options //[dim] and //*
69
      }%
70 }
Error if more than one of these is outside of warpprint.
71 \def\endhead{\LWR@longtable@maybeheaderror}
72 \def\endfirsthead{\LWR@longtable@maybeheaderror}
Error if ANY of these is outside of warpprint.
73 \def\endfoot{\LWR@longtable@headerror}
74 \def\endlastfoot{\LWR@longtable@headerror}
75 \let\tabularnewline\\
76 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}
77 \LWR@formatted{tabularnewline}
78 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
79 \newlength{\LTleft}
80 \newlength{\LTright}
81 \newlength{\LTpre}
82 \newlength{\LTpost}
83 \newlength{\LTcapwidth}
84 \LetLtxMacro\LWR@origkill\kill
85 \renewcommand*{\kill}{\LWR@tabularendofline}
86 \appto\LWR@restoreorigformatting{%
87 \LetLtxMacro\kill\LWR@origkill%
```

```
lwarp 934
```

88 }

```
File 263 lwarp-lpic.sty
```

§372 Package **lpic**

(Emulates or patches code by R. Matveyev.)

lpic (*Pkg*) lpic is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{lpic}[2010/12/23]

2 \BeforeBeginEnvironment{lpic}{%
3 \begin{lateximage}[-lpic-~\PackageDiagramAltText]%
4 }

6 \AfterEndEnvironment{lpic}{\end{lateximage}}

File 264 lwarp-lscape.sty

§373 Package **Iscape**

(Emulates or patches code by D. P. CARLISLE.)

lscape (Pkg) lscape is ignored.

for HTML output: Discard all options for lwarp-lscape.

1 \LWR@ProvidesPackageDrop{lscape}[2000/10/22]

 ${\tt 2 \ \ landscape} \{\} \{\}$

File 265 lwarp-ltablex.sty

§374 Package **ltablex**

(Emulates or patches code by Anil K. Goel.)

Itablex (Pkg) ltablex is emulated by lwarp.

for HTML output: Relies on tabularx.

```
1 \RequirePackage{longtable}
2 \RequirePackage{tabularx}
3
4 \LWR@ProvidesPackageDrop{ltablex}[2014/08/13]
5
6 \DeclareDocumentEnvironment{tabularx}{m o m}
7 {\longtable{#3}}
8 {\endlongtable}
9
10 \DeclareDocumentEnvironment{tabularx*}{m o m}
```

```
11 {\longtable{#3}}
12 {\endlongtable}
13
14 \newcommand*{\keepXColumns}{}
15 \newcommand*{\convertXColumns}{}
```

File 266 lwarp-ltcaption.sty

§ 375 Package **ltcaption**

($Emulates\ or\ patches\ code\ by\ Axel\ Sommerfeldt.$)

ltcaption (*Pkg*) ltcaption is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltcaption}[2018/08/26]

\LTcaptype is already defined by lwarp.

longtable* is already defined by lwarp-longtable.

```
2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
```

5 \newcommand*{\LTcapmarginsfalse}{}

File 267 lwarp-ltxgrid.sty

§376 Package ltxgrid

ltxgrid (Pkg) ltxgrid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltxgrid}[2010/07/25]

```
2 \newcommand*{\onecolumngrid}{}
3 \newcommand*{\twocolumngrid}{}
4 \newcommand*{\removestuff}{}
5 \newcommand*{\addstuff}[2]{}
6 \newcommand*{\replacestuff}[2]{}
```

File 268 lwarp-ltxtable.sty

§377 Package **ltxtable**

ltxtable (Pkg) ltxtable is emulated.

<u>table numbering</u> The print version does not seem to honor longtable* from the caption package, while lwarp does.

for HTML output: 1 \RequirePackage{tabularx,longtable}

 ${\tt 2 LWR@ProvidesPackageDrop\{ltxtable\}[1995/12/11]}$

 $\{\langle width \rangle\} \{\langle file \rangle\}$ \LTXtable 3 \newcommand*{\LTXtable}[2]{% \input{#2}% 5 } lwarp-lua-check-hyphen.sty lua-check-hyphen Package **§378** lua-check-hyphen is ignored. lua-check-hyphen (Pkg)for HTML output: 1 \LWR@ProvidesPackageDrop{lua-check-hyphen}[2018/04/19] 2 \newcommand*{\LuaCheckHyphen}[1]{} File 270 lwarp-lua-visual-debug.sty Package lua-visual-debug §379 lua-visual-debug is ignored. lua-visual-debug(Pkg)for HTML output: 1 \LWR@ProvidesPackageDrop{lua-visual-debug}[2016/05/30] File 271 lwarp-luacolor.sty luacolor Package **§380** luacolor (Pkg) luacolor is ignored. for HTML output: 1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16] 2 \newcommand{\luacolorProcessBox}[1]{} File 272 lwarp-luamplib.sty Package luamplib \$381 (Emulates or patches code by Hans Hagen, Taco Hoekwater, Elie Roux, Philipp Gesang, Kim Doluamplib(Pkg)luamplib is patched for use by lwarp.

1 \LWR@ProvidesPackagePass{luamplib}[2020/02/24]

for HTML output:

```
2 \BeforeBeginEnvironment{mplibcode}{%
3     \begin{lateximage}[-mplibcode~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{mplibcode}{\end{lateximage}}
```

File 273 lwarp-luatexko.sty

§382 Package luatexko

(Emulates or patches code by Dohyun Kim, Soojin Nam.)

luatexko (Pkg) luatexko is patched for use by lwarp.

Modern HTML is used for \dotemph, \ruby, and offset and thickness control for \uline, etc.

for HTML output: 1 \LWR@

```
1 \LWR@ProvidesPackagePass{luatexko}[2021/07/10]
```

2\protected\def\typesetvertical{}

```
3 \protected\def\typesethorizontal{}
5 \def\verticaltypesetting{\BlockClass{verticalrl}}
6 \def\beginverticaltypesetting{\BlockClass{verticalrl}}
7\def\endverticaltypesetting{\endBlockClass}
9 \protected\def\vertical#1{\BlockClass{verticalrl}}
10 \protected\def\endvertical{\endBlockClass}
11 \protected\def\horizontal#1{\BlockClass{horizontaltb}}
12 \protected\def\endhorizontal{\endBlockClass}
13 \DeclareDocumentCommand{\vertlatin}{m}{#1}
14 \newcommand{\LWR@HTML@dotemph}[1]{%
15 %
        \uline{#1}%
      \InlineClass[text-emphasis-style: dot]{dotemph}{#1}%
17 }
18 \LWR@formatted{dotemph}
19 \newcommand{\LWR@HTML@ruby}[2]{%
      \LWR@htmltagc{ruby}%
20
21
      \LWR@htmltagc{rp}(\LWR@htmltagc{/rp}%
      \LWR@htmltagc{rt}#2\LWR@htmltagc{/rt}%
      \LWR@htmltagc{rp})\LWR@htmltagc{/rp}%
25
      \LWR@htmltagc{/ruby}%
26 }
27 \LWR@formatted{ruby}
```

The following is modified from lwarp-ulem:

```
28 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
29 \InlineClass%
30 (text-decoration:underline; text-decoration-skip: auto)%
31 [%
32 text-underline-offset: \ulinedown;
33 text-decoration-thickness: \ulinewidth%
34 ]%
```

```
{uline}{\LWR@isolate{#1}}%
35
36 }
37 \LWR@formatted{uline}
39 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{%
               \InlineClass%
                         (%
41
                                    text-decoration:underline; text-decoration-skip: auto;%
42
                                    text-decoration-style:double%
43
                         )%
44
45
46
                                    text-underline-offset: \ulinedown ;
                                    text-decoration-thickness: \ulinewidth%
48
                         ]%
                         {uuline}{\LWR@isolate{#1}}%
49
50 }
51 \LWR@formatted{uuline}
53 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
               \InlineClass%
54
55
                         (%
                                    text-decoration:underline; text-decoration-skip: auto;%
56
                                    text-decoration-style:wavy%
57
                         )%
58
59
                         [%
60
                                    text-underline-offset: \ulinedown ;
61
                                    text-decoration-thickness: \ulinewidth%
                         ٦%
62
                         {uwave}{\LWR@isolate{#1}}%
63
64 }
65 \LWR@formatted{uwave}
67 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
               \InlineClass%
                          (text-decoration:line-through)%
                         [text-decoration-thickness: \ulinewidth]%
70
                         {sout}{\LWR@isolate{#1}}%
71
72 }
73 \LWR@formatted{sout}
75 \NewDocumentCommand{\LWR@HTML@xout}{+m}{%
76
               \InlineClass%
77
                          (text-decoration:line-through)%
                         [text-decoration-thickness: \ulinewidth]%
                         {xout}{\LWR@isolate{#1}}%
80 }
81 \LWR@formatted{xout}
83 \label{lem:lem:mand} $$ \end{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\command{\comm
               \InlineClass%
84
                         (%
85
                                    text-decoration:underline;%
86
                                    text-decoration-skip: auto;%
87
                                    text-decoration-style:dashed%
88
                         )%
89
                         [%
90
                                    text-underline-offset: \ulinedown ;
91
                                    text-decoration-thickness: \ulinewidth%
92
                         ٦%
93
                         {dashuline}{\LWR@isolate{#1}}%
94
```

```
95 }
96 \LWR@formatted{dashuline}
98 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
       \InlineClass%
100
           (%
               text-decoration:underline;%
101
               text-decoration-skip: auto;%
102
               text-decoration-style: dotted%
103
           )%
104
105
106
               text-underline-offset: \ulinedown ;
107
               text-decoration-thickness: \ulinewidth%
           ]%
           {dotuline}{\LWR@isolate{#1}}%
110 }
111 \LWR@formatted{dotuline}
```

File 274 lwarp-luatodonotes.sty

§ 383 Package luatodonotes

(Emulates or patches code by Fabian Lipp.)

luatodonotes (Pkg) luatodonotes is emulated.

The documentation for todonotes and luatodonotes have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

for HTML output:

1 \LWR@ProvidesPackagePass{luatodonotes}[2017/09/30]

Nullify options:

```
2\@todonotes@additionalMarginEnabledfalse
```

```
3 \if@todonotes@disabled
4 \else
5
6 \newcommand{\ext@todo}{tdo}
7
8 \renewcommand{\l@todo}[2]{\hypertocfloat{1}}{todo}{\do}{#1}{#2}}

9 \let\LWRTODONOTES@orig@todototoc\todototoc
10
11 \renewcommand*{\todototoc}{%
12 \LWR@phantomsection%
13 \LWRTODONOTES@orig@todototoc%
14 }
15
16
17 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
18 \fcolorbox
19 {\@todonotes@currentbordercolor}
20 {\@todonotes@currentbackgroundcolor}
21 {\arabic{@todonotes@numberoftodonotes}}
```

```
22 \marginpar{\@todonotes@drawMarginNote}
26 \fcolorboxBlock%
     {\@todonotes@currentbordercolor}%
      {\@todonotes@currentbackgroundcolor}%
28
29
          \if@todonotes@authorgiven%
30
          {\@todonotes@author:\,}%
31
32
33
          \@todonotes@text%
34
      }%
35 }
37 \newcommand{\@todonotes@drawMarginNote}{%
      \if@todonotes@authorgiven%
38
          \@todonotes@author\par%
39
      \fi%
40
      \arabic{@todonotes@numberoftodonotes}: %
41
      \fcolorbox%
42
      {\@todonotes@currentbordercolor}%
43
      {\@todonotes@currentbackgroundcolor}%
44
45
46
          \@todonotes@sizecommand%
47
          \@todonotes@text %
48
      }%
49 }%
50
51 \renewcommand{\missingfigure}[2][]{%
52 \setkeys{ todonotes \} \{ #1 \}%
53 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
54 \fcolorboxBlock%
      {\@todonotes@currentbordercolor}%
      {\@todonotes@currentfigcolor}%
57
      {%
          \verb|\setlength{\fboxrule}{4pt}||
58
          \fcolorbox{red}{white}{Missing figure} \quad #2%
59
      }
60
61 }
62
63 \LetLtxMacro\LWRTODONOTES@orig@todocommon\@todocommon
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*{\phantomsection}{}%
68 \LWRTODONOTES@orig@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \VerifyCommand[lwarp][luatodonotes]{\@todoarea}{3D40C9C729633DA7BB80F7A27E7C2694}
74 \renewcommand{\@todoarea}[3][]{%
      \@todonotes@areaselectedtrue%
      \@todocommon{#1}{#2}%
      \todonotes@textmark@highlight{#3}%
78
      \zref@label{@todonotes@\arabic{@todonotes@numberoftodonotes}@end}%
79 }%
80
81
```

```
82 \DeclareDocumentCommand{\todonotes@textmark@highlight}{m}{%
83 \InlineClass[background:\LWR@origpound{}B3FFB3]{highlight}{#1}%
84 }
85
86 \fi% \if@todonotes@disabled
```

File 275 lwarp-luavlna.sty

§384 Package luavlna

(Emulates or patches code by Michal Hoftich, Miro Hrončok.)

luavlna (*Pkg*) luavlna is patched for use by lwarp.

The package is disabled for HTML output, due to incompatibilities with lwarp's handling of math svG images.

for HTML output: 1 \LWR@ProvidesPackagePass{luavlna}[2019/10/30]

2\preventsingleoff

3 \LetLtxMacro\preventsingleon\preventsingleoff

File 276 lwarp-lyluatex.sty

§385 Package lyluatex

(Emulates or patches code by Fr. Jacques Peron, Urs Liska, Br. Samuel Springuel.)

lyluatex (*Pkg*) lyluatex is patched for use by lwarp.

For the first compile, to set *lwarpmk*'s configuration, use:

lualatex --shell-escape <filename>

After compiling the document with lwarpmk html, use lwarpmk limages to convert the Lilypond images for HTML.

The option insert=systems results in an image per system. Each music image "system" is placed inside a of class lyluatex, which defaults to display: inline-block.

The option insert=fullpage results in a single image per page of printed output. Each music "fullpage" image is placed inside a <div> of class lyluatex. To match the number of measures per line with the printed version, use the geometry package to select the page geometry, or use the lyluatex options for page and staff sizes.

 \triangle options

To use \linewidth or \textwidth inside the package options for lyluatex, use the kvoptions-patch package first:

```
\usepackage{kvoptions-patch}
\usepackage[...,line-width-0.8\linewidth,...]{lyluatex}
```

 \wedge

raw-pdf

If using raw-pdf, the resulting PDF images must be converted to svg:

```
Enter \Rightarrow lwarpmk pdftosvg tmp-ly/*.pdf
```

for HTML output:

```
1 \LWR@origRequirePackage{luacode}
2
3 \LWR@ProvidesPackagePass{lyluatex}[2023/04/18]
```

User-redefinable ALT tag:

4 \newcommand*{\LyluatexImageAltText}{-lilypond-~\PackageDiagramAltText}

\ly@compilescore

```
{\langle Lilypond object\rangle}
```

```
5 \VerifyCommand[lwarp][lyluatex]{\ly@compilescore}{31A1EF1F24F22143AFD302A7C6AD29E6}
6
7 \renewcommand*{\ly@compilescore}[1]{%
```

A local group holds a number of changes:

```
8 \begingroup%
```

The user's original geometry and font size are restored to match the print version. This allows for correct spacing in the musical score.

```
9 \LWR@maybe@orignewpage%10 \LWR@origloadgeometry{LWR@usergeometry}%11 \LWR@print@normalsize%
```

A local group holds a redefined \includegraphics which is used by *lyluatex.lua* to insert the *Lilypond* score if insert=systems is used. This is now placed inside a lateximage, which itself is placed inside a of class lyluatex.

\LWR@addbaselinemarker preserves the left margins.

```
\renewcommand{\includegraphics}[2][]{%
12
          \InlineClass{lyluatex}{%
13
              \begin{lateximage}[\LyluatexImageAltText]%
14
              \LWR@addbaselinemarker%
15
              \LWR@origincludegraphics{##2}%
16
              \end{lateximage}%
17
          }%
18
19
      }%
```

From the original:

```
\lv@setunits%
20
      \setluaoption{ly}{currfiledir}{\currfiledir}
21
22
      \setluaoption{ly}{twoside}{\ly@istwosided}
      \directlua{
23
          #1
24
          ly.newpage_if_fullpage()
25
26
      }%
27
      \ly@resetunits%
      \ly@currentfonts%
```

The fullpage version is set inside an HTML <div>:

```
29 \directlua{
30     if (ly.score.insert == 'fullpage') then
31         tex.print{[[\string\begin{BlockClass}{lyluatex}]]}
32     end
33  }%
```

```
Generate the score:
                      \directlua{ly.score:process()}%
                 Close the <div>:
                      \directlua{
                          if (ly.score.insert == 'fullpage') then
                 36
                              tex.print{[[\string\end{BlockClass}]]}
                 37
                 38
                      }%
                 39
                 Move to a new page and renew the regular page geometry:
                      \LWR@maybe@orignewpage%
                      \LWR@origrestoregeometry%
                 41
                 End of the local group.
                      \endgroup%
                 43 }
                 In HTML the following generates an error, so is removed:
                 46 \xpatchcmd{\endly@bufferenv}
                      \{\hspace \{ 0pt \} \hlbert \}
                 47
                 48
                      {}
                 49
                      {}
                      {\LWR@patcherror{lyluatex}{endly@bufferenv}}
                 50
         File 277 lwarp-magaz.sty
        Package magaz
$386
                 magaz is emulated.
      magaz(Pkg)
                 1 \LWR@ProvidesPackageDrop{magaz}[2011/11/24]
for HTML output:
                 2 \newcommand\FirstLine[1]{%
                      \begingroup%
                      \FirstLineFont{%
                 4
                          \LWR@textcurrentcolor{%
                 5
                              \LWR@textcurrentfont{%
                 6
                 7
                                  #1%
                              }%
                 8
                          }%
                 9
                 10
                      }%
                      \endgroup%
                 11
                 12 }
                 14 \providecommand\FirstLineFont{\scshape}
         File 278 lwarp-makeidx.sty
```

(Emulates or patches code by IATEX PROJECT TEAM.)

Package makeidx

§387

makeidx(Pkg)makeidx is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{makeidx}[2014/09/29]

\@wrindex is redefined \AtBeginDocument by the lwarp core.

\printindex

```
2\preto\printindex{%
     \LWR@maybe@orignewpage%
     \LWR@startpars%
5 }
```

File 279 lwarp-manyfoot.sty

\$388

Package manyfoot

manyfoot (Pkg) manyfoot is emulated.

bigfoot, manyfoot verbatim

Verbatim footnotes are not yet supported.

If using the bigfoot package, and possibly also manyfoot, problems may occur with counter allocation because lwarp uses many counters, and there is a difference in how counters numbered 256 and up are handled in PDF LATEX. With bigfoot this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining bigfoot or manyfoot footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use XFLATEX or LuaLATEX instead of PDF LATEX.

lwarp's emulation of bigfoot uses manyfoot, so some of the bigfoot enhancements are included here.

The bigfoot "default" footnote is ignored, using the lwarp version instead.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{manyfoot}[2005/09/11]
```

```
2 \RequirePackage{nccfoots}
4 \newcommand{\extrafootnoterule}{}
6 \let\defaultfootnoterule\footnoterule
8 \newcommand*{\SelectFootnoteRule}[2][0]{}
10 \newcommand{\footnoterulepriority}{1}
12 \newcommand{\SetFootnoteHook}[1]{}
13 \@onlypreamble\SetFootnoteHook
15 \newcommand{\SplitNote}{}
```

```
17 \newcommand*\ExtraParaSkip[1]{}
19 \newcommand*{\newfootnote}[2][plain]{%
      \ifstrequal{#2}{default}{}{% not "default"
          \expandafter\newbox\csname LWR@footnote#2box\endcsname%
21
          \appto{\LWR@printpendingfootnotes}{%
22
              \LWR@@printpendingfootnotes{footnote#2}%
23
24
          \long\csdef{Footnotetext#2}##1##2{%
25
              \NCC@makefnmark{##1}%
26
27
              \LWR@@footnotetext{##2}{LWR@footnote#2box}%
28
29
          \long\csdef{Footnotetext#2+}##1##2{%
30
               \NCC@makefnmark{##1}%
31
              \LWR@@footnotetext{##2}{LWR@footnote#2box}%
          }%
32
      }% not "default"
33
34 }
35 \@onlypreamble\newfootnote
36
37 \newcommand*{\DeclareNewFootnote}[2][plain]{%
    \@ifnextchar[%
38
          {\LWR@manyfoot@declare{#1}{#2}}%
39
          {\LWR@manyfoot@declare{#1}{#2}[arabic]}%
40
41 }
42
43 \def\LWR@manyfoot@declare#1#2[#3]{%
44 \ifstrequal{#2}{default}{}{% not "default"
    \newfootnote[#1]{#2}%
45
    \newcounter{footnote#2}%
46
      \newcounter{footnote#2Reset}%
47
48
      \setcounter{footnote#2Reset}{0}%
      \csdef{thefootnote#2}{%
49
        \expandafter\noexpand\csname @#3\endcsname%
50
51
        \expandafter\noexpand\csname c@footnote#2\endcsname%
52
      }%
```

For **bigfoot**, the footnote commands may be appended with one or two plusses or one or two minuses, which are ignored in HTML.

```
53
                                     \stepcounter{footnote#2}%
54
                                     \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
55
56
                                     \@footnotemark%
                                     \csuse{Footnotetext#2}{\ensuremath{\csuse{Footnote}}}\% absorbs the footnote contents
57
58
                      }%
59
                       \csdef{footnotemark#2}{%
                                     \verb|\stepcounter{footnote#2}|%
60
                                     \verb|\protected@xdef@thefnmark{\csname thefootnote#2\endcsname}| % \csname thefootnote for the following the follow
61
62
                                     \@footnotemark%
                     }%
63
                  64
                                     \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
65
                                     \csuse{Footnotetext#2}{\@thefnmark}% absorbs the footnote contents
66
67
68
                       \csdef{Footnotemark#2}{%
69
                             \Footnotemark%
70
                       \csdef{Footnote#2}##1{%
71
```

```
\Footnotemark{##1}%
               72
               73
                       \csuse{Footnotetext#2}{##1}%
                     }%
               75 }% not "default"
               77 \@onlypreamble\DeclareNewFootnote
       File 280 lwarp-marginal.sty
      Package marginal
 marginal (Pkg) marginal is ignored.
                1 \LWR@ProvidesPackageDrop{marginal}
                2 \newcommand*{\showlostmarginals}{}
                3 \newcommand*{\enlargefreelist}{}
                4 \newcommand*{\onesidemarginals}{}
       File 281 lwarp-marginfit.sty
      Package marginfit
               marginfit is ignored.
marginfit(Pkg)
                Discard all options for lwarp-marginfit:
                1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]
               lwarp-marginfix.sty
       File 282
      Package marginfix
                (Emulates or patches code by Stephen Hicks.)
marginfix(Pkg)
                marginfix is ignored.
                Discard all options for lwarp-marginfix:
                {\tt 1 \LWR@ProvidesPackageDrop\{marginfix\}[2013/09/08]}
                2 \newcommand*{\marginskip}[1]{}
                3 \newcommand*{\clearmargin}{}
                4\newcommand*{\softclearmargin}{}
                5 \newcommand*{\extendmargin}[1]{}
                6 \newcommand*{\mparshift}[1]{}
```

\$389

§390

\$391

for HTML output:

for HTML output:

for HTML output:

7 \newdimen\marginheightadjustment 8 \newdimen\marginposadjustment 9 \newcommand*{\blockmargin}[1][]{} 10 \newcommand*{\unblockmargin}[1][]{} 11 \newcommand*{\marginphantom}[2][]{}

File 283 lwarp-marginnote.sty

\mvs\char#1%
\end{lateximage}%

5 6 }

```
Package marginnote
$392
                 (Emulates or patches code by MARKUS KOHM.)
 marginnote(Pkg)
                 marginnote is emulated.
                 Discard all options for lwarp-marginnote:
for HTML output:
                 1 \LWR@ProvidesPackageDrop{marginnote}[2018/08/09]
                 2 \NewDocumentCommand{\marginnote}{+o +m o}{\marginpar{#2}}
                 3 \newcommand*{\marginnoteleftadjust}{}
                 4\newcommand*{\marginnoterightadjust}{}
                 5 \newcommand*{\marginnotetextwidth}{}
                 6 \let\marginnotetextwidth\textwidth
                 7 \newcommand*{\marginnotevadjust}{}
                 8 \newcommand*{\marginfont}{}
                 {\tt 9 \ left margin note} \{ \}
                 10 \newcommand*{\raggedrightmarginnote}{}
                 11 \appto\LWR@restoreorigformatting{%
                      \RenewDocumentCommand{\marginnote}{+o +m o}{}
                 13 }
                 For MATHJAX:
                 14 \begin{warpMathJax}
                 15 \CustomizeMathJax{\newcommand{\LWRmarginnote}[1][]{}}
                 17 \end{warpMathJax}
         File 284
                 lwarp-marvosym.sty
        Package marvosym
§393
                 (Emulates or patches code by Thomas Henlich, Mojca Miklavec.)
   marvosym (Pkg) marvosym is patched for use by lwarp.
                 Hashed inline images are used, as there may not be Unicode support for all icons.
for HTML output:
                 1 \LWR@ProvidesPackagePass{marvosym}[2011/07/20]
                 2 \renewcommand{\mvchr}[1]{%
                      \begin{lateximage}*[symbol #1][marvosym #1]%
```

```
7
8 \renewcommand{\textmvs}[1]{%
9 \begin{lateximage}%
10 \mvs #1%
11 \end{lateximage}%
12 }
```

File 285 lwarp-mathalpha.sty

§394 Package mathalpha

(Emulates or patches code by Michael Sharpe.)

mathalpha (Pkg) mathalpha is used as-is for svg math, and is emulated for MATHJAX.

⚠ limitations

The MathJax emulation ignores all package options, and some bold fonts may not be not supported by MathJax.

for HTML output:
 1 \LWR@ProvidesPackagePass{mathalpha}[2021/11/18]
 2
 3 \begin{warpMathJax}
 4 \CustomizeMathJax{\newcommand{\mathbfbb}[1]{\boldsymbol{\mathbb{#1}}}}% not bold
 5 \CustomizeMathJax{\newcommand{\mathbfcal}[1]{\boldsymbol{\mathcal{#1}}}}
 6 \CustomizeMathJax{\newcommand{\mathbfrak}[1]{\boldsymbol{\mathscr{#1}}}% not bold
 8
 9 \IfPackageLoadedWithOptionsTF{mathalpha}{oldbold}
 10 {
 11 \CustomizeMathJax{\newcommand{\mathbb}[1]{\boldsymbol{\mathbb{#1}}}}% not bold
 12 \CustomizeMathJax{\newcommand{\mathbbb}[1]{\boldsymbol{\mathcal{#1}}}}
 13 \CustomizeMathJax{\newcommand{\mathbcal}[1]{\boldsymbol{\mathcal{#1}}}}
 14 \CustomizeMathJax{\newcommand{\mathbscr}[1]{\boldsymbol{\mathfrak}{#1}}}% not bold
 15 }{}
 16 \end{\warpMathJax}

File 286 lwarp-mathastext.sty

§ 395 Package mathastext

10

\else

(Emulates or patches code by Jean-François Burnol.)

mathastext (*Pkg*) mathastext is used as-is for svg math, and emulated for MATHJAX.

\LWR@mathjax@addgreek@l@up{}{}

```
for HTML output: 1 \LWR@ProvidesPackagePass{mathastext}[2019/11/16]

2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \ifmst@itgreek
6% \LWR@mathjax@addgreek@l@it{}{}
7 \else
8 \ifmst@upgreek
```

```
11
          \ifmst@frenchmath
              \LWR@mathjax@addgreek@l@up{}{}
          \else
13
14
              \ifmst@italic
15 %
                   \LWR@mathjax@addgreek@l@it{}{}
16
              \else
                   \LWR@mathjax@addgreek@l@up{}{}
17
              \fi
18
          \fi
19
      \fi
20
21\fi
23 \ifcase\mst@greek@select
      \or{\LWR@mathjax@addgreek@u@it*{}{}}
25 %
        \or{\LWR@mathjax@addgreek@u@up*{}{}}
26\fi
28 \CustomizeMathJax{\newcommand{\mathnormalbold}[1]{\boldsymbol{#1}}}
29 \CustomizeMathJax{\newcommand{\MathEulerBold}[1]{\boldsymbol{#1}}}
30 \CustomizeMathJax{\newcommand{\MathEuler}[1]{{#1}}}
31 \CustomizeMathJax{\newcommand{\MathPSymbol}[1]{{#1}}}
32 \CustomizeMathJax{\let\fouriervec\vec}
33 \CustomizeMathJax{\let\pmvec\vec}
34 \CustomizeMathJax{\let\inodot\imath}
35 \CustomizeMathJax{\let\jnodot\jmath}
36 \CustomizeMathJax{\let\shortiff\iff}
37 \CustomizeMathJax{\let\longto\longrightarrow}
38 \CustomizeMathJax{\newcommand{\inftypsy}{\mathord{\unicode{x221E}}}}
39 \CustomizeMathJax{\newcommand{\proptopsy}{\mathrel{\unicode{x221D}}}}
40 \CustomizeMathJax{\let\prodpsy\prod}
41 \CustomizeMathJax{\let\sumpsy\sum}
42 \CustomizeMathJax{\let\MToriginalprod\prod}
43 \CustomizeMathJax{\let\MToriginalsum\sum}
44 \CustomizeMathJax{\newcommand{\DotTriangle}{\mathord{\unicode{x2234}}}}
45 \end{warpMathJax}
```

File 287 lwarp-mathcomp.sty

```
§ 396 Package mathcomp
```

(Emulates or patches code by Tilmann Böß.)

mathcomp (*Pkg*) mathcomp is supported as-is for svg math, and is emulated for MATHJAX.

```
for HTML output: 1 \LWR@ProvidesPackagePass{mathcomp}[2001/01/07]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\tcohm}{\mathrm{\Omega}}}
4 \CustomizeMathJax{\newcommand{\tccelsius}{\unicode{x2103}}}
5 \CustomizeMathJax{\newcommand{\tcmu}{\mathrm{\unicode{x0085}}}}
6 \CustomizeMathJax{\newcommand{\tcperthousand}{\unicode{x2030}}}
7 \CustomizeMathJax{\newcommand{\tcpertenthousand}{\unicode{x2031}}}
8 \CustomizeMathJax{\newcommand{\tcdegree}{\mathrm{\circ}}}
9 \CustomizeMathJax{\newcommand{\tcdigitoldstyle}[1]{\oldstyle{#1}}}
10 \end{warpMathJax}
```

File 288 lwarp-mathdesign.sty

§ 397 Package

mathdesign

(Emulates or patches code by PAUL PICHAUREAU.)

mathdesign (Pkg) mathdesign is used as-is for svg math, and is emulated for MATHJAX.

⚠ limitations

The MATHJAX emulation ignores all package options except greekuppercase and greeklowercase. The dedicated macros for upright and italic greek letters work correctly, although the user may wish to swap the definitions for epsilon and phi.

svG math should appear the same as the printed output.

for HTML output:

1 \LWR@ProvidesPackagePass{mathdesign}[2013/08/29]

For MATHJAX:

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
3
4 \LWR@origRequirePackage{lwarp-common-mathjax-overlaysymbols}
5
6 \begin{warpMathJax}
7 \LWR@infoprocessingmathjax{mathdesign}
```

Default greek upright or italicized:

```
8 \if@MD@grupright
9 \LWR@mathjax@addgreek@l@up{}{}
10 \fi
11
12 \if@MD@GRupright
13 \else
14 \LWR@mathjax@addgreek@u@it*{}{}
15 \fi
```

Upright:

```
16 \LWR@mathjax@addgreek@l@up{}{up}
17 \LWR@mathjax@addgreek@u@up*{}{up}
```

Italicized:

```
18 \LWR@mathjax@addgreek@l@it{}{it}
19 \LWR@mathjax@addgreek@u@it*{}{it}
```

Adapt to mathdesign inconsistency:

Extra symbols:

 ${\tt 22 \customizeMathJax{\newcommand{\smallin}{\mathrel{\unicode{x220A}}}}}$

```
23 \CustomizeMathJax{\newcommand{\smallowns}{\mathrel{\unicode{x220D}}}}}
                24 \costomizeMathJax{\newcommand{\notsmallin}{\mbox{\Newcommand{\notsmallin}}{\notsmallin}}})}
                25 \costomizeMathJax{\newcommand{\notsmallowns}{\mbox{\Newcommand{\notsmallowns}}}})
                Integrals:
                27 \CustomizeMathJax{\newcommand{\intclockwise}{\mathop{\unicode{x2231}}\limits}}
                28 \CustomizeMathJax{\newcommand{\ointclockwise}{\mathop{\unicode{x2232}}\limits}}
                29 \CustomizeMathJax{\newcommand{\ointctrclockwise}{\mathop{\unicode{x2233}}\limits}}
                30 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicode{x222F}}\limits}}
                31 \CustomizeMathJax{\newcommand{\oiiint}{\mathop{\unicode{x2230}}\limits}}
                Math and text mode:
                32 \CustomizeMathJax{\newcommand{\ddag}{\unicode{x2021}}}
                33 \CustomizeMathJax{\newcommand{\P}{\unicode{x00B6}}}
                34 \CustomizeMathJax{\newcommand{\copyright}{\unicode{x00A9}}}
                35 \CustomizeMathJax{\newcommand{\dag}{\unicode{x2020}}}
                36 \CustomizeMathJax{\newcommand{\pounds}{\unicode{x00A3}}}
                Extra symbols:
                37 \CustomizeMathJax{\newcommand{\iddots}{\mathinner{\unicode{x22F0}}}}
                {\tt 38 \ CustomizeMathJax{\newcommand{\utimes}{\{\newcommand{\utimes}\}}}}
                39 \CustomizeMathJax{\newcommand{\dtimes}{\mathbin{\underline{\times}}}}
                41 \CustomizeMathJax{\newcommand{\leftwave}{\left\{}}
                42 \CustomizeMathJax{\newcommand{\rightwave}{\right\}}}
                44 \end{warpMathJax}
        File 289
               lwarp-mathdots.sty
       Package mathdots
                 (Emulates or patches code by DAN LUECKING.)
  mathdots (Pkg) mathdots is used as-is for svg math, and emulated for MATHJAX.
for HTML output:
                 1 \LWR@ProvidesPackagePass{mathdots}[2014/06/11]
                2 \begin{warpMathJax}
                \label{lem:code} $$ \CustomizeMathJax{\newcommand{\iddots}{\mathbb{x}22F0}}}$
                4 \CustomizeMathJax{\let\fixedddots\ddots}
                5 \CustomizeMathJax{\let\fixedvdots\vdots}
                6 \CustomizeMathJax{\let\fixediddots\iddots}
                7 \CustomizeMathJax{\let\originalddots\ddots}
                8 \CustomizeMathJax{\let\originalvdots\vdots}
                9 \CustomizeMathJax{\let\originaliddots\iddots}
                10 \CustomizeMathJax{\let\originaldddot\dddot}
                11 \CustomizeMathJax{\let\originalddddot\ddddot}
                12 \end{warpMathJax}
```

§398

File 290 lwarp-mathfixs.sty

§ 399 Package mathfixs

(Emulates or patches code by Niklas Beisert.)

mathfixs (Pkg) mathfixs is used as-is for svg math, and is emulated for MATHJAX.

 \triangle

Greek letters are unchanged.

for HTML output: 1 \LWR@ProvidesPackagePass{mathfixs}[2018/12/30]

```
2 \begin{warpMathJax}
```

- $\label{lem:command} $$ \customizeMathJax{\newcommand{\rfrac}[2]{\tfrac{#1}{#2}}} $$
- 5 \CustomizeMathJax{\newcommand{\ProvideMathFix}[1]{}}
- 6 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
- 7 \CustomizeMathJax{\newcommand{\.}{\,}}
- 8 \end{warpMathJax}

File 291 lwarp-mathpazo.sty

§ 400 Package mathpazo

(Emulates or patches code by Walter Schmidt.)

mathpazo (Pkg) mathpazo is used as-is for svg math, and is emulated for MATHJAX.

△ limitations

The MathJax emulation ignores all package options. The dedicated macros for upright greek letters do work correctly.

svG math should appear the same as the printed output.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \LWR@ProvidesPackagePass{mathpazo}[2020/03/25] \end{tabular}$

For MATHJAX:

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{mathpazo}
6
7 \ifpazo@slGreek
8 \LWR@mathjax@addgreek@u@it*{}{}
9 \fi
10
11 \LWR@mathjax@addgreek@u@up*{up}{}
12
13 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
14 \end{warpMathJax}
```

File 292 lwarp-mathptmx.sty

§ 401 Package mathptmx

(Emulates or patches code by Walter Schmidt.)

mathptmx (*Pkg*) mathptmx is used as-is for svg math, and is emulated for MATHJAX.

⚠ limitations

The MathJax emulation ignores all package options. The dedicated macros for upright greek letters do work correctly.

svg math should appear the same as the printed output.

for HTML output: 1 \LWR@ProvidesPackagePass{mathptmx}[2020/03/25]

For MATHJAX:

File 293 lwarp-mathspec.sty

§ 402 Package mathspec

(Emulates or patches code by Andrew Gilbert Moschou.)

mathspec (Pkg) mathspec is used as-is with svg math, and is emulated for MATHJAX.

Double quotes (\" and the " character) are removed during MATHJAX emulation, but this also includes inside \text.

for HTML output: 1 \LWR@ProvidesPackagePass{mathspec}[2016/12/22]

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
3
4 \begin{warpMathJax}
```

Neutralize double quotes (" and \"):

5 \booltrue{LWR@MathJax@silentquotes}

Sort options for out Greek emulation:

```
6 \AtBeginDocument{
7\ifcase\eu@GreekUppercase@@value %% If Greek Uppercase Regular
      \LWR@mathjax@addgreek@u@up*{}{}
9\or %% If Greek Uppercase Italic
      \LWR@mathjax@addgreek@u@it*{}{}
11\or %% If Greek Uppercase Plain
      \LWR@mathjax@addgreek@u@up*{}{}
13 \fi
14\ifcase\eu@GreekLowercase@@value %% If Greek Lowercase Regular
      \LWR@mathjax@addgreek@l@up{}{}
16 \or %% If Greek Lowercase Italic
      \LWR@mathjax@addgreek@l@it{}{}
18 \or %% If Greek Lowercase Plain
      \LWR@mathjax@addgreek@l@it{}{}
20∖fi
21 }
```

Swap definitions according the mathspec conditionals:

```
22 \newcommand*{\LWR@mathspec@varforms}{%
23 \eu@ifbooltrue{GreekLowercase}{
      \eu@ifbooltrue{exchangebetaforms}{
24
          \CustomizeMathJax{\let\LWRorigbeta\beta}
25
26
          \CustomizeMathJax{\let\beta\varbeta}
27
          \CustomizeMathJax{\let\varbeta\LWRorigbeta}
28
29
      \eu@ifbooltrue{exchangeepsilonforms}{
          \CustomizeMathJax{\let\LWRorigepsilon\epsilon}
30
          \CustomizeMathJax{\let\epsilon\varepsilon}
31
          \CustomizeMathJax{\let\varepsilon\LWRorigepsilon}
32
33
      \eu@ifbooltrue{exchangethetaforms}{
34
          \CustomizeMathJax{\let\LWRorigtheta\theta}
35
          \CustomizeMathJax{\let\theta\vartheta}
36
37
          \CustomizeMathJax{\let\vartheta\LWRorigtheta}
38
      \eu@ifbooltrue{exchangekappaforms}{
39
          \CustomizeMathJax{\let\LWRorigkappa\kappa}
40
41
          \CustomizeMathJax{\let\kappa\varkappa}
42
          \CustomizeMathJax{\let\varkappa\LWRorigkappa}
43
      \eu@ifbooltrue{exchangepiforms}{
44
          \CustomizeMathJax{\let\LWRorigpi\pi}
45
          \CustomizeMathJax{\let\pi\varpi}
46
47
          \CustomizeMathJax{\let\varpi\LWRorigpi}
48
      \eu@ifbooltrue{exchangerhoforms}{
49
          \CustomizeMathJax{\let\LWRorigrho\rho}
50
51
          \CustomizeMathJax{\let\rho\varrho}
          \CustomizeMathJax{\let\varrho\LWRorigrho}
52
53
      \eu@ifbooltrue{exchangephiforms}{
54
          \CustomizeMathJax{\let\LWRorigphi\phi}
55
          \CustomizeMathJax{\let\phi\varphi}
56
          \CustomizeMathJax{\let\varphi\LWRorigphi}
57
58
      }
59 }
60 \eu@ifbooltrue{GreekUppercase}{
      \eu@ifbooltrue{exhangeThetaforms}{
62
          \CustomizeMathJax{\let\LWRorigTheta\Theta}
```

```
\CustomizeMathJax{\let\Theta\varTheta}
63
          \CustomizeMathJax{\let\varTheta\LWRorigTheta}
64
65
      }
66 }
67 }
```

Append new action to mathspec's \AtBeginDocument code:

```
68 \xapptocmd{\exchangeforms}
      {\AtBeginDocument{\LWR@mathspec@varforms}}
70
      {}
      {\LWR@patcherror{mathspec}{exchangeforms}}
71
73 \end{warpMathJax}
```

File 294 lwarp-mathtools.sty

Package mathtools **§ 403**

(Emulates or patches code by Morten Høgholm, Lars Madsen.)

mathtools(Pkg)equation numbering mathtools is patched for use by lwarp. Emulation macros are provided for MATH-

showonlyrefs is disabled, as it conflicts with cleveref, which is used by lwarp. Equation numbers may not match the print version.

italic correction mathic is not emulated for HTML.

MATHJAX If using MATHJAX:

- Recent changes may not yet be updated in the MATHJAX extension, which is used by lwarp.
- mathtools disallowspaces does not work for MATHJAX. Protect brackets which are not optional arguments, such as:

```
\begin{gathered}{}
[p]=1 . . .
\end{gathered}
```

- showonlyrefs does not work in MATHJAX, and will result in a difference in equation numbering compared to the print version.
- alignat in MathJax requires math mode, but in LATFX it doesn't. It may be required to use warpHTML and warpprint to isolate a version for each mode.
- \DeclarePairedDelimiter and related must be in the preamble before \begin{document}.

```
for HTML output:
                  1 \LWR@ProvidesPackagePass{mathtools}[2018/01/08]
                  2 \RequirePackage{graphicx}
                  ₃\MHInternalSyntaxOn
```

Forces showonlyrefs off because lwarp uses cleveref, which is not compatible with showonlyrefs.

```
4 \renewcommand*\MT_showonlyrefs_true:{%
      \PackageWarningNoLine{lwarp}
6
          Mathtools \space showonlyrefs \space conflicts \space
7
8
          with \space cleveref, \MessageBreak
9
          which \space is \space used \space by \space lwarp, \space
          so \space showonlyrefs \space is\MessageBreak
10
          forced \space off. \space\space
11
          Equation \space numbers \space may \space not \space match%
12
13
14
      \MT_showonlyrefs_false:
15 }
16 \mathtoolsset{showonlyrefs=false}
Forces math italic correction off. Not patched for lwarp.
17 \renewcommand*{\MT_mathic_true:}{\MT_mathic_false:}
```

19 \MHInternalSyntaxOff

18 \mathtoolsset{mathic=false}

For MATHJAX.

The MathJax package is used, and improvements are added.

```
20 \begin{warpMathJax}
21 \CustomizeMathJax{\require{mathtools}}
23 \LWR@infoprocessingmathjax{mathtools}
25 \CustomizeMathJax{\newenvironment{crampedsubarray}[1]{}{}}
27 \CustomizeMathJax{\newcommand{\smashoperator}[2][]{#2\limits}}
29 \CustomizeMathJax{\newcommand{\SwapAboveDisplaySkip}{}}
31 \CustomizeMathJax{\newcommand{\LaTeXunderbrace}[1]{\underbrace{#1}}}
32 \CustomizeMathJax{\newcommand{\LaTeXoverbrace}[1]{\overbrace{#1}}}
33
34
35 \CustomizeMathJax{\newcommand{\LWRmultlined}[1][]{\begin{multline*}}}
36 \costomizeMathJax{\newenvironment{multlined}[1][]{\LWRmultlined}{\newenvironment{multline*}}}
38 \CustomizeMathJax{\let\LWRorigshoveleft\shoveleft}
39 \CustomizeMathJax{\renewcommand{\shoveleft}[1][]{\LWRorigshoveleft}}
40 \CustomizeMathJax{\let\LWRorigshoveright\shoveright}
41 \CustomizeMathJax{\renewcommand{\shoveright}[1][]{\LWRorigshoveright}}
45 \verb|\LetLtxMacro| LWR@mathtools@orig@DeclarePairedDelimiter| DeclarePairedDelimiter| A constant of the cons
46 \renewcommand{\DeclarePairedDelimiter}[3]{
                \LWR@mathtools@orig@DeclarePairedDelimiter{#1}{#2}{#3}
48% starred:
                \appto\LWR@customizedMathJax{\LWRbackslash(}
49
                \appto\LWR@customizedMathJax{%
50
```

```
51
                     52
                  \appto\LWR@customizedMathJax{[2][]}%
  53
                  \appto\LWR@customizedMathJax{\{\{}}%
  54
                  \LWR@subcustomizedmathjax{##1\left#2##2##1\right#3}%
  55
  56
                  \appto\LWR@customizedMathJax{\}\}}%
                  \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
 57
 58% not starred:
                  \appto\LWR@customizedMathJax{\LWRbackslash(}
 59
                  \appto\LWR@customizedMathJax{%
 60
                     61
  62
  63
                  \appto\LWR@customizedMathJax{[2][]}%
                  65
                  \LWR@subcustomizedmathjax{##1#2##2##1#3}%
 66
                  \appto\LWR@customizedMathJax{\}\}}%
                  \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
 67
 68% user macro:
                  \appto\LWR@customizedMathJax{\LWRbackslash(}
 69
                  \appto\LWR@customizedMathJax{%
 70
                             \label{localization} $$ \LWRbackslash{}\rightarrow {\LWRbackslash{}\mbox{\colorable} } $$
  71
  72
                             \{\LWRbackslash{}ifstar%
  73
                                       \LWRbackslash{}\macrotocsname{#1}LWRsubstar%
                                       \LWRbackslash{}\macrotocsname{#1}LWRsubnostar%
  74
  75
                            \}%
  76
                 }%
  77
                  \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
 78 }
  {\it 79 \ensuremath{ \begin{tabular}{l} 79 \ensurem
 81% (DeclarePairedDelimiterX is already defined to use \DeclarePairedDelimiterXPP.)
 82
 83 \verb|\LetLtxMacro| LWR@mathtools@orig@DeclarePairedDelimiterXPP| DeclarePairedDelimiterXPP| A constraint of the constr
 84 \DeclareDocumentCommand{\DeclarePairedDelimiterXPP}{m O{1} m m m m}{
              \LWR@mathtools@orig@DeclarePairedDelimiterXPP{#1}[#2]{#3}{#4}{#5}{#6}{#7}
 86% subsubstar, second opt arg
                  \appto\LWR@customizedMathJax{\LWRbackslash(}%
 87
 88
                  \appto\LWR@customizedMathJax{%
                     \LWRbackslash{}newcommand\{\LWRbackslash\macrotocsname{#1}LWRsubsubstar\}%
 89
                 }%
 90
 91
                  \appto\LWR@customizedMathJax{[#2]}%
                  \appto\LWR@customizedMathJax{\{\LWRbackslash{}left}%
 92
                  \LWR@subcustomizedmathjax{#3#4#7}%
 93
 94
                  \appto\LWR@customizedMathJax{\LWRbackslash{}right}%
 95
                  \LWR@subcustomizedmathjax{#5#6}%
                  \appto\LWR@customizedMathJax{\}\}}%
 96
                  \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
 97
 98% substar, first opt arg
                  \appto\LWR@customizedMathJax{\LWRbackslash(}%
 99
                  \appto\LWR@customizedMathJax{%
100
                     \LWRbackslash\\acrotocsname{#1}LWRsubstar\\[1][]%
101
                 }%
102
103
                  \appto\LWR@customizedMathJax{%
104
                             \LWRbackslash{}def\LWRbackslash{}delimsize\{\#1\}
105
                             \LWRbackslash\macrotocsname{#1}LWRsubsubstar
106
107
108
                 }%
                  \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
109
110% subsubnostar, second opt arg
```

```
111
      \appto\LWR@customizedMathJax{\LWRbackslash(}%
112
      \appto\LWR@customizedMathJax{%
       113
114
     }%
115
      \appto\LWR@customizedMathJax{[#2]}%
      116
      \LWR@subcustomizedmathjax{#3#4#7}%
117
      \appto\LWR@customizedMathJax{\LWRbackslash{}delimsize}%
118
      \LWR@subcustomizedmathjax{#5#6}%
119
      \appto\LWR@customizedMathJax{\}\}}%
120
      \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
121
122% subnostar, first opt arg
123
      \appto\LWR@customizedMathJax{\LWRbackslash(}%
124
      \appto\LWR@customizedMathJax{%
125
       126
      \appto\LWR@customizedMathJax{%
127
128
         \{
         \LWRbackslash{}def\LWRbackslash{}delimsize\{\#1\}
129
         \LWRbackslash\macrotocsname{#1}LWRsubsubnostar
130
         \}%
131
     }%
132
      \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
133
134 % user macro:
      \appto\LWR@customizedMathJax{\LWRbackslash(}
135
      \appto\LWR@customizedMathJax{%
136
137
         \LWRbackslash{}newcommand\{%
138
            \LWRbackslash{}\macrotocsname{#1}%
         \}%
139
            \{\LWRbackslash{}ifstar%
140
                \LWRbackslash{}\macrotocsname{#1}LWRsubstar%
141
                \LWRbackslash{}\macrotocsname{#1}LWRsubnostar%
142
            \}%
143
144
     }%
      \appto\LWR@customizedMathJax{\LWRbackslash)\par}%
145
147 \@onlypreamble\DeclareParedDelimiterXPP
148 \@onlypreamble\DeclareParedDelimiterX
149
152 \LetLtxMacro\LWR@mathtools@orig@newgathered\newgathered
153 \renewcommand{\newgathered}[4]{%
154
      \LWR@mathtools@orig@newgathered{#1}{#2}{#3}{#4}%
      \appto\LWR@customizedMathJax{\LWRbackslash(}%
155
      \LWR@subcustomizedmathjax{%
156
         \newenvironment{#1}{\begin{gathered}}{\end{gathered}}%
157
158
     }%
      \appto\LWR@customizedMathJax{\LWRbackslash)\LWR@orignewline}%
159
160 }
161 \@onlypreamble\newgathered
162
163 \end{warpMathJax}
```

File 295 lwarp-mattens.sty

Package mattens **§ 404**

34

35

39

40

41 42

43 }} 44

46

47

36 }} 37

\LWRmattens%

\LWRmattens%

38 \CustomizeMathJax{\newcommand{\Sb}{%

45 \CustomizeMathJax{\newcommand{\aSa}{%

(Emulates or patches code by Danie Els.)

mattens is used as-is for svg math, and is emulated for MATHJAX.

```
mattens(Pkg)
for HTML output:
                                                       1 \LWR@ProvidesPackagePass{mattens}[2010/03/26]
                                                       2 \begin{warpMathJax}
                                                       3 \CustomizeMathJax{\newcommand{\LWRmattensnull}{}}
                                                       5 \CustomizeMathJax{\newcommand{\LWRmattensnostar}[2][]{%
                                                                   {\#1{LWR} matten sundercmd{LWR mattens overcmd{LWR mattenscross{boldsymbol{$\#2}}}}}}
                                                       7 }}
                                                       9 \CustomizeMathJax{\newcommand{\LWRmattensstar}[2][]{%
                                                                       $\{11\LWR = 1\LWR = 1
                                                     11 }}
                                                     13 \CustomizeMathJax{\newcommand{\LWRmattens}{
                                                                       \ifstar\LWRmattensstar\LWRmattensnostar%
                                                     14
                                                     15 }}
                                                     16
                                                     17 \CustomizeMathJax{\newcommand{\aS}{%
                                                                       \let\LWRmattenscross\LWRmattensnull%
                                                     18
                                                     19
                                                                       \let\LWRmattensovercmd\overrightarrow%
                                                     20
                                                                       \let\LWRmattensundercmd\LWRmattensnull%
                                                     21
                                                                       \LWRmattens%
                                                     22 }}
                                                    23
                                                     24 \CustomizeMathJax{\newcommand{\Sa}{%
                                                                       \let\LWRmattenscross\LWRmattensnull%
                                                                       \let\LWRmattensovercmd\underrightarrow%
                                                    26
                                                                       \let\LWRmattensundercmd\LWRmattensnull%
                                                     27
                                                     28
                                                                       \LWRmattens%
                                                    29 }}
                                                    30
                                                     31 \CustomizeMathJax{\newcommand{\bS}{%
                                                                       \let\LWRmattenscross\LWRmattensnull%
                                                     33
                                                                       \let\LWRmattensovercmd\overline%
```

\let\LWRmattensundercmd\LWRmattensnull%

\let\LWRmattenscross\LWRmattensnull%

\let\LWRmattenscross\LWRmattensnull%

\let\LWRmattensovercmd\overrightarrow%

\let\LWRmattensundercmd\LWRmattensnull%

\let\LWRmattensovercmd\underline%

```
\let\LWRmattensundercmd\underrightarrow%
48
      \LWRmattens%
49
50 }}
51
52 \CustomizeMathJax{\newcommand{\aSb}{%
      \let\LWRmattenscross\LWRmattensnull%
      \let\LWRmattensovercmd\overrightarrow%
54
      \let\LWRmattensundercmd\underline%
55
      \LWRmattens%
56
57 }}
59 \CustomizeMathJax{\newcommand{\bSa}{%
      \let\LWRmattenscross\LWRmattensnull%
      \let\LWRmattensovercmd\overline%
62
      \let\LWRmattensundercmd\underrightarrow%
63
      \LWRmattens%
64 }}
66 \CustomizeMathJax{\newcommand{\bSb}{%
      \let\LWRmattenscross\LWRmattensnull%
      \let\LWRmattensovercmd\overline%
68
      \let\LWRmattensundercmd\underline%
69
      \LWRmattens%
70
71 }}
73 \CustomizeMathJax{\newcommand{\aCSa}{%
      \let\LWRmattenscross\tilde%
      \let\LWRmattensovercmd\overrightarrow%
75
      \let\LWRmattensundercmd\underrightarrow%
76
      \LWRmattens%
77
78 }}
79
80 \CustomizeMathJax{\newcommand{\bCSb}{%
      \let\LWRmattenscross\tilde%
      \let\LWRmattensovercmd\overline%
83
      \let\LWRmattensundercmd\underline%
      \LWRmattens%
85 }}
86 \end{warpMathJax}
```

File 296 lwarp-maybemath.sty

Package maybemath **§ 405**

(Emulates or patches code by Andy Buckley.)

maybemath (*Pkg*) maybemath is used as-is for svg math, and is emulated for MATHJAX.

no effect MathJax is not able to detect the surrounding text font, so all maybemath macros are ignored.

```
for HTML output:
                  1 \LWR@ProvidesPackagePass{maybemath}[2005/2/22]
                  2 \begin{warpMathJax}
                  3 \subset MathJax{\newcommand{\mayberm}[1]{{#1}}}
                  4 \CustomizeMathJax{\let\maybebm\mayberm}
                  5 \CustomizeMathJax{\let\maybeit\mayberm}
```

- 6 \CustomizeMathJax{\let\maybeitrm\mayberm}
- 7 \CustomizeMathJax{\let\maybeitsubscript\mayberm}
- 8 \CustomizeMathJax{\let\maybesf\mayberm}
- 9 \CustomizeMathJax{\let\maybebmsf\mayberm}
- 10 \end{warpMathJax}

File 297 lwarp-mcaption.sty

§ 406

Package mcaption

(Emulates or patches code by Stephan Hennig.)

mcaption(Pkg)

mcaption is ignored.

for HTML output:

Discard all options for lwarp-mcaption:

1 \LWR@ProvidesPackageDrop{mcaption}[2009/03/13]

- 2 \newenvironment{margincap}{}{}
- 3 \newcommand*{\margincapalign}{}
- 4 \newlength{\margincapsep}

File 298 lwarp-mdframed.sty

§ 407

Package mdframed

(Emulates or patches code by Marco Daniel, Elke Schubert.)

mdframed (Pkg) mdframed is loaded with options forced to framemethod=none.

§ 407.1 Limitations

support

Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for mdframed environments and frame titles.

loading When used, lwarp loads mdframed in HTML with framemethod=none.

font For title font, use

frametitlefont=\textbf,

instead of

frametitlefont=\bfseries,

where \textbf must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the mdframed source). Since lwarp does not support \bfseries and friends, only one font selection may be made at a time.

theoremtitlefont

theoremtitlefont is not supported, since the following text is not in braces in the mdframed source.

ignored options userdefine

userdefinedwidth and align are currently ignored.

css classes

Environments created or encapsulated by mdframed are enclosed in a <div> of class mdframed, and also class md<environmentname> for new environments.

Frame titles are placed in a <div> of class |mdframedtitle|. Subtitles are in a <div> of class |mdframedsubtitle|, and likewise for subsubtitles.

Pre-existing hooks are used to patch extra functions before and after the frames.

§ 407.2 Package loading

for HTML output:

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackageDrop{mdframed}[2013/07/01]
```

Do not require TikZ or pstricks:

4 \LWR@origRequirePackage[framemethod=none]{mdframed}

§ 407.3 Patches

Patch to remove PDF formatting and add HTML tags:

```
5 \AtBeginDocument{
6 \def\mdf@trivlist#1{%
7 \edef\mdf@temp{%
8 %
        \topsep=\the\topsep\relax%
        \partopsep=\the\partopsep\relax%
9 %
10 %
        \parsep=\the\parsep\relax%
11 }%
12 %
     \setlength{\topsep}{#1}%
     \topskip\z@%
13 %
14 %
      \partopsep\z@%
      \parsep\z@%
15 %
      \@nmbrlistfalse%
16 %
17 %
      \@trivlist%
18 %
      \labelwidth\z@%
19 %
      \leftmargin\z@%
20 %
      \itemindent\z@%
21 \let\@itemlabel\@empty%
   \def\makelabel##1{##1}%
23 %
      \item\relax\mdf@temp\relax%
24 }
26\renewcommand*{\endmdf@trivlist}{%
27 \LWR@traceinfo{endmdf@trivlist}%
28% \endtrivlist%
29 \LWR@listend%
30 }
31 }% AtBeginDocument
```

§ 407.4 Initial setup

To handle css and paragraphs, patch code at start and end of environment and contents. \LWR@print@raggedright helps avoid hyphenation.

```
32 \mdfsetup{
33 startcode={\LWR@mdframedstart\LWR@print@raggedright},
34 endcode={\LWR@mdframedend},
35 startinnercode={\LWR@startpars\LWR@print@raggedright},
36 endinnercode={\LWR@stoppars},
37 }
```

§ 407.5 Color and length HTML conversion

\LWR@mdfprintcolor

```
\{\langle mdfcolorkey \rangle\}
```

Given the mdframed key, print the color.

```
38 \newcommand*{\LWR@mdfprintcolor}[1]{%
39 \convertcolorspec{named}{\@nameuse{mdf@#1}}{HTML}\LWR@tempcolor%
40 \LWR@origpound\LWR@tempcolor
41 }
```

\LWR@mdfprintlength

```
\{\langle mdflengthkey \rangle\}
```

Given the mdframed key, print the length.

```
42 \newcommand*{\LWR@mdfprintlength}[1]{%
43 \LWR@forceminwidth{\@nameuse{mdf@#1@length}}%
44 \LWR@printlength{\LWR@atleastonept}%
45 }
```

§ 407.6 Environment encapsulation

\LWR@mdframedstart

Actions before an mdframe starts.

Encapsulate a frame inside a <div> of the desired class.

```
46 \newcommand*{\LWR@mdframedstart}{% 47 \LWR@traceinfo{LWR@mdframedstart start}%
```

Warn if starting a frame inside a :

```
48 \LWR@spanwarninvalid{mdframe}%
```

Turn off paragraph handling during the generation of the encapsulating tags:

```
49 \LWR@stoppars%
```

Open a <div> and with custom class and custom style. A BlockClass environment is not used because this <div> is created by the mdframed startcode and endcode settings, which do not properly nest the <div> inside the mdframed environment.

```
50 \LWR@htmltagc{div class=\textquotedbl%
51 mdframed%
52 \ifdefstring{\LWR@mdthisenv}{mdframed}{}{ \LWR@mdthisenv}%
53 \textquotedbl \LWR@orignewline
54 style=\textquotedbl\LWR@orignewline
```

Convert and print the background color:

```
55 background: \LWR@mdfprintcolor{backgroundcolor}; \LWR@orignewline
```

Convert and print the border color and width:

```
56 border: \LWR@mdfprintlength{linewidth} solid
        57 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
        Convert and print the border radius:
        58 border-radius: \LWR@mdfprintlength{roundcorner}; \LWR@orignewline
        Convert and print the shadow:
        59 \ifbool{mdf@shadow}{%
              box-shadow:
        61
              \LWR@mdfprintlength{shadowsize}
              \LWR@mdfprintlength{shadowsize}
        62
              \LWR@mdfprintlength{shadowsize}
        63
              \LWR@mdfprintcolor{shadowcolor};
        64
        65 }
        66 {box-shadow: none ;}
        67 \LWR@orignewline
        68 \textquotedbl}
        69% \LWR@htmldivclass{\LWR@mdthisenv}
        mdframed environment may not work with the HTML versions of the following, so
        restore them to their originals while inside mdframed:
        70 \let\hspace\LWR@print@hspace%
        71 \renewcommand*{\rule}{\LWR@print@rule}
        72 \LetLtxMacro\makebox\LWR@print@makebox%
        73 \LWR@startpars%
        74 \LWR@traceinfo{LWR@mdframedstart done}%
        75 }
          Actions after an mdframe ends.
        After closing the <div>, globally restore to the default environment type:
        76 \newcommand*{\LWR@mdframedend}{
        77 \LWR@traceinfo{LWR@mdframedend start}%
        Close the custom <div>:
        78 \LWR@htmldivclassend{\LWR@mdthisenv}
        Reset future custom class to the default:
        79 \gdef\LWR@mdthisenv{mdframed}
        Resume paragraph handling:
        80 \LWR@startpars%
        81 \LWR@traceinfo{LWR@mdframedend done}%
        82 }
§ 407.7 Mdframed environment
        83 \renewenvironment{mdframed}[1][]{%
        84 \color@begingroup%
             \mdfsetup{userdefinedwidth=\linewidth,#1}%
        85
             \mdf@startcode%
             \mdf@preenvsetting%
             \ifdefempty{\mdf@firstframetitle}{}%
        88
                     {\let\mdf@frametitlesave\mdf@frametitle%
        89
```

\let\mdf@frametitle\mdf@firstframetitle%

\LWR@mdframedend

90 91

92

3%

\ifvmode\nointerlineskip\fi%

\ifdefempty{\mdf@frametitle}{}%

93

```
{\mdfframedtitleenv{\mdf@frametitle}%
                                                                   94
                                                                   95 %
                                                                                                            \mdf@@frametitle@use%
                                                                                                       }%
                                                                   96
                                                                   97
                                                                                \mdf@trivlist{\mdf@skipabove@length}%%
                                                                   98
                                                                                \mdf@settings%
                                                                                     \mdf@lrbox{\mdf@splitbox@one}%
                                                                   99 %
                                                                                     \mdf@startinnercode%
                                                                  100 %
                                                                  101
                                                                             }%
                                                                  102
                                                                             {%
                                                                  103 %
                                                                                     \mdf@@ignorelastdescenders%
                                                                  104
                                                                  105~\%
                                                                                        \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%%
                                                                  106
                                                                                \ifmdf@footnoteinside%
                                                                  107
                                                                                       \def\mdf@reserveda{%
                                                                                            \mdf@footnoteoutput%
                                                                  108
                                                                                                  \mdf@endinnercode%
                                                                  109 %
                                                                                                  \endmdf@lrbox%
                                                                  110 %
                                                                                                  \ifdefempty{\mdf@frametitle}{}%
                                                                  111 %
                                                                  112 %
                                                                                                            {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
                                                                  113 %
                                                                                                  \detected@mdf@put@frame
                                                                                       }%
                                                                  114
                                                                                \else%
                                                                  115
                                                                                       \def\mdf@reserveda{%
                                                                  116
                                                                  117~\%
                                                                                                 \mdf@endinnercode%
                                                                  118\ \%
                                                                                                  \endmdf@lrbox%
                                                                  119 %
                                                                                                  \ifdefempty{\mdf@frametitle}{}%
                                                                                                            {\verb|\df| amediate env{\mdf@frametitle}| mdf@frametitle@use}| % of the constant of the constan
                                                                  120 %
                                                                  121 %
                                                                                                  \detected@mdf@put@frame%
                                                                                             \mdf@footnoteoutput%
                                                                  122
                                                                  123
                                                                                             }%
                                                                                \fi%
                                                                  124
                                                                                \mdf@reserveda%
                                                                             \aftergroup\endmdf@trivlist%
                                                                  127 \color@endgroup%
                                                                  128 \mdf@endcode%
                                                                  129 }
\mdf@footnoteoutput
                                                                  130 \renewrobustcmd*\mdf@footnoteoutput{%
                                                                                   \LWR@printpendingmpfootnotes%
                                                                  132 }
                                                § 407.8 Titles and subtitles
\mdfframedtitleenv
                                                                        \{\langle title \rangle\}
                                                                     Place the title inside a <div> of class mdframedtitle:
                                                                  133 \newlength{\LWR@titleroundcorner}
                                                                  135 \renewrobustcmd\mdfframedtitleenv[1]{%
                                                                  136 \LWR@traceinfo{LWR@mdframedtitleenv start}%
                                                                      Open a <div> with a custom class and custom style:
                                                                  137 \begin{BlockClass}[%
                                                                      Convert and print the title background color:
                                                                  138 background:
                                                                  139 \LWR@mdfprintcolor{frametitlebackgroundcolor}
```

```
140; \LWR@orignewline
 Convert and print the title rule:
141 \ifbool{mdf@frametitlerule}{%
       border-bottom:
143
       \LWR@mdfprintlength{frametitlerulewidth}
       \LWR@mdfprintcolor{frametitlerulecolor}
       ; \LWR@orignewline
147 }{ }%
 Finish the custom style and the opening <div> tag:
148 ]{mdframedtitle}%
 Print the title inside the <div>:
149 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}%
 Close the <div>:
150 \end{BlockClass}%
151 \LWR@traceinfo{LWR@mdframedtitleenv end}%
152 }
  \{\langle sub - or - subsub \rangle\} [\langle options \rangle] \{\langle title \rangle\}
 Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubtitle.
 Encapsulate the subtitle inside a <div> of class mdframedsubtitle:
153 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
154 {% the following empty line is required
156 \LWR@traceinfo{LWR@mdframedsubtitlecommon start}%
 Open a <div> with a custom class and custom style:
157 \begin{BlockClass}[%
 Convert and print the background color:
158 background:
159 \LWR@mdfprintcolor{#1titlebackgroundcolor}
160; \LWR@orignewline
 Convert and print the above line:
161 \ifbool{mdf@#1titleaboveline}{%
       border-top:
       \LWR@mdfprintlength{#1titleabovelinewidth}
       \LWR@mdfprintcolor{#1titleabovelinecolor}
165
       ; \LWR@orignewline
166
167 }{}%
 Convert and print the below line:
168 \ifbool{mdf@#1titlebelowline}{%
      border-bottom:
       \LWR@mdfprintlength{#1titlebelowlinewidth}
170
171
       solid
       \LWR@mdfprintcolor{#1titlebelowlinecolor}
172
       ; \LWR@orignewline
173
174 }{}%
```

Finish the custom style and the opening <div> tag:

\LWR@mdfsubtitlecommon

```
175 ]{mdframed#1title}%
                                                                                                                       Perform the original subtitle action:
                                                                                                                  176 \IfNoValueTF{#2}
                                                                                                                  177 $$ \mathbb{L}Re^LL^{1} : \mathbb{L}Re^LL^{1} : \mathbb{L}Re^LL^{2} : \mathbb{L}R
                                                                                                                  178 \end{figure} 178 
                                                                                                                        Close the <div>:
                                                                                                                  179 \end{BlockClass}%
                                                                                                                  180 \LWR@traceinfo{LWR@mdframedsubtitlecommon end}%
                                                                                                                  181 }
                                                                                                                             [\langle options \rangle] \{\langle title \rangle\}
\LWR@mdfsubtitle
                                                                                                                  182 \newcommand*{\LWR@mdfsubtitle}{%
                                                                                                                  183 \LWR@mdfsubtitlecommon{sub}%
                                                                                                                  184 }
                                                                                                                  185 \let\mdfsubtitle\LWR@mdfsubtitle
\LWR@mdfsubsubtitle
                                                                                                                             [\langle options \rangle] \{\langle title \rangle\}
                                                                                                                  186 \newcommand*{\LWR@mdfsubsubtitle}{%
                                                                                                                  187 \LWR@mdfsubtitlecommon{subsub}%
                                                                                                                  189 \let\mdfsubsubtitle\LWR@mdfsubsubtitle
                                                                                  § 407.9 New environments
                                                                                                                             Stores the environment of the frame about to be created:
\LWR@mdthisenv
                                                                                                                  190 \newcommand*{\LWR@mdthisenv}{mdframed}
                                                                                                                             [\langle options \rangle] \{\langle env-name \rangle\}
\newmdenv
                                                                                                                        Modified from the original to remember the environment.
                                                                                                                  191 \renewrobustcmd*\newmdenv[2][]{%
                                                                                                                  192 \newenvironment{#2}%
                                                                                                                  193 {%
                                                                                                                  194 \mdfsetup{#1}%
                                                                                                                  195 \renewcommand*{\LWR@mdthisenv}{md#2}%
                                                                                                                  196 \begin{mdframed}%
                                                                                                                  197 }
                                                                                                                  198 {\end{mdframed}}%
                                                                                                                  199 }
\surroundwithmdframed
                                                                                                                             [\langle options \rangle] \{\langle environment \rangle\}
                                                                                                                       Modified from the original to remember the environment.
                                                                                                                  200 \renewrobustcmd*{\surroundwithmdframed}[2][]{%
                                                                                                                  201 \BeforeBeginEnvironment{#2}{%
                                                                                                                  202 \renewcommand*{\LWR@mdthisenv}{md#2}%
                                                                                                                  203 \begin{mdframed}[#1]}%
                                                                                                                  204 \AfterEndEnvironment{#2}{\end{mdframed}}%
                                                                                                                  205 }
                                                                                                                             [\langle mdframed-options \rangle] \{\langle envname \rangle\} [\langle numberedlike \rangle] \{\langle caption \rangle\} [\langle within \rangle]
\mdtheorem
                                                                                                                        Modified from the original to remember the environment.
```

```
206 \DeclareDocumentCommand{\mdtheorem}{ O{} m o m o }%
207 {\ifcsdef{#2}%
     {\mdf@PackageWarning{Environment #2 already exits\MessageBreak}}%
208
209
     {%
210
      \IfNoValueTF {#3}%
211
       {%#3 not given -- number relationship
        \IfNoValueTF {#5}%
212
          {%#3+#5 not given
213
           \@definecounter{#2}%
214
           \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
215
           \newenvironment{#2}[1][]{%
216
             \refstepcounter{#2}%
217
             \ifstrempty{##1}%
218
219
               {\let\@temptitle\relax}%
               {%
221
                \def\@temptitle{\mdf@theoremseparator%
222
                                \mdf@theoremspace%
                                \verb|\mdf@theoremtitlefont||
223
                                \LWR@textcurrentfont{##1}}% lwarp
224
                225
               }%
226
            \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
227
                                             \@temptitle}]}%
228
            {\end{mdframed}}%
229
           \newenvironment{#2*}[1][]{%
230
             \ifstrempty{##1}{\let\@temptitle\relax}{\def\@temptitle{:\ ##1}}%
231
232
             \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]}%
233
             {\end{mdframed}}%
234
          }%
235
          {%#5 given -- reset counter
           \ensuremath{\tt @definecounter{#2}\ensuremath{\tt @newctr{#2}[\#5]}
236
           \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
237
238
           \expandafter\xdef\csname the#2\endcsname{%
                 \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
239
240
                     \@thmcounter{#2}}%
           \newenvironment{#2}[1][]{%
241
             \refstepcounter{#2}%
242
             \ifstrempty{##1}%
243
244
               {\let\@temptitle\relax}%
              {%
245
                \def\@temptitle{\mdf@theoremseparator%
246
                                \mdf@theoremspace%
247
                                \mdf@theoremtitlefont%
248
                                \LWR@textcurrentfont{##1}}% lwarp
249
                \mbox{ \ndf@thm@caption{#2}{{#4}{\csname the #2\endcsname}{##1}}% }
250
251
            \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
252
                                             \@temptitle}]}%
253
             {\end{mdframed}}%
254
           \newenvironment{#2*}[1][]{%
255
             \ifstrempty{##1}%
256
               {\let\@temptitle\relax}%
257
               {%
258
259
                \def\@temptitle{\mdf@theoremseparator%
260
                                \mdf@theoremspace%
261
                                \mdf@theoremtitlefont%
                                \LWR@textcurrentfont{##1}}% lwarp
                263
264
             \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]}%
265
```

```
266
                                {\end{mdframed}}%
                          }%
267
                   }%
268
                   {%#3 given -- number relationship
269
                           \global\ensuremath{\mbox{\mbox{\mbox{$1$}}}\
270
271
                           \newenvironment{#2}[1][]{%
                                \refstepcounter{#3}%
272
                                \ifstrempty{##1}%
273
                                     {\let\@temptitle\relax}%
274
                                     {%
275
                                       \def\@temptitle{\mdf@theoremseparator%
276
                                                                                \mdf@theoremspace%
277
278
                                                                                \mdf@theoremtitlefont%
                                                                                \LWR@textcurrentfont{##1}}% lwarp
280
                                        \mbox{\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\
281
                               \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
282
283
                                                                                                                 \@temptitle}]}%
                                {\end{mdframed}}%
284
                           \newenvironment{#2*}[1][]{%
285
                                \ifstrempty{##1}{\let\@temptitle\relax}{\def\@temptitle{:\ ##1}}%
286
                                \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]}%
287
288
                                {\end{mdframed}}%
289
                   }%
290
                \BeforeBeginEnvironment{#2}{\renewcommand*{\LWR@mdthisenv}{md#2}}% lwarp
291
             \BeforeBeginEnvironment{#2*}{\renewcommand*{\LWR@mdthisenv}{md#2}}% lwarp
292
              }%
293 }
       [\langle 1: mdframed-options \rangle] \{\langle 2: envname \rangle\} [\langle 3: numberedlike \rangle] \{\langle 4: caption \rangle\}
   [\langle 5: within \rangle]
   Modified from the original to remember the environment.
294 \DeclareDocumentCommand\newmdtheoremenv{0{} m o m o }{%
        \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }%
                {\newtheorem{#2}{#4}}%
297
                   \IfValueT{#3}{\newtheorem{#2}[#3]{#4}}%
298
                   \IfValueT{#5}{\newtheorem{#2}{#4}[#5]}%
299
300
                }%
301 \BeforeBeginEnvironment{#2}{%
302 \renewcommand*{\LWR@mdthisenv}{md#2}%
303 \begin{mdframed}[#1]}%
304 \AfterEndEnvironment{#2}{%
305 \end{mdframed}}%
306 }
```

File 299 lwarp-mdwmath.sty

§ 408 Package mdwmath

\newmdtheoremenv

(Emulates or patches code by Mark Wooding.)

mdwmath (*Pkg*) mdwmath is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{mdwmath}[1996/04/11]

- 2 \begin{warpMathJax}
- 3 \CustomizeMathJax{\let\LWRmdwmathsqrt\sqrt}
- 5 \CustomizeMathJax{\newcommand{\bitand}{\mathbin\&}}
- 6 \CustomizeMathJax{\def\bitor{\mathbin\mid}}
- 7 \CustomizeMathJax{\def\dblor{\mathbin{\mid\mid}}}
- 8 \CustomizeMathJax{\def\dbland{\mathbin{\mathrel\bitand\mathrel\bitand}}}
- 9 \end{warpMathJax}

File 300 lwarp-media9.sty

§ 409

Package media9

media9 (Pkg) media9 is emulated.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each addresource=, as well as each flashvars source= and src=. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside \warpprintonly or the warpprint environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For movie15, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YouTubeTM video, use an "embedded" URL with .../embed/... instead of .../v/...

& in a URL Many special characters are converted to regular catcode 12 characters for use inside a URL. & is used in the flash variables fields, which are split with xparse \SplitList, which does not seem to work with a catcode 12 divider token, so & is

not converted to catcode 12, and will not work in a URL with media9. Using & in a URL in a flashvars field may also cause parsing problems with print output, as well.

```
for HTML output:
                           1 \LWR@ProvidesPackageDrop{media9}[2019/02/21]
                           2 \LWR@origRequirePackage{lwarp-common-multimedia}
                           4 \RequirePackage{xkeyval}
                            \{\langle path \rangle\}
\addmediapath
                           Supported.
                           5 \newcommand*{\LWR@medianine@path}{}
                           7 \newcommand*{\addmediapath}[1]{\appto\LWR@medianine@path{\{#1\}}}
                           The options and poster text are reused in several places.
                           8 \newcommand*{\LWR@medianine@postertext}{}
                           9 \newcommand*{\LWR@medianine@options}{}
                           Each addresource can generate a multimedia object.
                           10 \define@key{LWR@medianine}{addresource}{%
                                \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]
                                    {\LWR@medianine@postertext}
                           12
                           13
                                    {#1}
                           14 }
                           Each flashvars source can generate a multimedia object.
                           15 \newcommand*{\LWR@medianine@flashvarsb}[1]{%
                                \IfBeginWith{#1}{source=}{%
                                     \StrGobbleLeft{#1}{7}[\LWR@tempone]%
                           17
                           18
                                     \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
                           19
                                        {\LWR@medianine@postertext}%
                           20
                                        {\LWR@tempone}%
                          21
                                }{}%
                                 \IfBeginWith{#1}{src=}{%
                          22
                                    \StrGobbleLeft{#1}{4}[\LWR@tempone]%
                          23
                                    \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
                          24
                                        {\LWR@medianine@postertext}%
                          25
                                        {\LWR@tempone}%
                          26
                                }{}%
                          27
                          28 }
                          \ProcessList {#1}{\LWR@medianine@flashvarsb}%
                          31
                          32 }
                          33
                          34 \define@key{LWR@medianine}{flashvars}{%
                                \LWR@medianine@flashvars{#1}%
                          35
                          36 }
```

```
37 \newcommand*{\LWR@includemediab}[3][]{%
                    \let\input@path\LWR@medianine@path%
                    \renewcommand*{\LWR@medianine@options}{#1}%
              40
                    41
                    \setkeys*{LWR@medianine}{#1}%
                    42
                    \footnote{MTTP}{\LWR@multimedia[#1]{#2}{#3}}{\%}
              43
                    \label{lem:limedia} $$ \left( \frac{\#3}{ftp}_{\LWR@multimedia[\#1]{\#2}{\#3}} \right) $$
              44
                    \label{lem:limedia} $$ \FTP_{\LWR@multimedia[#1]{#2}{#3}}{\%} $$
              45
              46
                    }}}}%
              47
                    \endgroup%
              48 }
              49
              50 \newrobustcmd*{\includemedia}{%
                    \begingroup%
                    \LWR@linkmediacatcodes%
              52
                    \LWR@includemediab%
              53
              54 }
                [\langle options \rangle] \{\langle text \rangle\}
              Ignored.
              55 \newcommand*{\mediabutton}[2][]{}
     File 301 lwarp-memhfixc.sty
     Package memhfixc
memhfixc (Pkg) memhfixc is ignored.
               1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]
     File 302 lwarp-menukeys.sty
     Package menukeys
              (Emulates or patches code by Tobias Weh.)
menukeys (Pkg)
              menukeys is patched for use by lwarp.
               1 \LWR@ProvidesPackagePass{menukeys}[2020/12/19]
              Patch to use a lateximage whose alt text is the contents of this use of the macro.
              A hash on these contents allows the reuse of the image for each instance of the
              same contents.
              2 \VerifyCommand[lwarp][menukeys]{\tw@define@menu@macro@}{A3C988E47073504556D744EF08443B1D}
              4\xpatchcmd{\tw@define@menu@macro@}
                    {\@nameuse{tw@style@#4@pre}}
              6
                    {%
```

\begin{lateximage}*[\detokenize{##2}]%

\@nameuse{tw@style@#4@pre}%

\mediabutton

§410

\$411

for HTML output:

for HTML output:

7 8

```
9
                        }
                  10
                        {}
                        {\LWR@patcherror{menukeys}{tw@define@menu@macro@}}
                  11
                  13 \xpatchcmd{\tw@define@menu@macro@}
                        {\@nameuse{tw@style@#4@post}}
                        {%
                  15
                            \@nameuse{tw@style@#4@post}%
                  16
                            \end{lateximage}%
                  17
                  18
                        }
                  19
                        {}
                        {\LWR@patcherror{menukeys}{tw@define@menu@macro@ B}}
                   Patch the existing macros:
                  21 \renewmenumacro{\menu}[>]{menus}
                  22 \renewmenumacro{\directory}[/]{paths}
                  23 \renewmenumacro{\keys}[+]{roundedkeys}
         File 303 lwarp-metalogo.sty
         Package metalogo
§412
                   (Emulates or patches code by Andrew Gilbert Moschou.)
   metalogo(Pkg)
                  metalogo is used in print mode, and emulated in HTML.
 for HTML output:
                   1 \LWR@ProvidesPackagePass{metalogo}[2010/05/29]
                   2 \newcommand*{\LWR@HTML@setlogokern}[2]{}
                   3 \newcommand*{\LWR@HTML@setlogodrop}[2][XeTeX]{}
                   4 \newcommand*{\LWR@HTML@setLaTeXa}[1]{}
                   5 \newcommand*{\LWR@HTML@setLaTeXee}[1]{}
                   6 \newcommand*{\LWR@HTML@seteverylogo}[1]{}
                   7 \newcommand*{\LWR@HTML@everylogo}[1]{}
                   9 \LWR@formatted{setlogokern}
                  10 \LWR@formatted{setlogodrop}
                  11 \LWR@formatted{setLaTeXa}
                  12 \LWR@formatted{setLaTeXee}
                  13 \LWR@formatted{seteverylogo}
                  14 \LWR@formatted{everylogo}
         File 304 lwarp-metalogox.sty
         Package metalogox
§ 413
```

(Emulates or patches code by Brian Dunn.)

1 \LWR@ProvidesPackagePass{metalogox}[2019/01/20]

metalogox (*Pkg*) metalogox is patched for use by lwarp.

for HTML output:

\AtBeginDocument, adjust the logo setting according to the font which is active at that moment.

2 \AtBeginDocument{

- \let\LWR@metalogox@currentformatting\LWR@formatting
- \renewcommand*{\LWR@formatting}{print}%
- \autoadjustlogos*
- \let\LWR@formatting\LWR@metalogox@currentformatting

7 }

File 305 lwarp-mhchem.sty

\$414

Package mhchem

(Emulates or patches code by Martin Hensel.)

mhchem(Pkg) mhchem is patched for use by lwarp.

without MathJax Without MathJax, mhchem expressions are converted to svg math. Inline expressions use hashed filenames to allow reuse, and assume that any mhchem options are global.

MATHJAX with mhchem extension For MathJax, the mhchem extension is used if the mhchem expression is used inside a math expression:

```
$\ce{C6H5-CHO}$
```

To force the use of svg math for an expression which does not work with MATHJAX, place the expression between \displaymathother and \displaymathnormal:

```
\displaymathother
                                $ \ce { . . . } $
\[ \ce{ . . . } \]
                       . . .
\displaymathnormal
```

not inside math

If not used inside a math expression, lwarp converts standalone mhchem expressions into svg math images.



When producing HTML output without the MATHJAX mhchem extension, lwarp does not support the use of nested dollar signs in mhchem expressions.

For some examples from the mhchem manual, change as follows:

<pre>\$\ce{NaOH(aq,\$\infty\$)}\$ \$\ce{NaOH(aq,\infty)}\$</pre>	 old new
\$\ce{Fe(CN)_{\$\frac{6}{2}}\$}\$ \$\ce{Fe(CN)_{\frac{6}{2}}}\$	old new
\$\ce{NO_\$x\$}\$ \$\ce{NO_x}\$	 old new
\$\ce{N0_\${x}\$}\$ \$\ce{N0_{x}}\$	 old new
\$\ce{\$cis\${-}[PtCl2(NH3)2]}\$ \$\ce{\mathit{cis}{-}[PtCl2(NH3)2]}\$	 old new

for HTML output:

1 \LWR@ProvidesPackagePass{mhchem}[2018/06/22]

The original definition of \ce:

2 \LetLtxMacro\LWR@mhchem@origce\ce

The new definition, called from the new \ce after math shift is set. The starred lateximage uses a hashed filename for the svg image. The alt tag is set to the mhchem expression.

```
3 \newcommand{\LWR@mhchem@HTML@ce}[1]{%
     \LWR@findcurrenttextcolor% sets \LWR@tempcolor
5
     \ifbool{LWR@xfakebold}%
6
         {\def\LWR@tempone{Y}}%
7
         {\def\LWR@tempone{N}}%
8
     \begin{lateximage}%
9
         *%
         [%
10
11
             \textbackslash{}%
12
             13
         ]%
14
         *%
15
         [%
16
             FM\LWR@f@family%
17
             SR\LWR@f@series%
18
19
             SH\LWR@f@shape%
20
             SHC\LWR@f@shapecaps%
21
             CL\LWR@tempcolor%
             FB\LWR@tempone% xfakebold
22
         ]%
23
     \LWR@setcurrentfont%
24
25
     \LWR@mhchem@origce{#1}%
     \end{lateximage}%
26
27
     \endgroup%
     \addtocounter{LWR@mhchem@cedepth}{-1}%
28
29 }
```

Only set math shift if outer depth:

```
30 \newcounter{LWR@mhchem@cedepth}
31 \setcounter{LWR@mhchem@cedepth}{0}
```

The new \ce. Sets math shift then continues.

```
32 \renewcommand{\ce}{%
33  \begingroup%
34  \ifnumequal{\value{LWR@mhchem@cedepth}}{0}{%
35  \catcode'\$=3% math shift
36  }{}%
37  \addtocounter{LWR@mhchem@cedepth}{1}%
38  \LWR@mhchem@HTML@ce%
39 }
```

The original definition of \cesplit:

```
40 \LetLtxMacro\LWR@mhchem@origcesplit\cesplit
```

The new definition, called from the new \cesplit after math shift is set. The starred lateximage uses a hashed filename for the svG image. The alt tag is set to the mhchem expression.

```
41 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
42 {%
      \LWR@findcurrenttextcolor% sets \LWR@tempcolor
43
      \ifbool{LWR@xfakebold}%
44
          {\def\LWR@tempone{Y}}%
45
          {\def\LWR@tempone{N}}%
46
47
      \begin{lateximage}%
          *%
48
          [%
49
              \textbackslash{}%
50
51
52
              \{\LWR@HTMLsanitizedetokenized{\detokenize{#2}}\}%
          ]%
53
          *%
54
          Γ%
55
              FM\LWR@f@family%
56
              SR\LWR@f@series%
57
              SH\LWR@f@shape%
58
              SHC\LWR@f@shapecaps%
59
60
              CL\LWR@tempcolor%
61
              FB\LWR@tempone% xfakebold
          ]%
62
      \LWR@setcurrentfont%
63
      64
      \end{lateximage}%
65
      \endgroup%
66
67 }
Only set math shift if outer depth:
68 \newcounter{LWR@mhchem@cesplitdepth}
69 \setcounter{LWR@mhchem@cesplitdepth}{0}
The new \cesplit. Sets math shift then continues.
70 \renewcommand{\cesplit}{%
      \begingroup%
      \ifnumequal{\value{LWR@mhchem@cesplitdepth}}{0}{%
72
          \catcode'\$=3% math shift
73
74
      \addtocounter{LWR@mhchem@cesplitdepth}{1}%
75
      \LWR@mhchem@HTML@cesplit%
76
77 }
Resore originals inside a lateximage:
78 \appto\LWR@restoreorigformatting{%
79 \LetLtxMacro\ce\LWR@mhchem@origce%
80 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
81 }
```

82

83 \begin{warpMathJax}

85 \end{warpMathJax}

84 \CustomizeMathJax{\require{mhchem}}

File 306 lwarp-microtype.sty

§ 415 Package **microtype**(Emulates or patches or

(Emulates or patches code by R SCHLICHT.)

microtype (*Pkg*) microtype is pre-loaded by lwarp. All user options and macros are ignored and

disabled.

for HTML output: Discard all options for lwarp-microtype:

```
1 \LWR@ProvidesPackageDrop{microtype}[2018/01/14]
```

```
{\tt 2\DeclareDocumentCommand\{\DeclareMicrotypeSet\}\{o\ m\ m\}\{\}}
```

3 \DeclareDocumentCommand{\UseMicrotypeSet}{o m}{}

4 \DeclareDocumentCommand{\DeclareMicrotypeSetDefault}{o m}{}

5 \DeclareDocumentCommand{\SetProtrusion}{o m m}{}

6 \DeclareDocumentCommand{\SetExpansion}{o m m}{}

7 \DeclareDocumentCommand{\SetTracking}{o m m}{}

8 \DeclareDocumentCommand{\SetExtraKerning}{o m m}{}

10 \DeclareDocumentCommand{\DisableLigatures}{o m}{}

11 \DeclareDocumentCommand{\DeclareCharacterInheritance}{o m m}{}

12 \DeclareDocumentCommand{\DeclareMicrotypeVariants}{m}{}

13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}

14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m}{}

15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}

16 \DeclareDocumentCommand{\microtypesetup}{m}{}

17 \DeclareDocumentCommand{\microtypecontext}{m}{}

18 \DeclareDocumentCommand{\textmicrotypecontext}{m m}{#2}

20 $\DeclareDocumentCommand{\lsstyle}{}{}$

21 \DeclareDocumentCommand{\textls}{o +m}{}

22 $\DeclareDocumentCommand{\lslig}{m}{\#1}$

23 }

24 \def\DeclareMicrotypeSet#1#{\@gobbletwo}

25 \def\DeclareMicrotypeVariants#1#{\@gobble}

26 \@onlypreamble\DeclareMicrotypeSet

27 \@onlypreamble\UseMicrotypeSet

28 \@onlypreamble\DeclareMicrotypeSetDefault

29 \@onlypreamble\DisableLigatures

30 $\ensuremath{\verb{Qonlypreamble}\xspace}\xspace\xs$

File 307 lwarp-midfloat.sty

§416 Package midfloat

(Emulates or patches code by Sigitas Tolušis.)

midfloat (Pkg) midfloat is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{midfloat}[2012/05/29]

```
2 \newenvironment{strip}[1][]{}{}
3 \newskip\stripsep
```

File 308 lwarp-midpage.sty

§417 Package midpage

midpage (Pkg) midpage is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{midpage}[2009/09/03]

```
2 \newenvironment{midpage}
3 {\begin{BlockClass}[%
4 \LWR@print@mbox{margin-top:6ex}; \LWR@print@mbox{margin-bottom:6ex}%
5 ]{midpage}}
6 {\end{BlockClass}}
```

File 309 lwarp-minibox.sty

§418 Package **minibox**

 $(Emulates\ or\ patches\ code\ by\ Will\ Robertson.)$

minibox (*Pkg*) minibox is patched for use by lwarp.

Due to HTML limitations regarding paragraphs and <div>s, miniboxes inline with other text will appear on their own line.

for HTML output: 1 \LWR@ProvidesPackagePass{minibox}[2013/06/21]

```
2 \ExplSyntaxOn
3 \newcommand\LWR@HTML@minibox[2][]{%
      \verb|\LWR@stoppars||
5
      \group_begin:
6
      \keys_set:nn {minibox} {#1}
      \bool_if:NTF \l_minibox_frame_bool
7
8
          \setlength\fboxrule{\l_minibox_rule_dim}
9
          \setlength\fboxsep{\l_minibox_pad_dim}
10
11
              \begin{tabular}[\l_minibox_tabular_valign_tl]%
12
13
                 {\l_minibox_tabular_preamble_tl}
14
                   {#2}
              \end{tabular}
15
          }%
16
17
      }
18
          \begin{BlockClass}[display:inline-block]{minibox}
19
          \begin{tabular}[\l_minibox_tabular_valign_tl]%
20
            {\l_minibox_tabular_preamble_tl}
21
22
              {#2}
          \end{tabular}
23
          \end{BlockClass}
24
```

```
25 }
26 \group_end:
27 \LWR@startpars%
28 }
29 \ExplSyntaxOff
30
31 \LWR@formatted{minibox}
```

File 310 lwarp-minitoc.sty

§419 Package **minitoc**

minitoc (Pkg) minitoc is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]

mtcoff disables minitoc.

2 \usepackage{mtcoff}

File 311 lwarp-minted.sty

§ 420 Package minted

(Emulates or patches code by Geoffrey M. Poore.)

minted (Pkg) minted is patched for use by lwarp.

⚠ limitations

mathescape and highlightlines don't work. Line numbers on the right will not be aligned. Due to *pdftotext*, extra spaces may appear in broken lines if other formatting is included.

for HTML output: 1 \LWR@ProvidesPackagePass{minted}[2023/09/12]

Several options are forced, since they are unsupported by lwarp.

```
2\renewcommand{\setminted}[2][]{%
   \ifthenelse{\equal{#1}{}}%
      {\setkeys{minted@opt@g}{%
5
6
       mathescape=false,breaklines,texcomments=false,highlightlines={}% lwarp
7
      }}%
      {\minted@configlang{#1}%
8
        \setkeys{minted@opt@lang}{%
9
10
       mathescape=false,breaklines,texcomments=false,highlightlines={}% lwarp
11
12
      }}}
13
14 \renewcommand{\setmintedinline}[2][]{%
   \ifthenelse{\equal{#1}{}}%
      {\setkeys{minted@opt@g@i}{%
16
17
       mathescape=false,breaklines,texcomments=false,highlightlines={}% lwarp
18
      }}%
19
```

LWR@HTMLsanitize@tmpb@enable is used to turn off HTML sanitization early in the verbatim conversion, otherwise minted would then colorize the sanitized results, breaking the HTML entities in lwarp's HTML output.

Not using \VerifyCommand here because these are merely adjusting the keys, and other changes in the original definitions probably won't affect these patches.

```
25 \xpatchcmd{\RobustMintInlineProcess}
      {\setkeys{minted@opt@cmd}{#1}}
26
27
      {%
          \setkeys{minted@opt@cmd}{%
28
               #1.%
29
              mathescape=false, breaklines, texcomments=false, highlightlines={}%
30
31
32
           \ifbool{minted@draft}%
               {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
33
               {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
34
35
      }
36
      {}
      {\LWR@patcherror{minted}{minted}}
37
38
39 \xpatchcmd{\RobustMintProcess}
      {\setkeys{minted@opt@cmd}{#1}}
40
      {%
41
           \setkeys{minted@opt@cmd}{%
42
43
              mathescape=false, breaklines, texcomments=false, highlightlines={}%
44
45
          }%
46
          \ifbool{minted@draft}%
               {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
47
               {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
48
      }
49
      {}
50
      {\tt \{\LWR@patcherror\{minted\}\{minted\}\}}
51
52
53 \xpatchcmd{\minted}
      {\setkeys{minted@opt@cmd}{#1}}
54
55
56
           \setkeys{minted@opt@cmd}{%
57
58
              mathescape=false, breaklines, texcomments=false, highlightlines={}%
59
          }%
           \ifbool{minted@draft}%
60
               {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
61
               {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
62
63
      }
64
      {}
      {\LWR@patcherror{minted}{minted}}
65
67 \xpatchcmd{\inputminted}
      {\setkeys{minted@opt@cmd}{#1}}
68
      {\setkeys{minted@opt@cmd}{%
69
70
              mathescape=false, breaklines, texcomments=false, highlightlines={}%
71
```

```
72
          \ifbool{minted@draft}%
73
              {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
              {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
75
76
      }
77
      {}
      {\LWR@patcherror{minted}{inputminted}}
78
79 \renewenvironment{minted@snugshade*}[1]%
80 {%
      \colorlet{shadecolor}{#1}%
81
82
      \begin{snugshade*}%
83 }
84 {%
      \end{snugshade*}%
85
86 }
```

To add sanitization during the final output, adjust several characters to use HTML entities when loading the pygmentized results,

Not using \VerifyCommand here because this is a simple patch, not likely to be affected by other changes to the original.

```
87 \xpatchcmd{\minted@input}
88      {\input{#1}}
89       {%
90          \LWR@minted@overrides%
91          \input{#1}%
92     }
93     {}
94      {\LWR@patcherror{minted}{minted@input}}
```

These macros are used inside the *.pygtex files to format several individual characters. These are revised to use HTML entities. The backquote grave is not supported by pygments.

```
95 \newcommand*{\LWR@minted@overrides}{
96 \def\PYGZam{\char'\&}
97 \def\PYGZlt{\char'\<}
98 \def\PYGZgt{\char'\&gt;}
99 \def\PYGZsq{\char'\&apos;}
100 }
```

File 312 lwarp-mismath.sty

§ 421 Package mismath

(Emulates or patches code by Antoine Missier.)

mismath (*Pkg*) mismath is patched for svg math, and emulated for MATHJAX.

_ МатнЈах

\enumber, \inumber, \jnumber, and \pinumber are ignored for MATHJAX, except that \itpi is made available as a clone of \pi.

\MathUp, \MathIt, \MathNumbers, and \MathNormal are ignored in MathJax.

For MATHJAX, \boldvect and \arrowvect are honored if in the preamble.

If \boldvectcommand is set to \mathbf in the preamble, it will be used for Math-Jax, otherwise it will default to \mathit. \boldvectcommand may also be set with \CustomizeMathJax in the preamble. See section 8.7.7. Note that as of this writing there is not a bold italic font across all MathJax fonts.

If \probastyle is set to \mbox{mathbb} in the preamble, it will be used for MathJax, otherwise it will default to \mbox{mathrm} . \probastyle may be set with \probastyle in the preamble.

If \mathset is set to \mathbb in the preamble, it will be used for MathJax, otherwise it will default to \mathbf. \mathset may be set with \CustomizeMathJax in the preamble.

for HTML output:

1 \LWR@ProvidesPackagePass{mismath}[2023/02/24]

For MATHJAX, used in the HTML comment before the environment.

```
2 \ifbool{mathjax}{
3     \RenewEnviron{mathcols}{%
4     \preto\BODY{\begin{aligned}\displaystyle}}
5     \appto\BODY{\end{aligned}}
6     \expandafter\(\BODY\)
7     }
8 }% mathjax
```

For svg math. The lateximage restores the original defintion of the math environment

```
9 {% svg
                     \renewenvironment{mathcols}{
 11
                                  \begin{lateximage}
 12
                                   \begin{math}
                                   \begin{aligned}\displaystyle
 13
 14
                    }{
                                   \end{aligned}%
 15
                                   \end{math}
 16
                                   \end{lateximage}
 17
                    }
18
19 }% svg
21 \renewcommand{\changecol}{
                     \end{aligned}
                                                                        \qquad
22
23
                     \begin{aligned}\displaystyle
24 }
25
26 \begin{warpMathJax}
27 \CustomizeMathJax{\newcommand{\mathup}[1]{\mathrm{#1}}}
28 \CustomizeMathJax{\newcommand{\e}{\mathrm{e}}}
29 \CustomizeMathJax{\newcommand{\i}{\mathrm{i}}}
{\tt 30 \CustomizeMathJax{\newcommand{\j}{\{\mbox{mathrm{$j$}\}}}}\\
32 \CustomizeMathJax{\let\mathbfsfit\mathbfit}% not sans
33 \CustomizeMathJax{\let\tensor\mathbfsfit}
35 \CustomizeMathJax{\newcommand{\boldvect}{}}
36 \CustomizeMathJax{\newcommand{\arrowvect}{}}
37 \CustomizeMathJax{\newcommand{\pinumber}[1][]{}}
38 \CustomizeMathJax{\newcommand{\hvect}[1]{\vec{\vphantom{h}#1}}}
39 \color= 39 \color
```

```
40 \CustomizeMathJax{%
          \newcommand{\norm}[1]{\left\vert\left\vert#1\right\vert\right\vert}
\label{lem:lem:lem:d} $$43 \customizeMathJax{\newcommand{\di}{\mathbb{}}} \end{\di}{\newcommand{\di}}} $$
45 \costomizeMathJax{\newcommand{\P}{\newcommand{\P}}}\}
46 \CustomizeMathJax{\newcommand{\E}}{\probastyle{E}}}
{\tt 47 \ CustomizeMathJax{\newcommand{\V}}{\tt operatorname{\probastyle{V}}}}}
48 \CustomizeMathJax{\newcommand{\Par}{\unicode{x00B6}}}
50 \CustomizeMathJax{\DeclareMathOperator{\adj}{adj}}
51 \CustomizeMathJax{\DeclareMathOperator{\Aut}{Aut}}
52 \CustomizeMathJax{\DeclareMathOperator{\codim}{codim}}
53 \CustomizeMathJax{\DeclareMathOperator{\Conv}{Conv}}
54 \CustomizeMathJax{\DeclareMathOperator{\cov}{cov}}
55 \CustomizeMathJax{\DeclareMathOperator{\Cov}{Cov}}
56 \CustomizeMathJax{\newcommand{\curl}{\operatorname{\vect{\mathrm{curl}}}}}
\label{lem:continuous} \begin{tabular}{l} $$ \customizeMathJax{\DeclareMathOperator{\divg}{div}}$ \end{tabular}
58 \CustomizeMathJax{\DeclareMathOperator{\End}{End}}
60 \CustomizeMathJax{\DeclareMathOperator{\erf}{erf}}
 61 \continuous and \grad {\continuous manufacture } {\continuous manufac
62 \CustomizeMathJax{\DeclareMathOperator{\id}{id}}
63 \CustomizeMathJax{\DeclareMathOperator{\Id}{Id}}
64 \CustomizeMathJax{\DeclareMathOperator{\im}{im}}
65 \CustomizeMathJax{\let\oldIm\Im}
66 \CustomizeMathJax{\renewcommand{\Im}{\operatorname{Im}}}
67 \CustomizeMathJax{\DeclareMathOperator{\lb}{lb}}
68 \CustomizeMathJax{\DeclareMathOperator{\lcm}{lcm}}
69
70 \CustomizeMathJax{\DeclareMathOperator{\rank}{rank}}
71 \CustomizeMathJax{\let\oldRe\Re}
72 \CustomizeMathJax{\renewcommand{\Re}{\operatorname{Re}}}
73 \CustomizeMathJax{\newcommand{\rot}{\operatorname{\vect{\mathrm{rot}}}}}
74 \CustomizeMathJax{\DeclareMathOperator{\sgn}{sgn}}
75 \CustomizeMathJax{\DeclareMathOperator{\sinc}{sinc}}
76 \CustomizeMathJax{\DeclareMathOperator{\spa}{span}}
77 \CustomizeMathJax{\DeclareMathOperator{\tr}{tr}}
78 \CustomizeMathJax{\DeclareMathOperator{\var}{var}}
79 \CustomizeMathJax{\DeclareMathOperator{\Var}{Var}}
80 \CustomizeMathJax{\DeclareMathOperator{\Zu}{Z}}
81
82 \CustomizeMathJax{\DeclareMathOperator{\arccot}{arccot}}
83 \CustomizeMathJax{\DeclareMathOperator{\sech}{sech}}
84 \CustomizeMathJax{\DeclareMathOperator{\csch}{csch}}
85 \CustomizeMathJax{\DeclareMathOperator{\arsinh}{arsinh}}
86 \CustomizeMathJax{\DeclareMathOperator{\arcosh}{arcosh}}
87 \CustomizeMathJax{\DeclareMathOperator{\artanh}{artanh}}
88 \CustomizeMathJax{\DeclareMathOperator{\arcoth}{arcoth}}
89 \CustomizeMathJax{\DeclareMathOperator{\arsech}{arsech}}
90 \CustomizeMathJax{\DeclareMathOperator{\arcsch}{arcsch}}
92 \CustomizeMathJax{\DeclareMathOperator{\bigO}{\mathcal{0}}}
93 \CustomizeMathJax{\DeclareMathOperator{\bigo}{0}}
94 \CustomizeMathJax{\DeclareMathOperator{\lito}{o}}
96 \CustomizeMathJax{\newcommand{\R}{\mathset{R}}}
97 \CustomizeMathJax{\newcommand{\C}{\mathset{C}}}
98 \CustomizeMathJax{\newcommand{\N}{\mathset{N}}}
99 \CustomizeMathJax{\newcommand{\Z}{\mathset{Z}}}
```

```
100 \CustomizeMathJax{\newcommand{\Q}{\mathset{Q}}}
101 \CustomizeMathJax{\newcommand{\F}{\mathset{F}}}
102 \CustomizeMathJax{\newcommand{\K}{\mathset{K}}}
104 \CustomizeMathJax{\newcommand{\ds}{\displaystyle}}
105 \CustomizeMathJax{\newcommand{\dlim}{\lim\limits}}
106 \CustomizeMathJax{\newcommand{\dsum}{\sum\limits}}
107 \CustomizeMathJax{\newcommand{\dprod}{\prod\limits}}
108 \CustomizeMathJax{\newcommand{\dcup}{\bigcup\limits}}
\label{loss} $$109 \c \arrowcommand{\dcap}{\bigcap\limits}}$
110 \CustomizeMathJax{\newcommand{\lbar}{\overline}}
111 \CustomizeMathJax{\newcommand{\hlbar}[1]{\overline{\vphantom{h}#1}}}
112 \CustomizeMathJax{\newcommand{\LWReqdefstar}{\stackrel{\Delta}{=}}}
114 \CustomizeMathJax{\newcommand{\eqdef}{\ifstar\LWReqdefstar\LWReqdefnostar}}
115 \CustomizeMathJax{\newcommand{\unbr}{\underbrace}}
116 \CustomizeMathJax{\newcommand{\iif}{if and only if }}
119 \CustomizeMathJax{\newcommand{\then}{\ \Longrightarrow \ \mbox{} }}
121 \CustomizeMathJax{\newcommand{\pow}[2]{\left( #1 \right)^{\!#2}}}
122 \CustomizeMathJax{\newcommand{\abs}[1]{\left\vert#1\right\vert}}
123 \color= 123 
125 \CustomizeMathJax{\newenvironment{system}[1][l]%
            {\left\{\begin{array}{@{.15em}#1@{}}}
127
            {\end{array}\right.}
128 }
129
130 \CustomizeMathJax{\newenvironment{spmatrix}
            {\left(\begin{smallmatrix}}
131
            {\end{smallmatrix}\right)}
132
133 }
134
135 \CustomizeMathJax{%
            \newenvironment{mathcols}
136
137
                   {\begin{aligned}\displaystyle}
138
                   {\end{aligned}}
139 }
140 \CustomizeMathJax{\newcommand{\changecol}{\end{aligned}\qquad\begin{aligned}}}
  User-adjustable settings, detected if in the preamble.
141 \AtBeginDocument{
142 \ifdef{\itpi}{
            \CustomizeMathJax{\let\itpi\pi}
143
144 }{}
145 \ifdefstring{\boldvectcommand}{\mathbf}{
            \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\mathbf{#1}}}
146
147 }{
            \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\boldsymbol{#1}}}
148
149 }
150 \ifbool{arrowvect}{
            \CustomizeMathJax{\newcommand{\vect}[1]{\overrightarrow{#1}}}
151
152 }{
            \CustomizeMathJax{\newcommand{\vect}[1]{\boldvectcommand{#1}}}
153
154 }
155 \ifdefstring{\probastyle}{\mathbb}{
```

 $\CustomizeMathJax{\newcommand{\probastyle}[1]{\mathbb{#1}}}$

File 313 lwarp-mleftright.sty

§422 Package mleftright

(Emulates or patches code by Heiko Oberdiek.)

mleftright (*Pkg*) mleftright is used as-is, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{mleftright}[2019/12/03]

```
2 \begin{warpMathJax}
```

- ${\tt 3 \customizeMathJax{\newcommand{\mleft}{\left}}}$
- 4 \CustomizeMathJax{\newcommand{\mright}{\right}}
- 5 \CustomizeMathJax{\newcommand{\mleftright}{}}
- $\label{lem:command} \begin{tabular}{l} 6 \column{2}{l} CustomizeMathJax{\newcommand{\mleftrightrestore}} \end{tabular}$
- $7 \end\{warpMathJax\}$

File 314 lwarp-morefloats.sty

§ 423 Package morefloats

morefloats (Pkg) morefloats is ignored.

 $\textbf{for HTML output:} \qquad 1 \texttt{\LWR@ProvidesPackageDrop\{morefloats\}[2015/07/22]}$

File 315 lwarp-moreverb.sty

§ 424 Package moreverb

(Emulates or patches code by Robin Fairbairns.)

moreverb (*Pkg*) moreverb is supported with some patches.

1 \LWR@ProvidesPackagePass{moreverb}[2008/06/03]

- 2\BeforeBeginEnvironment{verbatimtab}{%
- 3 \LWR@forcenewpage
- 4 \LWR@atbeginverbatim{Verbatim}%
- 5]
- 6 \AfterEndEnvironment{verbatimtab}{%

```
7 \LWR@afterendverbatim%
8 }
10
11 \LetLtxMacro\LWRMV@orig@verbatimtabinput\@verbatimtabinput
13 \renewcommand{\@verbatimtabinput}[2][]{%
14 \LWR@forcenewpage
15 \LWR@atbeginverbatim{Verbatim}%
16 \LWRMV@orig@verbatimtabinput[#1]{#2}%
17 \LWR@afterendverbatim%
18 }
20 \BeforeBeginEnvironment{listing}{%
21 \LWR@forcenewpage
22 \LWR@atbeginverbatim{programlisting}%
23 }
25 \AfterEndEnvironment{listing}{%
26 \LWR@afterendverbatim%
27 }
28
29 \BeforeBeginEnvironment{listingcont}{%
30 \LWR@forcenewpage
31 \LWR@atbeginverbatim{programlisting}%
32 }
34 \AfterEndEnvironment{listingcont}{%
35 \LWR@afterendverbatim%
36 }
37 \LetLtxMacro\LWRMV@@listinginput\@listinginput
39 \renewcommand{\@listinginput}[3][]{
40 \LWR@forcenewpage
41 \LWR@atbeginverbatim{programlisting}%
42 \LWRMV@@listinginput[#1]{#2}{#3}%
43 \LWR@afterendverbatim%
44 }
45
46
47 \renewenvironment*{boxedverbatim}
49 \LWR@forcenewpage
50 \LWR@atbeginverbatim{boxedverbatim}%
51 \verbatim%
52 }
53 {
54 \endverbatim%
55 \LWR@afterendverbatim%
56 }
```

File 316 lwarp-movie15.sty

§ 425 Package movie15

movie15 (Pkg) movie15 is emualted.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each addresource=, as well as each flashvars source= and src=. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside \warpprintonly or the warpprint environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For movie15, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YouTubeTM video, use an "embedded" url with .../embed/... instead of .../v/...

for HTML output:

```
1 \LWR@ProvidesPackageDrop{movie15}[2012/05/16]
```

```
2 \LWR@origRequirePackage{lwarp-common-multimedia}
4 \RequirePackage{xkeyval}
6 \newcommand*{\LWR@moviefifteen@text}{}
8\define@key{LWR@moviefifteen}{text}{\renewcommand{\LWR@moviefifteen@text}{#1}}
10 \newcommand*{\LWR@includemovieb}[4][]{%
      \renewcommand{\LWR@moviefifteen@text}{(multimedia)}
      \setkeys*{LWR@moviefifteen}{#1}%
12
      \LWR@multimediab[#1,width=#2,height=#3]{\LWR@moviefifteen@text}{#4}%
13
14 }
16 \newrobustcmd*{\includemovie}{%
      \begingroup%
17
18
      \LWR@linkmediacatcodes%
      \LWR@includemovieb%
19
20 }
```

```
23 \newcommand*{\movieref}[3][]{}
             25 \LetLtxMacro\movie\LWR@multimedia
             26% \LetLtxMacro\sound\LWR@multimedia% not in media15
             28 \newcommand{\hyperlinkmovie}[3][]{}
     File 317 lwarp-mparhack.sty
     Package mparhack
             mparhack is ignored.
mparhack (Pkg)
             Discard all options for lwarp-mparhack:
             1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
     File 318 lwarp-multibib.sty
    Package multibib
             (Emulates or patches code by Thorsten Hansen.)
multibib (Pkg) multibib is patched for use by lwarp.
             1 \LWR@ProvidesPackagePass{multibib}[2008/12/10]
             4 \xpatchcmd{\newcites}
                  {{\@suffix}}
                  {{\@suffix_html}}
                  {\tt \{LWR@patcherror\{multibib\}\{newcites\}\}}
     File 319 lwarp-multicap.sty
     Package multicap
multicap (Pkg) multicap is emualted.
             1 \LWR@ProvidesPackageDrop{multicap}[2002/05/04]
             2 \newcommand*{\mfcaption}{\captionof{figure}}
             3 \newcommand*{\mtcaption}{\captionof{table}}
             4 \newcounter{mcapsize}
             5 \newcounter{mcapskip}
```

§ 426

§ 427

§ 428

for HTML output:

6 \newlength{\abvmcapskip} 7 \newlength{\blwmcapskip}

for HTML output:

for HTML output:

File 320 lwarp-multicol.sty

```
§429 Package multicol
```

(Emulates or patches code by Frank Mittelbach.)

multicol (*Pkg*) multicol is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicol}[2021/10/28]

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a <div> of class multicolsheading.

The content is placed inside a <div> of class multicols.

```
* {\(\(numcols\)\}\) [\(\lambda\lefta \) multicols

2 \(\numcols\)\} [\(\lambda\lefta \) mo\\

HTML \(\lambda \) class to contain everything:

3 \(\lambda \)

4 \(\lambda \) LWR@forcenewpage

5 \(\lambda \) BlockClass\{\text{multicols}\}
```

Optional HTML <div> class for the heading:

6 \IfValueT{#3}{\begin{BlockClass}{multicolsheading}#3\end{BlockClass}}%

Change \linewidth to compensate for expected size:

 $\label{linewidth} % $$ \operatorname{linewidth}_{\line$

Locally force any minipages to be fullwidth:

```
8 \booltrue{LWR@forceminipagefullwidth}
9 }
```

When done with the environment, close the <div>:

10 {\endBlockClass}

Emulated null functions which are not used in HTML:

```
11 \newcommand*{\columnbreak}{}
12 \newcommand*{\newcolumn}{}
13 \newcommand*{\RLmulticolcolumns}{}
14 \newcommand*{\LRmulticolcolumns}{}
15
16 \newlength{\premulticols}
17 \newlength{\multicols}
18 \newlength{\multicolsep}
19 \newlength{\multicolbaselineskip}
20 \newlength{\multicoltolerance}
21 \newlength{\multicolpretolerance}
22 \newcommand*{\columnseprulecolor}{\normalcolor}
23 \newcounter{columnbadness}
24 \newcounter{collectmore}
```

```
26 \newcounter{unbalance}
27 \newlength{\multicolovershoot}
28 \newlength{\multicolundershoot}

29 \NewDocumentCommand{\docolaction}{s o m m m}{%
30 \IfValueTF{#2}{#3}%
31 }
```

File 321 lwarp-multicolrule.sty

```
$430 Package multicolrule
multicolrule (Pkg) multicolrule is ignored.

for HTML output: 1 \RequirePackage{multicol}
2
3 \LWR@ProvidesPackageDrop{multicolrule}[2019/01/01]
4 \newcommand*{\SetMCRule}[1]{}
```

File 322 lwarp-multimedia.sty

§431 Package multimedia

multimedia (Pkg) multimedia is emulated.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

5 \NewDocumentCommand{\DeclareMCRulePattern}{m m}{}

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each addresource=, as well as each flashvars source= and src=. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside \warpprintonly or the warpprint environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For movie15, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YouTubeTM video, use an "embedded" url with .../embed/... instead of .../v/...

for HTML output:

```
1 \LWR@ProvidesPackageDrop{multimedia}[2012/05/02]
```

```
2 \LWR@origRequirePackage{lwarp-common-multimedia}
4 \LetLtxMacro\movie\LWR@multimedia
5 \LetLtxMacro\sound\LWR@multimedia
7 \newcommand{\hyperlinkmovie}[3][]{}
9 \newcommand{\hyperlinksound}[3][]{}
11 \newcommand{\hyperlinkmute}
```

File 323 lwarp-multiobjective.sty

§ 432

Package multiobjective

(Emulates or patches code by Luis Martí.)

multiobjective is used as-is for svg math, and is emulated for MATHJAX. multiobjective(Pkg)

for HTML output:

```
1 \LWR@ProvidesPackagePass{multiobjective}[2008/08/19]
```

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\dom}{\prec}}
4 \CustomizeMathJax{\newcommand{\negdom}{\not\prec}}
5 \CustomizeMathJax{\newcommand{\weakdom}{\preccurlyeq}}
6 \CustomizeMathJax{\newcommand{\negweakdom}{\not\preccurlyeq}}
8 \CustomizeMathJax{\newcommand{\negstrictdom}{\mathord{\not\prec}\!\!\mathord{\prec}}}
9 \CustomizeMathJax{\newcommand{\multepsilondom}{\preccurlyeq_{\epsilon\cdot}}}
10 \CustomizeMathJax{\newcommand{\addiepsilondom}{\preccurlyeq_{\epsilon +}}}
11 \CustomizeMathJax{\newcommand{\better}{\triangleleft}}
12 \CustomizeMathJax{\def\vec#1{%
     \mathchoice%
13
         {\{\displaystyle\boldsymbol\{\#1\}\}\}\%}
14
         {{\textstyle\boldsymbol{#1}}}%
15
         {{\scriptstyle\boldsymbol{#1}}}%
16
17
         {{\scriptscriptstyle\boldsymbol{#1}}}%
18 }}
19
20 \CustomizeMathJax{\newcommand{\set}[1]{%
     \mathchoice%
         {{\displaystyle\mathcal{#1}}}%
22
```

File 324 lwarp-multirow.sty

§ 433 Package

multirow

(Emulates or patches code by Piet van Oostrum, Øystein Bache, Jerry Leichter.)

multirow (Pkg) multirow is emulated during HTML output, and used as-is while inside a lateximage.

vposn

Note that recent versions of multirow include a new optional vposn argument.

multirow cells

• For multirow, insert \mrowcell into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```
... & \multirow{2}{.5in}{text} & ... 
... & \mrowcell & ...
```

colored cells

• The multirow documentation regarding colored cells recommends using a negative number of rows. This will not work with lwarp, so \warpprintonly and \warpHTMLonly must be used to make versions for print and HTML.

with \multicolumn

∴ \multicolumn & \multirow

• See section 433.2 for \multicolumrow.

lwarp does not support directly combining \multicolumn and \multirow. Use \multicolumnrow instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for \multicolumn come first, followed by the five arguments for \multirow, many of which are optional, followed by the contents.

As per \multirow, skipped cells to the right of the \multicolumnrow statement are not included in the source code on the same line. On the following lines, \mcolrowcell must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

```
... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ... 
... & \mcolrowcell & \mcolrowcell & ... 
... & \mcolrowcell & \mcolrowcell & ...
```

skipped cells

empty cells

• MathJax does not support multirow, so it is emulated to only print its text on the first row. \multirow works as expected in text tabulars or svg math.

In a lateximage, the print versions are restored.

See section 75.24 for the print-mode versions.

for HTML output:

Remove the placeholder macro which was used if multirow was not loaded:

```
1 \LetLtxMacro\multirow\relax
```

2 \LWR@ProvidesPackagePass{multirow}[2021/03/15]

\LWR@multirowborder Set to left or right to create a thick border for the cell, for use by bigdelim:

3 \newcommand{\LWR@multirowborder}{}

§ 433.1 Multirow

\LWR@multirow@par

\par inside a \multirow.

```
{\tt 4 \newcommand*{\LWR@multirow@par}{\tt \%}}
```

5 \LWR@htmltag{br /}%

6 }%

\multirow $[\langle 1: vpos \rangle] \{\langle 2: numrows \rangle\} [\langle 3:bigstruts \rangle] \{\langle 4: width \rangle\} [\langle 5: vmove \rangle] \{\langle 6: text \rangle\}$

- 9 \LWR@traceinfo{LWR@HTML@multirow #1 #2 #4}%
- 10 \booltrue{LWR@usedmultirow}%
- 11 \LWR@maybenewtablerow%
- 12 \LWR@tabularleftedge%

Print the start of a new table data cell:

```
13 \LWR@htmltag{%
```

td rowspan=\textquotedbl#2\textquotedbl\ %

A class adds the column spec and the rule:

```
15 class=\textquotedbl{}td%
```

Append this column's spec:

16 \LWR@getexparray{LWR@tablecolspec}{\arabic{LWR@tableLaTeXcolindex}}%

If this column has a cmidrule, add "rule" to the end of the $\verb|HTML|$ class tag. Also add the vertical bar class.

```
17 \LWR@addcmidruletrim%
```

- 18 \LWR@addleftmostbartag%
- 19 \LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%
- 20 \textquotedbl%
- 21 \LWR@tdstartstyles%

The vertical alignment, if given:

```
22 \ifstrequal{#1}{c}{\LWR@tdaddstyle\LWR@print@mbox{vertical-align:middle}}{}%
```

- 23 \ifstrequal{#1}{b}{\LWR@tdaddstyle\LWR@print@mbox{vertical-align:bottom}}{}%
- $\label{lem:lembox} $$ \ \ft_{t}_{LWR@tdaddstyle}LWR@print@mbox{vertical-align:top}}{}% $$$

The left/right border, if given:

```
25 \ifdefvoid{\LWR@multirowborder}{}%
26 \LWR@tdaddstyle%
27 \LWR@print@mbox{border-\LWR@multirowborder:} 2px dotted black; %
28 \LWR@print@mbox{padding-\LWR@multirowborder:} 2px%
29 }%
```

Additional style elements:

```
30 \LWR@addcmidrulewidth%
31 \LWR@addcdashline%
32 \LWR@addtabularrulecolors%
33 \LWR@tdendstyles%
34 }%
```

The column's < spec:

```
35 \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
```

While printing the text, redefine \\ to generate a new line. If a nested tabular occurs, \\ is redefined to \LWR@tabularendofline at the start of the tabular, then \LWR@endofline before again printing any \multirow contents inside the nested tabular.

\par is redefined to insert an HTML break, and if tabular is nested, it is redefined at the start of tabular.

```
\begingroup%
36
37
          \LetLtxMacro{\\}{\LWR@endofline}%
          \booltrue{LWR@in@multirow@par}%
38
          #6%
39
      \endgroup%
40
41
      \LWR@stoppars%
42
      \boolfalse{LWR@intabularmetadata}%
43
      \renewcommand{\LWR@multirowborder}{}%
      \LWR@traceinfo{LWR@HTML@multirow done}%
44
45 }%
46
47 \LWR@formatted{multirow}
```

§ 433.2 Combined multicolumn and multirow

```
 \begin{tabular}{ll} $$ \width \end{tabular} $$ \align$ \end{tabular}
```

 $\label{lem:linew} If Package Loaded TF \{ \verb|multirow| | determines if v2.0 or later of \verb|multirow| | which included the \Provides Package macro. \\$

The HTML version follows.

\AtBeginDocument because the print version had to see if multirow was loaded before determining how to define \LWR@print@multicolumnrow.

```
48 \AtBeginDocument{
49
50 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{} m O{} m O{} +m}{%
```

```
51 \booltrue{LWR@usedmultirow}%
                                   Figure out how many extra HTML columns to add for @ and ! columns:
                                  52 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}
                                   Create the multicolumn/multirow tag, temporarily redefining the end of line. (Us-
                                   ing a group caused problems with a nested tabular.
                                  53 \LetLtxMacro{\\}{\LWR@endofline}%
                                 54 \label{locality} $4 \times \mathbb{R}^4 = \mathbb{R}^4 \
                                 55 \LetLtxMacro{\\}{\LWR@tabularendofline}%
                                   Move to the next LATEX column:
                                  56 \defaddtocounter{LWR@tableLaTeXcolindex}{#1}%
                                  57 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}%
                                   Skip any trailing @ or! columns for this cell:
                                 58 \booltrue{LWR@skipatbang}%
                                 59 }
                                 61 \LWR@expandableformatted{multicolumnrow}
                                 63 }% \AtBeginDocument
                                   For MATHJAX. Only the text is used. All other parameters are ignored.
                                 64 \begin{warpMathJax}
                                 65% \multirow[vpos]{num}[bigstruts]{width}[vmove]{text}
                                 66 \c white \c whit
                                 67 \CustomizeMathJax{\newcommand{\LWRmultirow}[2][]{\LWRsubmultirow}}
                                 68 \CustomizeMathJax{\newcommand{\multirow}[2][]{\LWRmultirow}}
                                 69 %
                                 70 \CustomizeMathJax{\newcommand{\mrowcell}{}}
                                 71 \CustomizeMathJax{\newcommand{\mcolrowcell}{}}
                                 72 \CustomizeMathJax{\newcommand{\STneed}[1]{}}
                                 73 \end{warpMathJax}
             File 325 lwarp-multitoc.sty
            Package multitoc
multitoc (Pkg) multitoc is ignored.
                                   1 \LWR@ProvidesPackageDrop{multitoc}[1999/06/08]
                                   2 \newcommand{\multicolumntoc}{2}
                                   3 \newcommand{\multicolumnlot}{2}
                                   4 \newcommand{\multicolumnlof}{2}
                                   5 \newcommand*{\immediateaddtocontents}[2]{}
```

§ 434

for HTML output:

File 326 lwarp-musicography.sty

§ 435 Package musicography

(Emulates or patches code by Andrew A. Cashner.)

musicography (*Pkg*) musicography is patched for use by lwarp.

Images are used for the meter symbols and fingered bass, since the HTML fonts tend not to be the correct size and HTML cannot stack items. The HTML alt tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.

 \triangle

Note that browser support for musical symbols may be buggy. ALT text and copy/paste into a text editor work well.

for HTML output: 1 \LWR@ProvidesPackagePass{musicography}[2019/05/28]

```
2 \NewDocumentCommand{\LWR@HTML@musSymbol}{ O{\musFont} m m m m }{%
3 \begin{lateximage}%
4 {\#1\kern\#2\raisebox{\#3}{\#5}\kern\#4}%
5\end{lateximage}%
6 }
8 \LWR@formatted{musSymbol}
10 \NewDocumentCommand{\LWR@HTML@musStemmedNote}{ m }{%
11 \begin{lateximage}%
12 \musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}%
13 \end{lateximage}%
14 }
15
16 \LWR@formatted{musStemmedNote}
{\tt 18 \ NewDocumentCommand \{\ LWR@HTML@musFlaggedNote\}\{\ m\ m\ \}\{\%\}}
19 \begin{lateximage}%
20 \musSymbol{0.05em}{0.5ex}{0pt}{#1\musStem}%
21 \musSymbol{0pt}{0pt}{0.9em}{#2}%
22 \end{lateximage}%
23 }
25 \LWR@formatted{musFlaggedNote}
27 \NewDocumentCommand{\LWR@HTML@musDottedNote}{ m }{% }  
28 \begin{lateximage}%
29 #1\musDot%
30 \end{lateximage}%
31 }
33 \LWR@formatted{musDottedNote}
35 \NewDocumentCommand{\LWR@HTML@musMeter}{ m m }{\%}
36 \begin{lateximage}*[#1/#2]*[#1#2]%
37 \musStack{#1 #2}\kern0.05em%
38 \end{lateximage}%
39 }
```

```
41 \LWR@formatted{musMeter}
43 \MewDocumentCommand{\LWR@HTML@meterCplus}{ m }{\%}
44 \begin{lateximage}*[C#1]*%
      \meterC{}\kern-0.7pt#1%
46 \end{lateximage}%
47 }
48
49 \LWR@formatted{meterCplus}
51 \NewDocumentCommand{\LWR@HTML@meterC}{}{%
52 \begin{lateximage}*[C]*%
53 \musSymbolMeter{\symbol{83}}%
54 \end{lateximage}%
55 }
57 \LWR@formatted{meterC}
59 \NewDocumentCommand{\LWR@HTML@meterCutC}{}{%
60 \begin{lateximage}*[C|]*%
61 \musSymbolMeter{\symbol{82}}%
62 \end{lateximage}%
63 }
65 \LWR@formatted{meterCutC}
67 \NewDocumentCommand{\LWR@HTML@meterCThreeTwo}{}{%
68 \begin{lateximage}*[C3/2]*%
69 \meterCplus{\musStack{3 2}}%
70 \end{lateximage}%
71 }
73 \LWR@formatted{meterCThreeTwo}
75 \NewDocumentCommand{\LWR@HTML@meterO}{}{\HTMLunicode{25EF}}
77 \LWR@formatted{meter0}
79 \newcommand{\LWR@null@noFig}[1][]{}%
81 \NewDocumentCommand{\LWR@HTML@musFig}{ m }{%
82 \begin{lateximage}*[%
83
      {% ALT text for copy/paste
          \LetLtxMacro\noFig\LWR@null@noFig%
84
85
          \LetLtxMacro\musSharp\LWR@HTML@musSharp%
86
          \LetLtxMacro\musDoubleSharp\LWR@HTML@musDoubleSharp%
          \LetLtxMacro\musFlat\LWR@HTML@musFlat%
87
          \LetLtxMacro\musDoubleFlat\LWR@HTML@musDoubleFlat%
88
          \verb|\LetLtxMacro\musNatural\LWR@HTML@musNatural|| \\
89
          {#1}% braces here because \noFig uses []
90
      }%
91
92]*%
      \begin{tabular}{l} $$\max $$ \arrowvert ack[\musFigFont]{$\#1$}\% $$
94 \end{lateximage}%
95 }
97 \LWR@formatted{musFig}
99 \NewDocumentCommand{\LWR@HTML@musFlat}
                                                  {}{\HTMLunicode{266D}}
```

```
100 \NewDocumentCommand{\LWR@HTML@musDoubleFlat} {}{\HTMLunicode{1D12B}}
101 \NewDocumentCommand{\LWR@HTML@musSharp}
                                                {}{\HTMLunicode{266F}}
103 \NewDocumentCommand{\LWR@HTML@musNatural}
                                                {}{\HTMLunicode{266E}}
105 \LWR@formatted{musFlat}
106 \LWR@formatted{musDoubleFlat}
107 \LWR@formatted{musSharp}
108 \LWR@formatted{musDoubleSharp}
109 \LWR@formatted{musNatural}
111 \NewDocumentCommand{\LWR@HTML@musWhole}
                                                   {}{\HTMLunicode{1D15D}}}
112 \NewDocumentCommand{\LWR@HTML@musHalf}
                                                   {}{\HTMLunicode{1D15E}}
113 \NewDocumentCommand{\LWR@HTML@musQuarter}
                                                   {}{\HTMLunicode{1D15F}}
114 \NewDocumentCommand{\LWR@HTML@musEighth}
                                                   {}{\HTMLunicode{1D160}}
115 \NewDocumentCommand{\LWR@HTML@musSixteenth}
                                                   {}{\HTMLunicode{1D161}}
116 \NewDocumentCommand{\LWR@HTML@musThirtySecond}
                                                   {}{\HTMLunicode{1D162}}
117 \NewDocumentCommand{\LWR@HTML@musSixtyFourth}
                                                   {}{\HTMLunicode{1D163}}
119 \LWR@formatted{musWhole}
120 \LWR@formatted{musHalf}
121 \LWR@formatted{musQuarter}
122 \LWR@formatted{musEighth}
123 \LWR@formatted{musSixteenth}
124 \LWR@formatted{musThirtySecond}
125 \LWR@formatted{musSixtyFourth}
126
{\tt 127 \ NewDocumentCommand\{\ LWR@HTML@musWholeDotted\}\{\}}
      {\HTMLunicode{1D15D}\HTMLunicode{1D16D}}
128
129 \NewDocumentCommand{\LWR@HTML@musHalfDotted}{}
      {\HTMLunicode{1D15E}\HTMLunicode{1D16D}}
130
131 \NewDocumentCommand{\LWR@HTML@musQuarterDotted}{}
132
      {\HTMLunicode{1D15F}\HTMLunicode{1D16D}}
133 \NewDocumentCommand{\LWR@HTML@musEighthDotted}{}
      {\HTMLunicode{1D160}\HTMLunicode{1D16D}}
135 \NewDocumentCommand{\LWR@HTML@musSixteenthDotted}{}
      {\HTMLunicode{1D161}\HTMLunicode{1D16D}}
137 \NewDocumentCommand{\LWR@HTML@musThirtySecondDotted}{}
      {\HTMLunicode{1D162}\HTMLunicode{1D16D}}
139 \NewDocumentCommand{\LWR@HTML@musSixtyFourthDotted}{}
      {\HTMLunicode{1D163}\HTMLunicode{1D16D}}
140
141
142 \LWR@formatted{musWholeDotted}
143 \LWR@formatted{musHalfDotted}
144 \LWR@formatted{musQuarterDotted}
145 \LWR@formatted{musEighthDotted}
146 \LWR@formatted{musSixteenthDotted}
147 \LWR@formatted{musThirtySecondDotted}
148 \LWR@formatted{musSixtyFourthDotted}
```

File 327 lwarp-mwe.sty

§ 436 Package **mwe**

(Emulates or patches code by Martin Scharrer.)

mwe (Pkg) mwe is used as-is, but a warning is issued to copy the images to the local directory.

for HTML output: 1 \LWR@ProvidesPackagePass{mwe}[2018/03/30] 2 \AtEndDocument{% \PackageWarningNoLine{lwarp}{% 3 For package mwe, copy any mwe images to be used for\MessageBreak 4 HTML, such as PNG or JPG, to the document's base\MessageBreak 5 directory. Neither a subdirectory nor the mwe\MessageBreak directory will work, due to the TeX file search\MessageBreak 8 algorithm% 9 }% 10 }%

File 328 lwarp-nameauth.sty

§437 Package nameauth

(Emulates or patches code by Charles P. Schaum.)

nameauth (*Pkg*) nameauth is patched for use by lwarp.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \land \texttt{LWR@ProvidesPackagePass{nameauth}[2023/02/03]} \end{tabular}$

\@nameauth@Hook (*Hook*)

) lwarp formatting is inserted.

[nameauth]

```
{\tt 2\VerifyCommand[lwarp][nameauth]{\Qnameauth@Hook}{E665BBD1C138AA37AF2AF5E3C3565584}}
4 \renewcommand*\@nameauth@Hook[1]
5 {%
    \ifdefined\@nameauth@InParser
      \@nameauth@InHooktrue%
      \protected@edef\test{#1}%
      \verb|\expandafter@nameauth@TestDot\expandafter{\test}| % \\
10
      \if@nameauth@MainFormat
11
        \if@nameauth@FirstFormat
          \bgroup\NamesFormat{%
12
               \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%
                                                                      lwarp
13
          }\egroup%
14
        \else
15
16
          \bgroup\MainNameHook{%
               \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%
17
                                                                      lwarp
18
          }\egroup%
19
        \fi
20
      \else
        \if@nameauth@FirstFormat
21
          \bgroup\FrontNamesFormat{%
22
               \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%
                                                                      lwarp
23
          }\egroup%
24
        \else
25
           \bgroup\FrontNameHook{%
26
27
               \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%
                                                                      lwarp
28
          }\egroup%
29
        \fi
30
      \fi
    \fi
31
32 }
```

```
File 329 lwarp-nameref.sty
                  nameref
         Package
§ 438
                   nameref is nullified here, then emulated by lwarp.
    nameref (Pkg)
                   Discard all options for lwarp-nameref:
for HTML output:
                   1 \LWR@ProvidesPackageDrop{nameref}[2023-08-07]
         File 330 lwarp-natbib.sty
         Package natbib
§ 439
                   (Emulates or patches code by Patrick W. Daly.)
     natbib (Pkg) natbib is patched for use by lwarp.
for HTML output:
                   1 \LWR@ProvidesPackagePass{natbib}[2010/09/13]
                   Replace math < and > with \textless and \textgreater:
                   A macro to compare:
                   2 \newcommand{\LWRNB@NAT@open}{$<$}</pre>
                   To patch \NAT@open and \NAT@close
                   3 \newcommand{\LWRNB@patchnatbibopenclose}{
                   4 \ifdefstrequal{\NAT@open}{\LWRNB@NAT@open}
                   5 {
                         \renewcommand{\NAT@open}{\textless}
                        \renewcommand{\NAT@close}{\textgreater}
                   8 }{}
                   Do it now in case angle was selected as an option:
                   10 \LWRNB@patchnatbibopenclose
                   Also patch \setcitestyle to patch after settings are made:
                  11 \let\LWRNB@origsetcitestyle\setcitestyle
                  13 \renewcommand{\setcitestyle}[1]{%
                  14 \LWRNB@origsetcitestyle{#1}%
                  15 \LWRNB@patchnatbibopenclose%
                  16 }
                   Syncronize the autopage labels:
                  17 \xpretocmd{\NAT@reset@parser}
```

```
18 {\LWR@newautopagelabel{page}}%
19 {}
20 {\LWR@patcherror{natbib}{NAT@reset@parser}}
```

File 331 lwarp-nccfancyhdr.sty

```
Package nccfancyhdr
§ 440
                  (Emulates or patches code by Alexander I. Rozhenko.)
\operatorname{nccfancyhdr}(Pkg)
                 nccfancyhdr is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{nccfancyhdr}[2004/12/07]
                  2 \newcommand*{\headrulewidth}{}
                  3 \newcommand*{\footrulewidth}{}
                  4 \newcommand{\headstrutheight}{}
                  5 \newcommand{\footstrutheight}{}
                  6 \newcommand*{\headrule}{}
                  7 \newcommand*{\footrule}{}
                  8
                  9 \mbox{ newdimen}\mbox{headwidth}
                 10 \newcommand*{\extendedheaders}{}
                 11 \newcommand*{\normalheaders}{}
                 13 \newcommand*{\fancyhead}[2][]{}
                 15 \newcommand*{\fancyhf}[2][]{}
                 16 \newcommand*{\fancypagestyle}[2]{}
                 18 \newcommand*{\chead}[2][]{}
                 19 \newcommand*{\rhead}[2][]{}
                 20 \newcommand*{\lfoot}[2][]{}
                 21 \newcommand*{\cfoot}[2][]{}
                 22 \mbox{ } 12[]{}
```

24 \newcommand{\nouppercase}[1]{#1}

30 \newcommand*{\iffloatpage}[2]{#2}
31 \newcommand*{\ifftopfloat}[2]{#2}
32 \newcommand*{\iffbotfloat}[2]{#2}

26 \NewDocumentCommand{\fancycenter}{o o m m m}{}

28 $\MewDocumentCommand{\newpagestyle}{m o m}{}$

File 332 lwarp-nccfoots.sty

§ 441 Package nccfoots

(Emulates or patches code by Alexander I. Rozhenko.)

nccfoots (Pkg) nccfoots is used as-is, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{nccfoots}[2005/02/03]

To nullify the footnotes where necessary:

```
2\apptocmd{\LWR@nullifyfootnotes}{%
3 \renewcommand*{\Footnote}[1]{}%
4 \renewcommand*{\Footnotemark}[1]{}%
5 }{}{}
```

Λ

For MathJax. There is no way to test for an empty argument, so the mark is not automatically duplicated.

```
6 \begin{warpMathJax}
7 \CustomizeMathJax{\newcommand{\Footnotemark}[1]{{}^{\mathrm{#1}}}}
8 \CustomizeMathJax{\newcommand{\Footnote}[2]{\Footnotemark{#1}}}
9 \end{warpMathJax}
```

File 333 lwarp-nccmath.sty

§ 442 Package nccmath

(Emulates or patches code by Alexander I. Rozhenko.)

nccmath (*Pkg*) nccmath is patched for use by lwarp, and emulated for MATHJAX.

```
for HTML output: 1 \LWR@ProvidesPackagePass{nccmath}[2006/01/20]
```

```
2 \let\LWR@origeqnarray\eqnarray
3 \let\LWR@origendeqnarray\endeqnarray
5 \csletcs{LWR@origeqnarraystar}{eqnarray*}
6 \csletcs{LWR@origendeqnarraystar}{endeqnarray*}
8 \RenewEnviron{eqnarray}
9 {%
10
      \LWR@eqnarrayfactor
11
12
13 }
15 \RenewEnviron{eqnarray*}
16 {%
17
18
      \begingroup
19
      \csletcs{LWR@origeqnarray}{LWR@origeqnarraystar}
20
      \csletcs{LWR@origendeqnarray}{LWR@origendeqnarraystar}
      \boolfalse{LWR@numbereqnarray}
21
      \LWR@eqnarrayfactor
22
      \endgroup
23
24
25 }
26
27 \def\eqs{%
      \@ifstar\LWR@nccmath@eqsstar\LWR@nccmath@eqs%
\label{locality} $$30 \rightarrow \frac{LWR@nccmath@eqsstar}[2][]{\begin{eqnarray*}\#2\end{eqnarray*}} $
31 \newcommand*{\LWR@nccmath@eqs}[2][]{\begin{eqnarray}#2\end{eqnarray}}
33 \begin{warpMathJax}
```

```
34\CustomizeMathJax{\renewcommand{\intertext}[2][]{\text{#2}\notag }}
               35 \CustomizeMathJax{\newenvironment{fleqn}[1][]{}{}}
               36 \CustomizeMathJax{\newenvironment{ceqn}{}{}}
               \label{lem:continuous} $$3\gamma \subset \mathcal{I}_{array}[2][c]_{begin_{array}[41]_{42}}_{cnd_{array}}$$
               38 \CustomizeMathJax{\newcommand{\dmulticolumn}[3]{#3}}
                As of v0.86, MathJax v3 does not offer \\*, so the unstarred version is used here.
               39 \CustomizeMathJax{\newcommand{\LWRnrnostar}[1][0.5ex]{\\[#1]}}
               40 \command{\nr}{\ifstar\LWRnrnostar}}
               42 \CustomizeMathJax{\newcommand{\mrel}[1]{\begin{aligned}#1\end{aligned}}}
               43 \CustomizeMathJax{\newcommand{\underrel}[2]{\underset{#2}{#1}}}
               44 \CustomizeMathJax{\newcommand{\medmath}[1]{#1}}
               45 \CustomizeMathJax{\newcommand{\medop}[1]{#1}}
               46 \CustomizeMathJax{\newcommand{\medint}[1]{#1}}
               47 \CustomizeMathJax{\newcommand{\medintcorr}[1]{#1}}
               48 \CustomizeMathJax{\newcommand{\mfrac}[2]{\frac{#1}{#2}}}
               49 \CustomizeMathJax{\newcommand{\mbinom}[2]{\binom{#1}{#2}}}
               50 \CustomizeMathJax{\newenvironment{mmatrix}{\begin{matrix}}}\end{matrix}}}
               51 \CustomizeMathJax{\newcommand{\displaybreak}[1][]{}}
                \eq, \eqs, \eqalign are created by LATEX, not MATHJAX.
               52 \end{warpMathJax}
       File 334 lwarp-needspace.sty
      Package needspace
                (Emulates or patches code by Peter Wilson.)
               needspace is ignored.
needspace (Pkg)
                Discard all options for lwarp-needspace:
                1 \LWR@ProvidesPackageDrop{needspace}[2010/09/12]
                3 \DeclareDocumentCommand{\needspace}{m}{}
                4 \DeclareDocumentCommand{\Needspace}{s m}{}
       File 335 lwarp-newpxmath.sty
      Package newpxmath
                (Emulates or patches code by Michael Sharpe.)
newpxmath (Pkg)
               newpxmath is used as-is for svg math, and is emulated for MATHJAX.
```

The MathJax emulation ignores all package options, except slantedGreek is honored. The dedicated macros for upright and italic Greek do work correctly.

svg math should appear the same as the printed output.

§ 443

§ 444

for HTML output:

limitations

for HTML output:

The MathJax code from newtxmath is used:

```
1 \LWR@ProvidesPackagePass{newpxmath}[2020/01/09]
3 \LWR@infoprocessingmathjax{newpxmath}
5 \LWR@origRequirePackage{lwarp-common-mathjax-newpxtxmath}
7 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
9 \begin{warpMathJax}
    * \marg{2: prefix} \marg{3: postfix} \marg{4: i/u: italic/upright}
12 \LWR@mathjax@addgreek@u@up*{}{up}
13 \LWR@mathjax@addgreek@u@up*{up}{}
14 \LWR@mathjax@addgreek@l@up{up}{}
15 \LWR@mathjax@addgreek@l@up{}{up}
16 \LWR@mathjax@addgreek@u@it*{}{it}
17 \LWR@mathjax@addgreek@l@it{}{it}
Optional slanted Greek:
18 \ifpx@slantedG
      \LWR@mathjax@addgreek@u@it*{}{}
20∖fi
21
22 \end{warpMathJax}
```

File 336 lwarp-newtxmath.sty

§ 445

Package newtxmath

(Emulates or patches code by Michael Sharpe.)

newtxmath (Pkg) newtxmath is used as-is for svg math, and is emulated for MATHJAX.

limitations

The MathJax emulation ignores all package options, except slantedGreek is honored, and except that bold italic Latin letters are not defined for MATHJAX if the option is not selected.

The dedicated macros for upright and italic Greek and bold italic Latin letters do work correctly.

svg math should appear the same as the printed output.

```
for HTML output:
```

```
1 \LWR@ProvidesPackagePass{newtxmath}[2020/08/04]
3 \LWR@infoprocessingmathjax{newtxmath}
5 \LWR@origRequirePackage{lwarp-common-mathjax-newpxtxmath}
7 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
9 \begin{warpMathJax}
    * \marg{2: prefix} \marg{3: postfix} \marg{4: i/u: italic/upright}
12 \LWR@mathjax@addgreek@u@up*{}{up}
```

```
13 \LWR@mathjax@addgreek@u@up*{up}{}
14 \LWR@mathjax@addgreek@l@up{up}{}
15 \LWR@mathjax@addgreek@l@up{}{up}
16 \LWR@mathjax@addgreek@u@it*{}{it}
17 \LWR@mathjax@addgreek@l@it{}{it}
19% only newtxmath, not newpxmath:
20 \LWR@mathjax@addgreek@u@it*{it}{}
21 \LWR@mathjax@addgreek@l@it{it}{}
23% only newtxmath, not newpxmath:
24\ifdef{\iftx@BI}{
      \iftx@BI
          \LWR@mathjax@addlatin@u@bfit{BI}
27
          \LWR@mathjax@addlatin@l@bfit{BI}
      \fi
28
29 }{}
Optional slanted Greek:
30 \iftx@slantedG
      \LWR@mathjax@addgreek@u@it*{}{}
31
32\fi
34 \end{warpMathJax}
```

File 337 lwarp-newtxsf.sty

§ 446 Package **newtxsf**

(Emulates or patches code by Michael Sharpe.)

newtxsf (*Pkg*) **newtxsf** is used as-is for svg math, and is emulated for MATHJAX.

⚠ limitations

The MathJax emulation ignores all package options, except slantedGreek is honored. The dedicated macros for upright and italic Greek and bold italic Latin letters do work correctly.

svg math should appear the same as the printed output.

```
for HTML output:
```

```
1 \LWR@ProvidesPackagePass{newtxsf}[2020/05/02]
2
3 \LWR@infoprocessingmathjax{newtxsf}
4
5 \LWR@origRequirePackage{lwarp-common-mathjax-newpxtxmath}
6
7 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
8
9 \begin{warpMathJax}
10
11% * \marg{2: prefix} \marg{3: postfix} \marg{4: i/u: italic/upright}
12 \LWR@mathjax@addgreek@u@up*{}{up}
13 \LWR@mathjax@addgreek@u@up*{up}{}
14 \LWR@mathjax@addgreek@l@up}{}
15 \LWR@mathjax@addgreek@l@up}{}up}
16 \LWR@mathjax@addgreek@u@it*{}{it}
17 \LWR@mathjax@addgreek@l@it{}{it}
```

```
19% only newtxmath, not newpxmath:
                 20 \LWR@mathjax@addgreek@u@it*{it}{}
                 21 \LWR@mathjax@addgreek@l@it{it}{}
                 22 %
                 23% only newtxmath, not newpxmath:
                 24 \ifdef{\iftx@BI}{
                       \iftx@BI
                 25
                            \LWR@mathjax@addlatin@u@bfit{BI}
                 26
                            \LWR@mathjax@addlatin@l@bfit{BI}
                 27
                 28
                       \fi
                 29 }{}
                  Optional slanted Greek:
                 30 \iftx@slantedG
                 31
                       \LWR@mathjax@addgreek@u@it*{}{}
                 32\fi
                 34 \end{warpMathJax}
         File 338 lwarp-nextpage.sty
        Package nextpage
                  (Emulates or patches code by Peter Wilson.)
   nextpage(Pkg)
                  nextpage is ignored.
                  Discard all options for lwarp-nextpage.
                  1 \LWR@ProvidesPackageDrop{nextpage}[2009/09/03]
                  2 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
                  3 \DeclareDocumentCommand{\movetoevenpage}{o}{}
                  4 \DeclareDocumentCommand{\cleartooddpage}{o}{}
                  5 \DeclareDocumentCommand{\movetooddpage}{o}{}
                 lwarp-nfssext-cfr.sty
         File 339
        Package nfssext-cfr
                  (Emulates or patches code by Clea F. Rees.)
nfssext-cfr (Pkg) nfssext-cfr is emulated in HTML, and used as-is in print output.
                  Results depend on the browser's font.
                  1 \LWR@ProvidesPackagePass{nfssext-cfr}[2017/03/28]
                  Macros which are present in the lwarp core are commented out here.
                  2 \newrobustcmd{\LWR@HTML@lnstyle}{}
```

 ${\tt 3 \ less tyle} {\tt \ LWR@HTML@osstyle} {\tt \ LWR@HTML@scshape} \\$

§ 447

§ 448

for HTML output:

for HTML output:

```
4 \newrobustcmd{\LWR@HTML@instyle}{}
5 \newrobustcmd{\LWR@HTML@sustyle}{}
6 \newrobustcmd{\LWR@HTML@swstyle}{}
7 \newrobustcmd{\LWR@HTML@pstyle}{}
8 \newrobustcmd{\LWR@HTML@tistyle}{}
9 \newrobustcmd{\LWR@HTML@ostyle}{\LWR@HTML@scshape}
10 \newrobustcmd{\LWR@HTML@postyle}{\LWR@HTML@scshape}
11 \newrobustcmd{\LWR@HTML@ltstyle}{}
12 \newrobustcmd{\LWR@HTML@ofstyle}{}
13 \newrobustcmd{\LWR@HTML@altstyle}{}
14 \newrobustcmd{\LWR@HTML@regstyle}{}
15 \newrobustcmd{\LWR@HTML@embossstyle}{}
16 \newrobustcmd{\LWR@HTML@ornamentalstyle}{}
17 \newrobustcmd{\LWR@HTML@qtstyle}{}
18 \newrobustcmd{\LWR@HTML@shstyle}{}
19 \newrobustcmd{\LWR@HTML@swashstyle}{}
20 \newrobustcmd{\LWR@HTML@tmstyle}{\renewcommand*{\LWR@f@family}{tt}}
21 \newrobustcmd{\LWR@HTML@tvstyle}{\renewcommand*{\LWR@f@family}{tt}}
22 \newrobustcmd{\LWR@HTML@tstyle}{}
23 \newrobustcmd{\LWR@HTML@lstyle}{}
24 \newrobustcmd{\LWR@HTML@tlstyle}{}
25 \newrobustcmd{\LWR@HTML@plstyle}{}
26 \newrobustcmd{\LWR@HTML@tostyle}{\LWR@HTML@scshape}
27% \newrobustcmd{\LWR@HTML@sishape}{}
28 \newrobustcmd{\LWR@HTML@olshape}{}
29 \newrobustcmd{\LWR@HTML@scolshape}{}
30 \newrobustcmd{\LWR@HTML@ushape}{}
31 \newrobustcmd{\LWR@HTML@scushape}{}
32 \newrobustcmd{\LWR@HTML@uishape}{\LWR@HTML@itshape}
33 \newrobustcmd{\LWR@HTML@rishape}{}
34 \newrobustcmd{\LWR@HTML@regwidth}{}
35 \newrobustcmd{\LWR@HTML@nwwidth}{}
36 \newrobustcmd{\LWR@HTML@cdwidth}{}
37 \newrobustcmd{\LWR@HTML@ecwidth}{}
38 \newrobustcmd{\LWR@HTML@ucwidth}{}
39 \newrobustcmd{\LWR@HTML@etwidth}{}
40 \newrobustcmd{\LWR@HTML@epwidth}{}
41 \newrobustcmd{\LWR@HTML@exwidth}{}
42 \newrobustcmd{\LWR@HTML@uxwidth}{}
43 \end{\lwR@HTML@mbweight} {\newcommand*{\lwR@f@series}{md}} \\
44 \newrobustcmd{\LWR@HTML@dbweight}{\renewcommand*{\LWR@f@series}{db}}
46% \newrobustcmd{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}
47 \newrobustcmd{\LWR@HTML@ubweight}{\renewcommand*{\LWR@f@series}{ub}}
48% \newrobustcmd{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}
49 \newrobustcmd{\LWR@HTML@elweight}{\renewcommand*{\LWR@f@series}{el}}
50 \newrobustcmd{\LWR@HTML@ulweight}{\renewcommand*{\LWR@f@series}{ul}}
51% \newrobustcmd{\LWR@HTML@itshape}{}
52 % \newrobustcmd{\LWR@HTML@scshape}{}
53 % \newrobustcmd{\LWR@HTML@upshape}{}
54 \newrobustcmd{\LWR@HTML@dfshape}{}
56 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes
57
      \newrobustcmd{\LWR@HTML@swshape}{}
58 }
60 \newrobustcmd{\LWR@HTML@ornament}[1]{}
62 \LWR@formatted{lnstyle}
63 \LWR@formatted{osstyle}
```

```
64 \LWR@formatted{instyle}
65 \LWR@formatted{sustyle}
66 \LWR@formatted{swstyle}
67 \LWR@formatted{pstyle}
68 \LWR@formatted{tistyle}
69 \LWR@formatted{ostyle}
70 \LWR@formatted{postyle}
71 \LWR@formatted{ltstyle}
72 \LWR@formatted{ofstyle}
73 \LWR@formatted{altstyle}
74 \LWR@formatted{regstyle}
75 \LWR@formatted{embossstyle}
76 \LWR@formatted{ornamentalstyle}
77 \LWR@formatted{qtstyle}
78 \LWR@formatted{shstyle}
79 \LWR@formatted{swashstyle}
80 \LWR@formatted{tmstyle}
81 \LWR@formatted{tvstyle}
82 \LWR@formatted{tstyle}
83 \LWR@formatted{lstyle}
84 \LWR@formatted{tlstyle}
85 \LWR@formatted{plstyle}
86 \LWR@formatted{tostyle}
87 % \LWR@formatted{sishape}
88 \LWR@formatted{olshape}
89 \LWR@formatted{scolshape}
90 \LWR@formatted{ushape}
91 \LWR@formatted{scushape}
92 \LWR@formatted{uishape}
93 \LWR@formatted{rishape}
94 \LWR@formatted{regwidth}
95 \LWR@formatted{nwwidth}
96 \LWR@formatted{cdwidth}
97 \LWR@formatted{ecwidth}
98 \LWR@formatted{ucwidth}
99 \LWR@formatted{etwidth}
100 \LWR@formatted{epwidth}
101 \LWR@formatted{exwidth}
102 \LWR@formatted{uxwidth}
103 \LWR@formatted{mbweight}
104 \LWR@formatted{dbweight}
105 \LWR@formatted{sbweight}
106% \LWR@formatted{ebweight}
107 \LWR@formatted{ubweight}
108% \LWR@formatted{lgweight}
109 \LWR@formatted{elweight}
110 \LWR@formatted{ulweight}
111 \LWR@formatted{itshape}% adapt to the new print version
112 \LWR@formatted{scshape}% adapt to the new print version
113 \LWR@formatted{upshape}% adapt to the new print version
114 \LWR@formatted{dfshape}
115
116 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes
       \LWR@formatted{swshape}
117
120 \LWR@formatted{ornament}
121 \FilenameNullify{%
       \LetLtxMacro\lnstyle\@empty%
```

```
123
       \LetLtxMacro\osstyle\@empty%
       \LetLtxMacro\instyle\@empty%
124
       \LetLtxMacro\sustyle\@empty%
125
126
       \LetLtxMacro\swstyle\@empty%
127
       \LetLtxMacro\pstyle\@empty%
128
       \LetLtxMacro\tistyle\@empty%
       \LetLtxMacro\ostyle\@empty%
129
       \LetLtxMacro\postyle\@empty%
130
       \LetLtxMacro\ltstyle\@empty%
131
       \LetLtxMacro\ofstyle\@empty%
132
       \LetLtxMacro\altstyle\@empty%
133
134
       \LetLtxMacro\regstyle\@empty%
135
       \LetLtxMacro\embossstyle\@empty%
       \LetLtxMacro\ornamentalstyle\@empty%
137
       \LetLtxMacro\qtstyle\@empty%
138
       \LetLtxMacro\shstyle\@empty%
       \LetLtxMacro\swashstyle\@empty%
139
       \LetLtxMacro\tmstyle\@empty%
140
       \LetLtxMacro\tvstyle\@empty%
141
       \LetLtxMacro\tstvle\@emptv%
142
       \LetLtxMacro\lstyle\@empty%
143
       \LetLtxMacro\tlstyle\@empty%
144
145
       \LetLtxMacro\plstyle\@empty%
       \LetLtxMacro\tostyle\@empty%
146
147~\%
       \LetLtxMacro\sishape\@empty%
       \LetLtxMacro\olshape\@empty%
148
149
       \LetLtxMacro\scolshape\@empty%
150
       \LetLtxMacro\ushape\@empty%
151
       \LetLtxMacro\scushape\@empty%
       \LetLtxMacro\uishape\@empty%
152
       \LetLtxMacro\rishape\@empty%
153
       \LetLtxMacro\regwidth\@empty%
154
155
       \LetLtxMacro\nwwidth\@empty%
       \LetLtxMacro\cdwidth\@empty%
156
       \LetLtxMacro\ecwidth\@empty%
157
       \LetLtxMacro\ucwidth\@empty%
158
159
       \LetLtxMacro\etwidth\@empty%
160
       \LetLtxMacro\epwidth\@empty%
       \LetLtxMacro\exwidth\@empty%
161
       \LetLtxMacro\uxwidth\@empty%
162
       \LetLtxMacro\mbweight\@empty%
163
       \LetLtxMacro\dbweight\@empty%
164
       \LetLtxMacro\sbweight\@empty%
165
166 %
       \LetLtxMacro\ebweight\@empty%
       \LetLtxMacro\ubweight\@empty%
167
168 %
       \LetLtxMacro\lgweight\@empty%
169
       \LetLtxMacro\elweight\@empty%
170
       \LetLtxMacro\ulweight\@empty%
       \LetLtxMacro\itshape\@empty%
171 %
       \LetLtxMacro\scshape\@empty%
172 %
       \LetLtxMacro\upshape\@empty%
173 %
       \LetLtxMacro\dfshape\@empty%
174
175
       \LetLtxMacro\swshape\@empty%
       \LetLtxMacro\ornament\@gobble%
176
177 }
179 \newrobustcmd{\LWR@HTML@textln}[1]{\InlineClass{textln}{#1}}
180 \newrobustcmd{\LWR@HTML@textos}[1]{\textsc{#1}}
181 \newrobustcmd{\LWR@HTML@textin}[1]{#1}
182 \newrobustcmd{\LWR@HTML@textsu}[1]{#1}
```

```
183 % \newrobustcmd{\LWR@HTML@textsi}[1]{#1}
184 \newrobustcmd{\LWR@HTML@textdf}[1]{#1}
185 \ifdef{\LWR@HTML@textsw}{}{% duplicated by fontaxes
       \newrobustcmd{\LWR@HTML@textsw}[1]{#1}
187
       \LWR@formatted{textsw}
188 }
189
190 \newrobustcmd{\LWR@HTML@textti}[1]{#1}
191 \newrobustcmd{\LWR@HTML@textlt}[1]{#1}
192 \newrobustcmd{\LWR@HTML@textof}[1]{#1}
193 \newrobustcmd{\LWR@HTML@textalt}[1]{#1}
194 \newrobustcmd{\LWR@HTML@textreg}[1]{#1}
195 \newrobustcmd{\LWR@HTML@emboss}[1]{#1}
196 \newrobustcmd{\LWR@HTML@textorn}[1]{#1}
197 \newrobustcmd{\LWR@HTML@textqt}[1]{#1}
198 \newrobustcmd{\LWR@HTML@textsh}[1]{#1}
199 \newrobustcmd{\LWR@HTML@texttm}[1]{\texttt{#1}}
200 \newrobustcmd{\LWR@HTML@texttv}[1]{\texttt{#1}}
201 \newrobustcmd{\LWR@HTML@textl}[1]{\InlineClass{textln}{#1}}
202 \newrobustcmd{\LWR@HTML@texto}[1]{\textsc{#1}}
203 \newrobustcmd{\LWR@HTML@textp}[1]{\InlineClass{textp}{#1}}
204 \newrobustcmd{\LWR@HTML@textt}[1]{\InlineClass{textt}{#1}}
205 \newrobustcmd{\LWR@HTML@textpl}[1]{#1}
206 \newrobustcmd{\LWR@HTML@textpo}[1]{\textsc{#1}}
207 \newrobustcmd{\LWR@HTML@texttl}[1]{\InlineClass{textln}{#1}}
208 \newrobustcmd{\LWR@HTML@textto}[1]{\textsc{#1}}
209 \newrobustcmd{\LWR@HTML@textol}[1]{#1}
210 \newrobustcmd{\LWR@HTML@textswash}[1]{#1}
211 \newrobustcmd{\LWR@HTML@textu}[1]{#1}
212 \newrobustcmd{\LWR@HTML@textscu}[1]{#1}
213 \newrobustcmd{\LWR@HTML@textui}[1]{\LWR@HTML@textit{#1}}
214 \newrobustcmd{\LWR@HTML@textri}[1]{#1}
215 \newrobustcmd{\LWR@HTML@textnw}[1]{#1}
216 \newrobustcmd{\LWR@HTML@textcd}[1]{#1}
217 \newrobustcmd{\LWR@HTML@textec}[1]{#1}
218 \newrobustcmd{\LWR@HTML@textuc}[1]{#1}
219 \newrobustcmd{\LWR@HTML@textet}[1]{#1}
220 \newrobustcmd{\LWR@HTML@textep}[1]{#1}
221 \newrobustcmd{\LWR@HTML@textex}[1]{#1}
222 \newrobustcmd{\LWR@HTML@textux}[1]{#1}
223 \newrobustcmd{\LWR@HTML@textrw}[1]{#1}
224\newrobustcmd{\LWR@HTML@textmb}[1]{{\LWR@HTML@mbweight\InlineClass{textmb}{#1}}}
225 \newrobustcmd{\LWR@HTML@textdb}[1]{{\LWR@HTML@dbweight\InlineClass{textdb}{#1}}}
226 \newrobustcmd \\ \LWR@HTML@textsb \\ [1] \\ \{ \LWR@HTML@sbweight \InlineClass \\ \{ textsb \} \\ \{ \#1 \} \} \}
227% \newrobustcmd{\LWR@HTML@texteb}[1]}{#1}
228 \newrobustcmd{\LWR@HTML@textub}[1]{{\LWR@HTML@ubweight\InlineClass{textub}{\#1}}}
229 % \newrobustcmd{\LWR@HTML@textlg}[1]}{#1}
231 \newrobustcmd \\ LWR@HTML@textul \\ [1] \\ \{ LWR@HTML@ulweight \\ InlineClass \\ \{ textul \\ \} \\ \{ 1\} \} \\ \}
233 \LWR@formatted{textln}
234 \LWR@formatted{textos}
235 \LWR@formatted{textin}
236 \LWR@formatted{textsu}
237% \LWR@formatted{textsi}
238 \LWR@formatted{textdf}
239 \LWR@formatted{textti}
240 \LWR@formatted{textlt}
241 \LWR@formatted{textof}
```

```
242 \LWR@formatted{textalt}
243 \LWR@formatted{textreg}
244 \LWR@formatted{emboss}
245 \LWR@formatted{textorn}
246 \LWR@formatted{textqt}
247 \LWR@formatted{textsh}
248 \LWR@formatted{texttm}
249 \LWR@formatted{texttv}
250 \LWR@formatted{textl}
251 \LWR@formatted{texto}
252 \LWR@formatted{textp}
253 \LWR@formatted{textt}
254 \LWR@formatted{textpl}
255 \LWR@formatted{textpo}
256 \LWR@formatted{texttl}
257 \LWR@formatted{textto}
258 \LWR@formatted{textol}
259 \LWR@formatted{textswash}
260 \LWR@formatted{textu}
261 \LWR@formatted{textscu}
262 \LWR@formatted{textui}
263 \LWR@formatted{textri}
264 \LWR@formatted{textnw}
265 \LWR@formatted{textcd}
266 \LWR@formatted{textec}
267 \LWR@formatted{textuc}
268 \LWR@formatted{textet}
269 \LWR@formatted{textep}
270 \LWR@formatted{textex}
271 \LWR@formatted{textux}
272 \LWR@formatted{textrw}
273 \LWR@formatted{textmb}
274 \LWR@formatted{textdb}
275 \LWR@formatted{textsb}
276% \LWR@formatted{texteb}
277 \LWR@formatted{textub}
278 % \LWR@formatted{textlg}
279 \LWR@formatted{textel}
280 \LWR@formatted{textul}
281
282 \FilenameNullify{%
       \LetLtxMacro\textln\@firstofone%
       \LetLtxMacro\textos\@firstofone%
284
285
       \LetLtxMacro\textin\@firstofone%
286
       \LetLtxMacro\textsu\@firstofone%
       \LetLtxMacro\textsi\@firstofone%
287 %
       \LetLtxMacro\textdf\@firstofone%
288
       \LetLtxMacro\textsw\@firstofone%
289
       \LetLtxMacro\textti\@firstofone%
290
       \LetLtxMacro\textlt\@firstofone%
291
       \LetLtxMacro\textof\@firstofone%
292
       \LetLtxMacro\textalt\@firstofone%
293
       \LetLtxMacro\textreg\@firstofone%
       \LetLtxMacro\emboss\@firstofone%
296
       \LetLtxMacro\textorn\@firstofone%
       \LetLtxMacro\textqt\@firstofone%
297
       \LetLtxMacro\textsh\@firstofone%
298
       \LetLtxMacro\texttm\@firstofone%
299
```

\LetLtxMacro\texttv\@firstofone%

300

```
\LetLtxMacro\textl\@firstofone%
301
       \LetLtxMacro\texto\@firstofone%
302
       \LetLtxMacro\textp\@firstofone%
304
       \LetLtxMacro\textt\@firstofone%
305
       \LetLtxMacro\textpl\@firstofone%
       \LetLtxMacro\textpo\@firstofone%
306
       \LetLtxMacro\texttl\@firstofone%
307
       \LetLtxMacro\textto\@firstofone%
308
       \LetLtxMacro\textol\@firstofone%
309
       \LetLtxMacro\textswash\@firstofone%
310
       \LetLtxMacro\textu\@firstofone%
311
       \LetLtxMacro\textscu\@firstofone%
       \LetLtxMacro\textui\@firstofone%
       \LetLtxMacro\textri\@firstofone%
315
       \LetLtxMacro\textnw\@firstofone%
       \LetLtxMacro\textcd\@firstofone%
316
       \LetLtxMacro\textec\@firstofone%
317
       \LetLtxMacro\textuc\@firstofone%
318
       \LetLtxMacro\textet\@firstofone%
319
       \LetLtxMacro\textep\@firstofone%
320
321
       \LetLtxMacro\textex\@firstofone%
322
       \LetLtxMacro\textux\@firstofone%
       \LetLtxMacro\textrw\@firstofone%
323
       \LetLtxMacro\textmb\@firstofone%
325
       \LetLtxMacro\textdb\@firstofone%
326
       \LetLtxMacro\textsb\@firstofone%
      \LetLtxMacro\texteb\@firstofone%
327 %
       \LetLtxMacro\textub\@firstofone%
328
      \LetLtxMacro\textlg\@firstofone%
329 %
       \LetLtxMacro\textel\@firstofone%
330
331
       \LetLtxMacro\textul\@firstofone%
332 }
334 \providecommand*{\zeroslash}{0}
335 \newrobustcmd*{\LWR@HTML@zeroslash}{0}
336 \LWR@formatted{zeroslash}
```

File 340 lwarp-nicefrac.sty

§ 449 Package nicefrac

 $(Emulates\ or\ patches\ code\ by\ Axel\ Reichert.)$

nicefrac (Pkg) nicefrac is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{nicefrac}[1998/08/04]
```

```
12 }
14 \LWR@formatted{@UnitsNiceFrac}
16 \DeclareRobustCommand*{\LWR@HTML@@UnitsUglyFrac}[3][]{%
      {% localize font selection
          \verb|#1{\LWR@textcurrentfont{#2/#3}}||
18
19
20 }
21
22 \LWR@formatted{@UnitsUglyFrac}
For Mathjax:
23 \begin{warpMathJax}
24 \CustomizeMathJax{\newcommand{\nicefrac}[3][]{\mathinner{{}^{#2}\!/\!_{#3}}}}
25 \end{warpMathJax}
```

File 341 lwarp-niceframe.sty

Package niceframe **§ 450**

niceframe(Pkg)niceframe is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{niceframe}% the original date is in yyyy/dd/mm format

```
2 \newcommand{\LWR@niceframe}[3]{%
     \begin{LWR@setvirtualpage}*%
     \setlength{\LWR@templengthone}{#1}%
     5
6
     \end{BlockClass}%
7
     \end{LWR@setvirtualpage}%
8
9 }
10
11 \newcommand{\niceframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{niceframe}}
12 \newcommand{\curlyframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{curlyframe}}
\label{localization} $$13 \rightarrow {\artdecoframe}[2][\text{textwidth}]{\LWR@niceframe}{\#1}{\#2}{\artdecoframe}}$
15 \newcommand{\generalframe}[9]{\LWR@niceframe{\textwidth}{#9}{generalframe}}
```

File 342 lwarp-nicematrix.sty

Package nicematrix § 451

(Emulates or patches code by F. Pantigny.)

nicematrix (Pkg) nicematrix is used as-is for svg math, and is emulated for MATHJAX.

MATHJAX Keys/values are ignored in MATHJAX. \Cdots, etc. do not span multiple cells. AutoNiceMatrix, etc. are not supported for MathJax. svg math output preserves all nicematrix features. To force svG output for one or more consecutive math expressions, for inline math use \inlinemathother and \inlinemathnormal, or for display math use \displaymathother and \displaymathnormal.

for HTML output:

Skip the test for array, which does not work with lwarp:

```
1 \PassOptionsToPackage{no-test-for-array}{nicematrix}
2 \LWR@ProvidesPackagePass{nicematrix}[2022/10/06]
```

NiceTabular must be converted to svg to support the various nicematrix options:

```
3 \begin{warpHTML}
4 \BeforeBeginEnvironment{NiceTabular}{%
5  \begin{lateximage}[-nicematrix-~\PackageDiagramAltText]%
6 }
7 \AfterEndEnvironment{NiceTabular}{\end{lateximage}}
8 \BeforeBeginEnvironment{NiceTabular*}{%
9  \begin{lateximage}[-nicematrix-~\PackageDiagramAltText]%
10 }
11 \AfterEndEnvironment{NiceTabular*}{\end{lateximage}}
12 \end{warpHTML}
```

Special handling for the optional arguments, and the lack of a delimiter:

```
13 \begin{warpMathJax}
 \label{local-continuity} $$15 \subset \mathcal{L}(x) = 15 \cap \mathcal{L}(x) + 10 \cap \mathcal{L}(x) = 15 \cap \mathcal{L}(x) + 10 \cap \mathcal{L}(x) + 10 \cap \mathcal{L}(x) = 15 \cap \mathcal{L}(x) + 10 \cap \mathcal{L}(x) + 10 \cap \mathcal{L}(x) = 15 \cap \mathcal{
16
17 \CustomizeMathJax{%
                                                 \newenvironment{NiceArray}[2][]%
18
                                                                               {\ifnextchar[{\LWRnicearrayarrayopt{#2}}{\LWRnicearrayarray{#2}}}%
 19
20
                                                                               {\end{array}}%
21 }
22
23 \CustomizeMathJax{%
                                                 \newcommand{\LWRnicearraywithdelimtwo}[2][]{%
                                                                                 25
                                               }%
26
27 }
```

General case with left/right delimiters:

Instances of specific delimiters:

```
37 \CustomizeMathJax{%
38     \newenvironment{pNiceArray}
39         {\begin{NiceArrayWithDelims}{(){})}}
40         {\end{NiceArrayWithDelims}}
41 }
42
43 \CustomizeMathJax{%
44     \newenvironment{bNiceArray}
```

```
45
                                                                       {\begin{NiceArrayWithDelims}{[]{]}}
46
                                                                       {\end{NiceArrayWithDelims}}
47 }
48
49 \CustomizeMathJax{%
                                         \newenvironment{BNiceArray}
                                                                       {\begin{NiceArrayWithDelims}{\{}{\}}}
51
                                                                       {\end{NiceArrayWithDelims}}
52
53 }
54
55 \CustomizeMathJax{%
                                         \newenvironment{vNiceArray}
56
                                                                       {\begin{NiceArrayWithDelims}{\vert}{\vert}}
57
58
                                                                       {\end{NiceArrayWithDelims}}
59 }
61 \CustomizeMathJax{%
                                          \newenvironment{VNiceArray}
                                                                       {\begin{NiceArrayWithDelims}{\Vert}{\Vert}}
63
                                                                       {\end{NiceArrayWithDelims}}
64
65 }
    Ignore optional arg and use standard environments:
66 \CustomizeMathJax{\newenvironment{\NiceMatrix}[1][]{\begin{matrix}}{\end{matrix}}}
\label{lem:continuous} $$ GT \subset \mathcal{I}_{0}(\ \mathbb{T}_{0}) = GT \cap \mathcal{I}_{0}(\ \mathbb{T}_{0}) $$ GT \cap \mathcal{I}_{0}(\ \mathbb{
68 \CustomizeMathJax{\newenvironment{bNiceMatrix}[1][]{\begin{bmatrix}}{\end{bmatrix}}}
\label{lem:continuity} $$ G9 \subset \mathcal{B}(B) \subset \mathcal{B}(B) $$ G9 \subset \mathcal{B
 70 \CustomizeMathJax{\newenvironment{vNiceMatrix}[1][]{\begin{vmatrix}}{\end{vmatrix}}}
\label{lem:continuous} % To the continuous continuous
    Ignore optional argument and size. Print contents.
\label{lock} $$72 \subset \mathcal{L}(\mathbb{R}^2) = \mathbb{R}^2 \ \mathcal{L}(\mathbb{R}^2) .
\label{lockopt} \mbox{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\custo
75 \CustomizeMathJax{%
                                 \newcommand{\Block}[2][]{\ifnextchar<\LWRnicematrixBlockopt\LWRnicematrixBlock}%</pre>
 77 }
    Form an approximation:
78 \CustomizeMathJax{%
                                         \newcommand{\diagbox}[2]{%
79
                                                                        \begin{array}{l}\hfill\quad#2\\hline#1\quad\hfill\end{array}%
80
                                          }%
81
82 }
    More approximations:
 83 \CustomizeMathJax{\let\hdottedline\hdashline}
 84 \CustomizeMathJax{\newcommand{\Hline}[1][]{\hline}}
85 \CustomizeMathJax{\newcommand{\CodeBefore}{}}
86 \CustomizeMathJax{\newcommand{\Body}{}}
87 \CustomizeMathJax{\newcommand{\CodeAfter}{}}
88 \CustomizeMathJax{\newcommand{\line}[3][]{}}
```

```
89 \CustomizeMathJax{\newcommand{\RowStyle}[2][]{}}
                  90 \CustomizeMathJax{\newcommand{\LWRSubMatrix}[1][]{}}
                  91 \CustomizeMathJax{\newcommand{\SubMatrix}[4]{\LWRSubMatrix}}
                  92 \CustomizeMathJax{\newcommand{\OverBrace}[4][]{}}
                  93 \CustomizeMathJax{\newcommand{\UnderBrace}[4][]{}}
                  94 \CustomizeMathJax{\newcommand{\ShowCellNames}{}}
                  95 \CustomizeMathJax{\newcommand{\cellcolor}[3][]{}}
                  96 \CustomizeMathJax{\newcommand{\rowcolor}[3][]{}}
                  97 \CustomizeMathJax{\newcommand{\LWRrowcolors}[1][]{}}
                  98 \CustomizeMathJax{\newcommand{\rowcolors}[4][]{\LWRrowcolors}}
                  99 \CustomizeMathJax{\newcommand{\rowlistcolors}[3][]{\LWRrowcolors}}
                 100 \CustomizeMathJax{\newcommand{\columncolor}[3][]{}}
                 101 \CustomizeMathJax{\newcommand{\rectanglecolor}[4][]{}}
                 102 \CustomizeMathJax{\newcommand{\arraycolor}[2][]{}}
                 103 \CustomizeMathJax{\newcommand{\chessboardcolors}[3][]{}}
                 104 \CustomizeMathJax{\newcommand{\ldots}[1][]{\dots}}
                 105 \CustomizeMathJax{\newcommand{\Cdots}[1][]{\cdots}}
                 \label{local-continuity} $$106 \c \arrowcommand{\Vdots}[1][]{\vdots}$$
                 \label{local-continuity} $$107 \customizeMathJax{\newcommand{\Ddots}[1][]{\ddots}}$
                 108 \CustomizeMathJax{\newcommand{\Iddots}[1][]{\mathinner{\unicode{x22F0}}}}
                 110 \CustomizeMathJax{\newcommand{\Hdotsfor}[1]{\ldots}}
                 111 \CustomizeMathJax{\newcommand{\Vdotsfor}[1]{\vdots}}
                  There is no way to emulate AutoNiceMatrix in MATHJAX.
                 112 \CustomizeMathJax{\newcommand{\AutoNiceMatrix}[2]{\text{(AutoNiceMatrix #1)}}}
                 113 \CustomizeMathJax{\let\pAutoNiceMatrix\AutoNiceMatrix}
                 {\tt 114 \ CustomizeMathJax\{ \ let \ bAutoNiceMatrix \ AutoNiceMatrix \}}
                 115 \CustomizeMathJax{\let\BAutoNiceMatrix\AutoNiceMatrix}
                 116 \CustomizeMathJax{\let\vAutoNiceMatrix\AutoNiceMatrix}
                 117 \CustomizeMathJax{\let\VAutoNiceMatrix\AutoNiceMatrix}
                 118 \end{warpMathJax}
         File 343 lwarp-noitcrul.sty
        Package noitcrul
                  (Emulates or patches code by Paul Ebermann.)
  noitcrul (Pkg) noitcrul is used as-is for svG and emulated for MATHJAX.
                  1 \LWR@ProvidesPackagePass{noitcrul}[2006/04/11]
for HTML output:
                  2 \begin{warpMathJax}
                  3 \CustomizeMathJax{\newcommand{\noitUnderline}[1]{\underline{#1}\!}}
                   4 \end{warpMathJax}
         File 344 lwarp-nolbreaks.sty
```

(Emulates or patches code by Donald Arseneau.)

Package nolbreaks

§ 452

§ 453

```
nolbreaks(Pkg)
                  nolbreaks is emulated.
                  1 \LWR@ProvidesPackageDrop{nolbreaks}[2012/05/31]
for HTML output:
                  2 \NewDocumentCommand{\nolbreaks}{s m}{\InlineClass{nolbreaks}{#2}}
         File 345 lwarp-nomencl.sty
         Package nomencl
§ 454
                  (Emulates or patches code by Boris Veytsman, Bernd Schandl, Lee Netherton, CV Radhakrishnan.)
    nomencl (Pkg) nomencl is patched for use by lwarp.
                  To process the HTML nomenclature:
                       makeindex
                                      project>_html.nlo
                                                                      nomencl.ist
                                                               -5
                                                                                        -0
                       project>_html.nls
                  1 \LWR@ProvidesPackagePass{nomencl}[2021/11/10]
for HTML output:
                  \BaseJobname is added to the label in case xr or xr-hyper are used.
                  2 \xpatchcmd{\@@@nomenclature}
                        {\thepage}
                        {\theLWR@previousautopagelabel}
                  5
                        {\LWR@patcherror{nomencl}{@@@nomenclature}}
                  6
                  8\renewcommand*{\pagedeclaration}[1]{, \nameref{\BaseJobname-autopage-#1}}%
         File 346 lwarp-nonfloat.sty
         Package nonfloat
§ 455
                  (Emulates or patches code by KAI RASCHER.)
   nonfloat (Pkg) nonfloat is emulated.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{nonfloat}[1999/07/05]
                  2 \LetLtxMacro\topcaption\caption
                  3 \newcommand{\figcaption}{\def\@captype{figure}\caption}
                  4 \newcommand{\tabcaption}{\def\@captype{table}\topcaption}
                  5 \newenvironment{narrow}[2]{}{}
         File 347 lwarp-nonumonpart.sty
         Package nonumonpart
§ 456
nonumonpart (Pkg) nonumonpart is ignored.
```

1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

for HTML output:

File 348 lwarp-nopageno.sty

```
Package nopageno
§ 457
   nopageno (Pkg)
                nopageno is ignored.
for HTML output:
                1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]
        File 349 lwarp-notes.sty
        Package notes
§ 458
     notes (Pkg) notes is emulated.
for HTML output:
                1 \LWR@ProvidesPackageDrop{notes}[2002/10/29]
                2 \newcommand*{\LWR@notes@onenote}[2]{%
                3 \newenvironment{#1}
                5
                         \BlockClass{notes#1}
                         6
                         \BlockClass{notescontents}
                7
                8
                     {\verb|\endBlockClass|}
                9
                10 }
                11
                12 \LWR@notes@onenote{importantnote}{!}
                14 \LWR@notes@onenote{warningnote}{--}
                16 \LWR@notes@onenote{informationnote}{i}
```

File 350 lwarp-notespages.sty

```
$459 Package notespages
notespages (Pkg) notespages is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{notespages}[2016/08/21]

2 \newcommand*{\npnotesname}{}
3 \newcommand*{\npnotestext}{}
4 \newcommand*{\remainingtextheight}{}
5 \newdimen\remainingtextheight
6 \newcommand*{\notestitletext}{}
7 \newcommand*{\notesareatext}{}
```

8 \newcommand*{\npnpinfo}[1]{}
9 \newcommand*{\tracingnpmarks}{}
10 \newcommand*{\notespage}[1][]{}

11 \newcommand*{\notespages}[1][]{}
12 \newcommand*{\notesfill}[1][]{}
13 \newcommand*{\setnotespages}[1][{}
14 \newcommand*{\definenotesoption}[2][{}
15 \newcommand{\definenotesstyle}[2][{}
16 \newcommand{\definetitlestyle}[2][{}
17 \newcommand{\nppatchchapter}[1][{}
18 \newcommand{\npunpatchchapter}[{}

File 351 lwarp-nowidow.sty

§ 460 Package **nowidow**

(Emulates or patches code by Raphaël Pinson.)

nowidow (Pkg) nowidow is ignored.

for HTML output: District real in the Frank for Unantonio daid 1/09/20]

\nowidow $[\langle lines \rangle]$ \setnowidow $[\langle lines \rangle]$

2 \newcommand*{\nowidow}[1][]{}
3 \newcommand*{\setnowidow}[1][]{}

4 \newcommand*{\noclub}[1][]{}
5 \newcommand*{\setnoclub}[1][]{}

File 352 lwarp-ntheorem.sty

§ 461 Package ntheorem

($Emulates\ or\ patches\ code\ by\ Wolfgang\ May,\ Andreas\ Schedler.$)

ntheorem (*Pkg*) **ntheorem** is patched for use by lwarp.

Table 20: Ntheorem package — css styling of theorems and proofs

Theorem: <div> of class theorembody<theoremstyle>

Theorem Header: of class theoremheader<style>

where <theoremstyle> is plain, break, etc.

§ 461.1 Limitations

Font control This conversion is not total. Font control is via css, and the custom LATEX font settings are ignored.

Equation numbering

ntheorem has a bug with equation numbering in $\mathcal{F}_{M}\mathcal{S}$ environments when the option thref is used. lwarp does not share this bug, so equations with \split, etc, are numbered correctly with lwarp's HTML output, but not with the print output. It is recommended to use cleveref instead of ntheorem's thref option.

§ 461.2 **Options**

Options amsthm or standard choose which set of theorems and proofs to initialize.

Disabled options

The options thmmarks and amsmath are disabled, since they heavily modify the underlying math code. Theorem marks are emulated. The AMS-math modifications are not done.

Option thref is disabled because cleveref functions are used instead. \thref is emulated.

Option hyperref is disabled because lwarp emulated hyperref.

for HTML output:

Some disabled options:

```
1 \DeclareOption{thref}{
      \AtEndDocument{
          \PackageWarningNoLine{lwarp}{%
4
              Lwarp uses cleveref, which takes over ntheorem's\MessageBreak
5
              referencing, including
6
                  \protect\label \space and \protect\thref.\MessageBreak
7
              Cleveref does not accept ntheorem's optional\MessageBreak
              argument for \protect\label, so it will appear\MessageBreak
8
              in the text. It is recommended to remove the \MessageBreak
9
10
             thref option, \protect\usepackage{cleveref} instead,\MessageBreak
              and remove any trailing optional arguments for \protect\label%
11
          }%
12
13
      }
14 }
15
17 \newbool{LWR@ntheoremmarks}
18 \boolfalse{LWR@ntheoremmarks}
20 \DeclareOption{thmmarks}{
21 \booltrue{LWR@ntheoremmarks}
22 \newif\ifsetendmark\setendmarktrue
23 }
26 \newbool{LWR@ntheoremamsthm}
27 \boolfalse{LWR@ntheoremamsthm}
29 \DeclareOption{amsthm}{\booltrue{LWR@ntheoremamsthm}}
32 \DeclareOption{amsmath}{}
33 \DeclareOption{hyperref}{}
35 \LWR@ProvidesPackagePass{ntheorem}[2011/08/15]
```

§ 461.3 Remembering the theorem style

87

Storage for the style being used for new theorems.

```
36 \newcommand{\LWR@newtheoremstyle}{plain}
37 \AtBeginDocument{
38 \IfPackageLoadedTF{cleveref}{
39 \gdef\@thm#1#2#3{%
     \if@thmmarks
       \stepcounter{end\InTheoType ctr}%
41
42
43
     \renewcommand{\InTheoType}{#1}%
     \if@thmmarks
44
       \stepcounter{curr#1ctr}%
45
       \setcounter{end#1ctr}{0}%
46
47
     \refstepcounter[#1]{#2}% <<< cleveref modification
48
49
     \theorem@prework
      \LWR@forcenewpage% lwarp
50
      \LWR@printpendingfootnotes%
                                                      lwarp
51
      \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
52
     \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
53
     \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
54
55
       \ifthm@inframe
56
         \thm@topsep\theoreminframepreskipamount
57
         \thm@topsepadd\theoreminframepostskipamount
58
         \thm@topsep\theorempreskipamount
59
         \thm@topsepadd\theorempostskipamount
60
        \fi
61
      \else% oldframeskips
62
        \thm@topsep\theorempreskipamount
63
        \thm@topsepadd \theorempostskipamount
64
        \ifvmode\advance\thm@topsepadd\partopsep\fi
65
66
     \@topsep\thm@topsep
67
68
     \@topsepadd\thm@topsepadd
69
     \advance\linewidth -\theorem@indent
70
     \advance\linewidth -\theorem@rightindent
     \advance\@totalleftmargin \theorem@indent
71
     \parshape \@ne \@totalleftmargin \linewidth
72
     \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
73
74 }
75 }{% not @ifpackageloaded{cleveref}
76 \gdef\@thm#1#2#3{%
     \if@thmmarks
78
       \stepcounter{end\InTheoType ctr}%
79
     \fi
     \renewcommand{\InTheoType}{#1}%
80
     \if@thmmarks
81
       \stepcounter{curr#1ctr}%
82
83
       \setcounter{end#1ctr}{0}%
84
     \refstepcounter{#2}%
85
     \theorem@prework
86
      \LWR@forcenewpage% lwarp
```

```
88
       \LWR@printpendingfootnotes%
                                                       lwarp
       \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
89
      \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
90
      \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
91
92
        \ifthm@inframe
          \thm@topsep\theoreminframepreskipamount
93
          \thm@topsepadd\theoreminframepostskipamount
94
95
          \thm@topsep\theorempreskipamount
96
          \thm@topsepadd\theorempostskipamount
97
98
       \else% oldframeskips
99
         \thm@topsep\theorempreskipamount
100
         \thm@topsepadd \theorempostskipamount
101
         \ifvmode\advance\thm@topsepadd\partopsep\fi
102
      \fi
103
      \@topsep\thm@topsep
104
      \@topsepadd\thm@topsepadd
105
      \advance\linewidth -\theorem@indent
106
      \advance\linewidth -\theorem@rightindent
107
      \advance\@totalleftmargin \theorem@indent
108
109
      \parshape \@ne \@totalleftmargin \linewidth
110
      \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
111 }
112 }
113 }% AtBeginDocument
```

Patched to remember the style being used for new theorems:

Patched to remember the style for this theorem type, and set it later when the environment is started.

```
125 \VerifyCommand[lwarp][ntheorem]{\@xnthm}{699CB37D7349C4F062B16B9B890FFE90}
126
127 \gdef\@xnthm#1#2[#3]{%
    \ifthm@tempif
128
        \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
129
        \expandafter\@ifundefined{c@#1}%
130
           {\@definecounter{#1}}{}%
131
        \@newctr{#1}[#3]%
132
133
        \expandafter\xdef\csname the#1\endcsname{%
          \expandafter\noexpand\csname the#3\endcsname \@thmcountersep
134
             {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
135
        \expandafter\gdef\csname mkheader@#1\endcsname
136
          {\csname setparms@#1\endcsname
137
138
           \@thm{#1}{#1}{#2}
```

```
139
140
                  \global\@namedef{end#1}{\@endtheorem}
              \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
141
142
143 }
144
145 \VerifyCommand[lwarp][ntheorem]{\@ynthm}{E0E49F4C2FF76BA3024F2413E2E3DA0D}
147 \gdef\@ynthm#1#2{%
          \ifthm@tempif
148
                  \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
149
150
                  \expandafter\@ifundefined{c@#1}%
                         {\@definecounter{#1}}{}%
151
152
                  \expandafter\xdef\csname the#1\endcsname
153
                         {\noexpand\csname\the\theoremnumbering\endcsname{#1}}%
154
                  \expandafter\gdef\csname mkheader@#1\endcsname
                       {\csname setparms@#1\endcsname
155
                         \@thm{#1}{#1}{#2}
156
157
                  \global\@namedef{end#1}{\@endtheorem}
158
              \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
159
160
161 }
162
163 \VerifyCommand[lwarp][ntheorem]{\@othm}{A6D2FCC33AB3F7C7F998399F013FB6A8}
164
165 \gdef\@othm#1[#2]#3{%
166
          \@ifundefined{c@#2}{\@nocounterr{#2}}%
167
             {\ifthm@tempif
                  \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
168
                  \global\ensuremath{\normalfill} \ensuremath{\normalfill} \ensuremath{
169
                  \expandafter\protected@xdef\csname num@addtheoremline#1\endcsname{%
170
171
                                       \noexpand\@num@addtheoremline{#1}{#3}}%
                  \expandafter\protected@xdef\csname nonum@addtheoremline#1\endcsname{%
172
                                       \noexpand\@nonum@addtheoremline{#1}{#3}}%
173
                \theoremkeyword{#3}%
174
175
                \expandafter\protected@xdef\csname #1Keyword\endcsname
176
                                     {\the\theoremkeyword}%
                  \expandafter\gdef\csname mkheader@#1\endcsname
177
                       {\csname setparms@#1\endcsname
178
                                           \@thm{#1}{#2}{#3}
179
180
                  \global\@namedef{end#1}{\@endtheorem}
181
              \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
182
183
          \fi}
184 }
```

§ 461.4 HTML cross-referencing

Mimics a float by incrementing the float counter and generating an HTML anchor. These are used for list-of-theorem cross-references.

```
185 \newcommand{\LWR@inctheorem}{%
186 \addtocounter{LWR@thisautoid}{1}%
187 \LWR@stoppars%
188 \LWR@htmltag{%
189         a id=\textquotedbl\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}\textquotedbl%
190 }%
191 \LWR@htmltag{/a}\LWR@orignewline%
192 \LWR@startpars%
```

193 }

§ 461.5 \newtheoremstyle

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader<style>.

```
194 \VerifyCommand[lwarp][ntheorem]{\newtheoremstyle}{8173F61CEBA45226CD3015E5E258C93D}
196 \gdef\newtheoremstyle#1#2#3{%
    \expandafter\@ifundefined{th@#1}%
     {\expandafter\gdef\csname th@#1\endcsname{%
      \def\@begintheorem###1###2{%
199
      \LWR@inctheorem% lwarp
200
      #23%
201
      \def\@opargbegintheorem###1###2####3{%
202
203
      \LWR@inctheorem% lwarp
204
205 }%
206 }%
207 {\PackageError{\basename}{Theorem style #1 already defined}\@eha}
```

§ 461.6 Standard styles

```
209 \renewtheoremstyle{plain}%
210
    {\item[
      \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
212
      \InlineClass\{theoremheaderplain\}\{\#1\ \#2\ (\#3)\theorem@separator\}]\}
213
214
215 \renewtheoremstyle{break}%
216
      \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
217
      ]}%
218
    {\item[
219
      \InlineClass{theoremheaderbreak}%
220
          {\#1\ \#2\ (\#3)}\
221
222
223
224 \renewtheoremstyle{change}%
225
    {\item[
      \InlineClass{theoremheaderchange}{##2\ ##1\theorem@separator}]}%
226
227
      228
229
230 \renewtheoremstyle{changebreak}%
231
          \InlineClass{theoremheaderchangebreak}%
232
233
              {##2\ ##1\theorem@separator}\newline
234
      ]}%
    {\item[
235
          \InlineClass{theoremheaderchangebreak}%
236
              {\#2\ \#1\ (\#3)\ theorem@separator}\ newline
237
```

```
238
       ]}
240 \renewtheoremstyle{margin}%
    {\item[
242
           \InlineClass{theoremheadermargin}{##2 \qquad ##1\theorem@separator}
243
       ]}%
    {\item[
244
        \InlineClass{theoremheadermargin}{##2 \qquad ##1\ (##3)\theorem@separator}
245
246
       ]}
247
248 \renewtheoremstyle{marginbreak}%
    {\item[
250
       \InlineClass{theoremheadermarginbreak}%
251
           {##2 \qquad ##1\theorem@separator}\newline
252
       ]}%
253
    {\item[
       \InlineClass{theoremheadermarginbreak}%
254
           {\#2 \neq \#1 \ (\#3)}\
255
256
       ]}
257
258 \renewtheoremstyle{nonumberplain}%
    {\item[
259
       \InlineClass{theoremheaderplain}{##1\theorem@separator}]}%
260
261
262
       \InlineClass{theoremheaderplain}{##1\ (##3)\theorem@separator}]}
263
264 \renewtheoremstyle{nonumberbreak}%
265
    {\item[
       \InlineClass{theoremheaderbreak}{##1\theorem@separator}\newline
266
       ]}%
267
    {\item[
268
269
       \InlineClass{theoremheaderbreak}{##1\ (##3)\theorem@separator}\newline
270
272 \renewtheoremstyle{empty}%
    {\item[]}%
274
     {\item[
       \InlineClass{theoremheaderplain}{##3}]}
275
277 \renewtheoremstyle{emptybreak}%
278 {\item[]}%
    {\item[
279
       \InlineClass{theoremheaderplain}{##3}] \ \newline}
```

§ 461.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```
281 \ifbool{LWR@ntheoremamsthm}{}{%
```

Upright text via CSS:

```
282 \newtheoremstyle{plainupright}%
283 {\item[
284 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
285 {\item[
286 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]}
```

Upright text and small caps header via CSS:

```
287 \newtheoremstyle{nonumberplainuprightsc}%
288 {\item[
289 \InlineClass{theoremheadersc}{##1\theorem@separator}]}%
290 {\item[
291 \InlineClass{theoremheadersc}{##1\ (##3)\theorem@separator}]}
292 }% not amsthm
```

§ 461.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```
293 \ifbool{LWR@ntheoremamsthm}{}{%
```

```
294 \ifx\thm@usestd\@undefined
295 \else
296
       \theoremnumbering{arabic}
297
       \theoremstyle{plain}
298
       \RequirePackage{latexsym}
       \theoremsymbol{\Box}
299
       \theorembodyfont{\itshape}
300
       \theoremheaderfont{\normalfont\bfseries}
301
       \theoremseparator{}
302
       \renewtheorem{Theorem}{Theorem}
303
304
       \renewtheorem{theorem}{Theorem}
       \renewtheorem{Satz}{Satz}
305
       \renewtheorem{satz}{Satz}
306
307
       \renewtheorem{Proposition}{Proposition}
308
       \renewtheorem{proposition}{Proposition}
309
       \renewtheorem{Lemma}{Lemma}
310
       \renewtheorem{lemma}{Lemma}
       \renewtheorem{Korollar}{Korollar}
311
       \renewtheorem{korollar}{Korollar}
312
       \renewtheorem{Corollary}{Corollary}
313
       \renewtheorem{corollary}{Corollary}
314
315
       \theoremstyle{plainupright}
316
317
       \theorembodyfont{\upshape}
       \theoremsymbol{\HTMLunicode{25A1}}% UTF-8 white box
318
319
       \renewtheorem{Example}{Example}
320
       \renewtheorem{example}{Example}
       \renewtheorem{Beispiel}{Beispiel}
321
322
       \renewtheorem{beispiel}{Beispiel}
       \renewtheorem{Bemerkung}{Bemerkung}
323
324
       \renewtheorem{bemerkung}{Bemerkung}
325
       \renewtheorem{Anmerkung}{Anmerkung}
       \renewtheorem{anmerkung}{Anmerkung}
326
       \renewtheorem{Remark}{Remark}
327
328
       \renewtheorem{remark}{Remark}
329
       \renewtheorem{Definition}{Definition}
       \renewtheorem{definition}{Definition}
330
331
       \theoremstyle{nonumberplainuprightsc}
332
       \theoremsymbol{\HTMLunicode{220E}}% UTF-8 end-of-proof
333
       \renewtheorem{Proof}{Proof}
334
335
       \renewtheorem{proof}{Proof}
       \renewtheorem{Beweis}{Beweis}
336
       \renewtheorem{beweis}{Beweis}
```

```
338 \qedsymbol{\HTMLunicode{220E}}% UTF-8 end-of-proof
339
340 \theoremsymbol{}
341 \fi
342 }% not amsthm
```

§ 461.9 amsthm option

Only if the amsthm option was given:

```
343 \ifbool{LWR@ntheoremamsthm}{
344
345 \gdef\th@plain{%
    \def\theorem@headerfont{\normalfont\bfseries}\itshape%
346
     \def\@begintheorem##1##2{%
347
           \LWR@inctheorem% lwarp
348
349
         \item[
       \InlineClass{theoremheaderplain}{##1\ ##2.}
350
351
           ]}%
     \def\@opargbegintheorem##1##2##3{%
352
           \LWR@inctheorem% lwarp
353
354
      \InlineClass{theoremheaderplain}{\#1\ \#2\ (\#3).}
355
356
357
358 \gdef\th@nonumberplain{%
     \def\theorem@headerfont{\normalfont\bfseries}\itshape%
359
     \def\@begintheorem##1##2{%
360
           \LWR@inctheorem% lwarp
361
362
         \item[
      \InlineClass{theoremheaderplain}{##1.}
363
           ]}%
364
365
     \def\@opargbegintheorem##1##2##3{%
366
           \LWR@inctheorem% lwarp
367
      \InlineClass{theoremheaderplain}{##1\ (##3).}
368
369
           ]}}
370
371 \gdef\th@definition{%
    \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
372
     \def\@begintheorem##1##2{%
373
           \LWR@inctheorem% lwarp
374
375
         \item[
       \InlineClass{theoremheaderdefinition}{##1\ ##2.}
376
377
           ]}%
     \def\@opargbegintheorem##1##2##3{%
378
379
           \LWR@inctheorem% lwarp
380
        \item[
      \InlineClass\{theoremheaderdefinition\}\{\#\#1\ \#\#2\ (\#\#3).\}
381
382
           ]}}
383
384 \gdef\th@nonumberdefinition{%
     \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
385
     \def\@begintheorem##1##2{%
386
           \LWR@inctheorem% lwarp
387
388
         \item[
       \InlineClass{theoremheaderdefinition}{##1.}
389
390
     \def\@opargbegintheorem##1##2##3{%
391
           \LWR@inctheorem% lwarp
392
```

```
393
     \InlineClass\{theoremheaderdefinition\}\{\#1\ (\#3).\}
394
395
396
397 \gdef\th@remark{%
    \def\theorem@headerfont{\itshape}\normalfont%
398
    399
          \LWR@inctheorem% lwarp
400
        \item[
401
      \InlineClass{theoremheaderremark}{##1\ ##2.}
402
403
          ]}%
404
    \def\@opargbegintheorem##1##2##3{%
405
          \LWR@inctheorem% lwarp
406
       \item[
     \InlineClass\{theoremheaderremark\}\{\#1\ \#2\ (\#3).\}
407
408
          ]}}
409
410 \gdef\th@nonumberremark{%
    \def\theorem@headerfont{\itshape}\normalfont%
411
    \def\@begintheorem##1##2{%
412
          \LWR@inctheorem% lwarp
413
        \item[
414
      \InlineClass{theoremheaderremark}{##1.}
415
416
417
    418
          \LWR@inctheorem% lwarp
419
       \item[
     \InlineClass{theoremheaderremark}{##1\ (##3).}
420
421
          ]}}
422
423 \gdef\th@proof{%
    \def\theorem@headerfont{\normalfont\bfseries}\itshape%
424
    \def\@begintheorem##1##2{%
425
          \LWR@inctheorem% lwarp
427
428
      \InlineClass{theoremheaderproof}{##1.}
429
    \def\@opargbegintheorem##1##2##3{%
430
          \LWR@inctheorem% lwarp
431
       \item[
432
     \InlineClass{theoremheaderproof}{##1\ (##3).}
433
434
435
436
438 \newcounter{proof}%
439 \if@thmmarks
      \newcounter{currproofctr}%
       \newcounter{endproofctr}%
441
442\fi
443
444 \gdef\proofSymbol{\openbox}
446 \newcommand{\proofname}{Proof}
448 \newenvironment{proof}[1][\proofname]{
      \th@proof
      \def\theorem@headerfont{\itshape}%
450
      \normalfont
451
      \theoremsymbol{\HTMLunicode{220E}}% UTF-8 end-of-proof
452
```

```
453 \@thm{proof}{proof}{#1}
454}%
455{\@endtheorem}
456
457}{}% amsthm option
```

§ 461.10 Ending a theorem

Patched for css:

```
458 \let\LWR@origendtheorem\@endtheorem
459 \renewcommand{\@endtheorem}{%
460 \ifbool{LWR@ntheoremmarks}{%
      \ifsetendmark%
       \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
462
      \setendmarkfalse%
463
      \fi%
464
465 }{ }%
466 \LWR@origendtheorem% also does \@endtrivlist
467\ifbool{LWR@ntheoremmarks}{\global\setendmarktrue}{}%
       \LWR@printpendingfootnotes%
468
                                                       lwarp
469 \endBlockClass%
470 }
```

§ 461.11 \NoEndMark

471 \gdef\NoEndMark{\global\setendmarkfalse}

§ 461.12 **List-of**

Redefined to reuse the float mechanism to add list-of-theorem links:

\thm@thmline $\{\langle 1: printed \ type \rangle\} \{\langle 2: \# \rangle\} \{\langle 3: optional \rangle\} \{\langle 4: page \rangle\}$

```
472 \renewcommand{\thm@@thmline@noname}[4]{%
473 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}%
474 }
475
476 \renewcommand{\thm@@thmline@name}[4]{%
477 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}%
478 }
```

This was redefined by ntheorem when loaded, so it is now redefined for lwarp:

```
479 \def\thm@@thmline{\thm@@thmline@name}
```

Patch for css:

§ 461.13 **Symbols**

```
Proof QED symbol:
```

```
489 \newcommand{\qed}{\qquad\the\qedsymbol}
491 \AtBeginDocument{
492 \@ifundefined{LWR@orig@openbox}{
493 \LetLtxMacro\LWR@orig@openbox\openbox
494 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
495 \LetLtxMacro\LWR@orig@Box\Box
497 \def\openbox{\text{\HTMLunicode{25A1}}}% UTF-8 white box
499 \def\Box{\text{\HTMLunicode{25A1}}}% UTF-8 white box
501 \appto\LWR@restoreorigformatting{%
502 \LetLtxMacro\openbox\LWR@orig@openbox%
503 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
504 \LetLtxMacro\Box\LWR@orig@Box%
505 }% appto
506 }{}% @ifundefined
507 }% AtBeginDocument
```

§ 461.14 Cross-referencing

 $508 \mbox{ } 1]{\cref{#1}}%$

File 353 lwarp-octave.sty

Package Octave § 462

(Emulates or patches code by Andrew A. Cashner.)

octave (*Pkg*) octave is patched for use by lwarp.

1 \LWR@ProvidesPackagePass{octave}[2017/10/31] for HTML output:

Remove the leading 1pt kern:

```
{\tt 2\VerifyCommand[lwarp][octave]{\QPrintTicks}{26490A1A3593981987395ED149B4D54D}}
4\RenewDocumentCommand{\@PrintTicks}{ m }{%
5 \kern-1pt% lwarp
6 \@TickNum = #1%
7\loop
8 \@Tick{}%
9 \advance\@TickNum by -1
10 \ifnum\@TickNum > 0
11 \repeat
12 }
```

Use unicode for the prime character:

```
{\tt 13 \ RenewDocumentCommand \{\ensuremath{\tt QTick}\}{\tt HTMLunicode\{2032\}\}}}
```

Catch the inline font:

```
14 \VerifyCommand[lwarp][octave]{\pitch}{3803E3D6B44EDFF8880F06BBE60571D9}
16 \RenewDocumentCommand{\pitch}{ m o m }{%
17 \if@OctaveNumber%
18 {%
      \pitchfont{%
19
20
          \LWR@textcurrentfont{% lwarp
21
               \MakeUppercase{#1}%
               \IfValueTF{#2}{#2}{}\textsubscript{#3}%
22
          }%
23
      }%
24
25 }%
26 \else%
27 {%
28
      \pitchfont{%
29
          \LWR@textcurrentfont{% lwarp
30
               \@GetOctaveTick{#1}[#2]{#3}%
31
32
      }%
33 }%
34\fi%
35 }
```

The original was hard to adapt to lwarp's handling of &.

```
36\StartDefiningTabulars
37 \renewcommand{\octavetable}{%
38 \begin{tabular}{ll}
39 \octaveprimes \pitch{C}{0} & \octavenumbers \pitch{C}{0} \\
40 \octaveprimes \pitch{C}{1} & \octavenumbers \pitch{C}{1} \\
41 \octaveprimes \pitch{C}{2} & \octavenumbers \pitch{C}{2} \\
42 \octaveprimes \pitch{C}{3} & \octavenumbers \pitch{C}{3} \\
43 \octaveprimes \pitch{C}{4} & \octavenumbers \pitch{C}{4} \\
44 \octaveprimes \pitch{C}{5} & \octavenumbers \pitch{C}{5} \\
45 \octaveprimes \pitch{C}{6} & \octavenumbers \pitch{C}{6} \\
46 \octaveprimes \pitch{C}{7} & \octavenumbers \pitch{C}{7} \\
47 \end{tabular}
48 }
49 \StopDefiningTabulars
```

File 354 lwarp-orcidlink.sty

```
Package orcidlink
§ 463
```

(Emulates or patches code by Leo C. Stein.)

orcidlink (Pkg) orcidlink is patched for use by lwarp.

```
for HTML output:
                   1 \RequirePackage{lwarp-scalerel}
                   3 \LWR@ProvidesPackagePass{orcidlink}[2023/12/30]
                   {\tt 4\VerifyCommand[lwarp][orcidlink]{\orcidlink}{3158910F15AD114F9C397A208315B6D2}}
                   6 \renewcommand\orcidlink[1]{%
```

```
\texorpdfstring%
7
8
          {%
9
               \href%
                   {https://orcid.org/#1}%
10
11
                   {%
                       \begin{lateximage}[orcid #1]%
12
                                                         lwarp
                       \mbox{%
13
                            \scalerel*{%
14
                                \begin{tikzpicture}[yscale=-1,transform shape]
15
                                \pic{orcidlogo};
16
                                \end{tikzpicture}
17
18
                            }{|}%
19
                       }%
20
                       \end{lateximage}%
                                             lwarp
                   }%
21
           }%
22
           {}%
23
24 }
26 \begin{warpMathJax}
27 \CustomizeMathJax{\newcommand{\orcidlink}[1]{}}
28 \end{warpMathJax}
```

File 355 lwarp-overpic.sty

§ 464 Package **Overpic**

(Emulates or patches code by Rolf Niepraschk.)

overpic (*Pkg*) overpic is patched for use by lwarp.

The macros \overpicfontsize and \overpicfontskip are used during HTML generation. These are sent to \fontsize to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the overpic and Overpic environments.

See section 88.2 for the print-mode version of \overpicfontsize and \overpicfontskip.

for HTML output:

```
1 \LWR@ProvidesPackagePass{overpic}[2017/10/06]
```

```
2 \newcommand*{\overpicfontsize}{12}
3 \newcommand*{\overpicfontskip}{14}
5 \BeforeBeginEnvironment{overpic}{%
      \begin{lateximage}%
      \fontsize{\overpicfontsize}{\overpicfontskip}%
7
8
      \selectfont%
9 }
10
11 \AfterEndEnvironment{overpic}{\end{lateximage}}
13 \BeforeBeginEnvironment{Overpic}{%
      \begin{lateximage}%
14
      \fontsize{\overpicfontsize}{\overpicfontskip}%
15
      \selectfont%
16
17 }
18
```

19 \AfterEndEnvironment{Overpic}{\end{lateximage}}

File 356 lwarp-pagegrid.sty

§ 465 Package pagegrid

pagegrid (Pkg) pagegrid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

2 \newcommand*{\pagegridsetup}[1]{}

File 357 lwarp-pagenote.sty

§ 466 Package pagenote

pagenote (*Pkg*) pagenote works as-is, but the page option is disabled.

△ labels Note that labels in page notes do not appear as expected, even in the print version.

for HTML output: 1 \DeclareOption{page}{}

2 \LWR@ProvidesPackagePass{pagenote}[2009/09/03]

For MATHJAX:

3 \begin{warpMathJax}

 $\verb| 4 \appto LWR@syncone note number {LWRpage note} {\the page note}| \\$

5 \CustomizeMathJax{\def\LWRpagenote{1}}

 $\begin{tabular}{l} 6 \customizeMathJax{\newcommand{\pagenote}[2][\LWRpagenote]{{}^{\mbox{mathrm}{\#1}}}} \end{tabular}$

7 \end{warpMathJax}

There is no \pagenotemark, so the following are not required:

\providecommand{\pagenotename}{pagenote}
\appto\LWR@syncnotenames{\LWR@synconenotename{LWRpagenote}{\pagenotename}}

File 358 lwarp-pagesel.sty

§ 467 Package pagesel

pagesel (*Pkg*) pagesel is ignored.

 $\textbf{for HTML output:} \qquad 1 \texttt{\LWR@ProvidesPackageDrop\{pagesel\}[2016/05/16]}$

File 359 lwarp-paralist.sty

§ 468 Package paralist

(Emulates or patches code by Bernd Schandl.)

paralist (Pkg) paralist is supported with minor changes.

for HTML output:

1 \LWR@ProvidesPackagePass{paralist}[2017/01/22]

The compact environments are identical to the regular ones:

```
2 \LetLtxMacro\compactitem\itemize
3 \LetLtxMacro\compactenum\enumerate
4 \LetLtxMacro\compactdesc\description
5 \LetLtxMacro\endcompactitem\enditemize
6 \LetLtxMacro\endcompactenum\endenumerate
7 \LetLtxMacro\endcompactdesc\enddescription
```

For the inline environments, revert \item to its original print-mode version:

```
8 \AtBeginEnvironment{inparaitem}{\LetLtxMacro\item\LWR@origitem}
9 \AtBeginEnvironment{inparaenum}{\LetLtxMacro\item\LWR@origitem}
10 \AtBeginEnvironment{inparadesc}{\LetLtxMacro\item\LWR@origitem}
```

Manual formatting of the description labels:

```
11 \def\paradescriptionlabel#1{{\normalfont\textbf{#1}}}
```

File 360 lwarp-parallel.sty

§ 469 Package

Package parallel

(Emulates or patches code by Matthias Eckermann.)

parallel (*Pkg*) parallel is emulated.

Package options are ignored. Footnotes are treated as normal lwarp footnotes.

Environment option c gives side-by-side <div>s of class minipage, each of whose width is a percent depending on the given left and right widths, proportional to \linewidth.

Inside each environment, \linewidth and \textwidth are set for the print-output sizes.

for HTML output:

Discard all options for lwarp-parallel:

```
1 \LWR@ProvidesPackageDrop{parallel}[2003/04/13]
2 \newcounter{LWR@parallel@Lwidth}
3 \newcounter{LWR@parallel@Rwidth}
4 \newcommand*{\LWR@parallel@border}
6 \newenvironment*{Parallel}[3][]%
7
          \LWR@printpendingfootnotes%
8
          \setlength{\linewidth}{\LWR@userstextwidth}%
9
10
          \setlength{\textwidth}{\LWR@userstextwidth}%
11
          \renewcommand*{\LWR@parallel@border}{}%
          \ifstrequal{#1}{v}%
12
13
             \renewcommand*{\LWR@parallel@border}{ ; border-left: 2px solid black}%
14
```

```
15
              }%
              {}%
16
          \ifblank{#2}{%
17
18
              \ifblank{#3}{% {}{}
19
                  \setcounter{LWR@parallel@Lwidth}{45}%
                  \setcounter{LWR@parallel@Rwidth}{45}%
20
              }% {}{}
21
              {% {}{x}
22
                  23
                  \setcounter{LWR@parallel@Lwidth}{%
24
                      90*\ratio{\LWR@templengthone}{\linewidth}%
25
26
                  }%
27
                  \setcounter{LWR@parallel@Rwidth}{%
28
                      90*\ratio{#3}{\linewidth}%
29
                  }%
30
              }% {}{x}
          }% #2 blank
31
          {% #2 non-blank
32
              \ifblank{#3}{% {x}{}
33
                  \setcounter{LWR@parallel@Lwidth}{%
34
                      90*\ratio{#2}{\linewidth}%
35
                  }%
36
                  \setlength{\LWR@templengthone}{\linewidth-#2}%
37
                  \setcounter{LWR@parallel@Rwidth}{%
38
39
                      90*\ratio{\LWR@templengthone}{\linewidth}%
40
                  }%
41
              }% {x}{}
42
              {x}{x}{x}
                  \setcounter{LWR@parallel@Lwidth}{%
43
                      90*\ratio{#2}{\linewidth}%
44
                  }%
45
                  \setcounter{LWR@parallel@Rwidth}{%
46
                      90*\ratio{#3}{\linewidth}%
47
48
              x {x}{x}
49
          }% #2 non-blank
50
51
      {%
52
          \ParallelAtEnd%
53
          \renewcommand*{\ParallelAtEnd}{}%
54
          \LWR@printpendingfootnotes%
55
56
     }
57
58 \newcommand*{\ParallelLText}[1]{%
      \begin{BlockClass}[%
59
          width:\arabic{LWR@parallel@Lwidth}\% ; % space
60
61
          padding: .5ex 1\% ; % space
62
      ]{minipage}%
63
      #1%
      \end{BlockClass}%
64
65 }
66
67 \newcommand*{\ParallelRText}[1]{%
      \begin{BlockClass}[%
68
          width:\arabic{LWR@parallel@Rwidth}\%; % space
69
          padding: .5ex 1\%; % space
70
71
          \LWR@parallel@border%
72
      ]{minipage}%
73
      #1%
      \end{BlockClass}%
74
```

```
75 }
76
77 \newcommand*{\ParallelPar}{\LWR@printpendingfootnotes}
78
79 \newcommand*{\ParallelAtEnd}{}
```

File 361 lwarp-parcolumns.sty

§ 470 Package parcolumns

(Emulates or patches code by Jonathan Sauer.)

parcolumns (Pkg) parcolumns is emulated.

rulebetween is honored. The other keys are ignored, including colwidths.

Each column is placed inside a <div> of class minipage, each of whose width is fixed at 85% divided by the number of columns. In most cases, this results in side-by-side minipages adapting to the browser width. Inside each minipage, \linewidth, \textwidth, and \textheight are set for a virtual 6×9 inch page, with \linewidth divided by the number of columns.

for HTML output:

Discard all options for lwarp-parcolumns:

```
1 \RequirePackage{keyval}%
3 \LWR@ProvidesPackageDrop{parcolumns}[2004/11/25]
4 \newcounter{LWR@parcolumns@numcols}
5 \newcounter{LWR@parcolumns@thiscol}
6 \newcounter{LWR@parcolumns@width}
7 \newbool{LWR@parcolumns@started}
8 \newbool{LWR@parcolumns@rule}
10 \define@key{LWRparcols}{colwidths}{}
11 \define@key{LWRparcols}{distance}{}
12 \define@key{LWRparcols}{rulebetween}[true]{%
      \setbool{LWR@parcolumns@rule}{#1}%
14 }
15 \define@key{LWRparcols}{nofirstindent}{}
16 \define@key{LWRparcols}{sloppy}{}
17 \define@key{LWRparcols}{sloppyspaces}{}
19 \newenvironment*{parcolumns}[2][]
20
      {%
          \begin{LWR@setvirtualpage}*[#2]%
21
          \setcounter{LWR@parcolumns@numcols}{#2}%
22
          \setcounter{LWR@parcolumns@thiscol}{1}%
23
          \boolfalse{LWR@parcolumns@started}%
24
          \boolfalse{LWR@parcolumns@rule}%
25
26
          \setcounter{LWR@parcolumns@width}{%
27
              85/#2
28
29
          \setkeys{LWRparcols}{#1}%
30
      }
31
      {%
```

```
\colplacechunks%
32
33
          \end{LWR@setvirtualpage}%
34
      }
35
36 \newcommand{\LWR@parcolumns@onecol}[1]{%
      \ifbool{LWR@parcolumns@started}%
          {}%
38
          {%
39
              \LWR@htmldivclass{parcolumns}%
40
              \booltrue{LWR@parcolumns@started}%
41
42
          }%
43
      \ifboolexpr{%
44
          bool {LWR@parcolumns@rule} and
45
          test {%
46
              \ifnumgreater
                   {\value{LWR@parcolumns@thiscol}}
47
48
                   {1}
          }%
49
      }%
50
          {\renewcommand{\LWR@tempone}{ ; border-left: 2px solid black}}%
51
          {\renewcommand{\LWR@tempone}{}}%
52
      \begin{BlockClass}[%
53
          width:\arabic{LWR@parcolumns@width}\% ; % space
54
55
          padding: .5ex 1\%; % space
56
          \LWR@tempone%
57
      ]{minipage}%
58
      #1%
      \end{BlockClass}%
59
      \addtocounter{LWR@parcolumns@thiscol}{1}%
60
61 }
62
63 \newcommand{\colchunk}[2][\value{LWR@parcolumns@thiscol}]{%
      \whileboolexpr{%
64
65
          test {%
66
              \ifnumcomp%
                   {\value{LWR@parcolumns@thiscol}}
67
68
                   {<}
                   {#1}%
69
          }%
70
      }{%
71
          \LWR@parcolumns@onecol{}%
72
73
      }%
      \LWR@parcolumns@onecol{#2}%
74
75 }
77 \newcommand*{\colplacechunks}{%
      \ifbool{LWR@parcolumns@started}%
78
79
          {%
              \LWR@htmldivclassend{div}%
80
              \boolfalse{LWR@parcolumns@started}%
81
          }%
82
83
          {}%
      \setcounter{LWR@parcolumns@thiscol}{1}%
84
85 }
```

File 362 lwarp-parnotes.sty

§ 471 Package parnotes

(Emulates or patches code by Chelsea Hughes.)

parnotes (*Pkg*) parnotes is supported with some patches.

```
for HTML output: 1 \LWR@ProvidesPackagePass{parnotes}[2019/07/23]
```

```
{\tt 2 Verify Command [lwarp][parnotes] \{ NPMeparnote@real \} \{ 91361D751D6393BA644478FDE4A764DA \} }
4 \long\def\PN@parnote@real#1#2{%
      \parnotemark{#1}%
      % Unless this is the first parnote in \PN@text, add a separator first
6
      \unless\ifx\PN@text\@empty\g@addto@macro\PN@text{\parnoteintercmd}\fi
      % Redefine \@currentlabel to the parnote label, so \label works
9
      \g@addto@macro\PN@text{%
10 %
             \phantomsection%
           \def\@currentlabel{#1}%
11
                                             lwarp
           \def\cref@currentlabel{%
12
               [parnotemark][\arabic{parnotemark}][]\theparnotemark%
13
           }%
14
      }%
15
      \g@addto@macro\PN@text{%
16
17
           \LWR@textcurrentfont{%
                                             lwarp
18
               \parnotemark{#1}\nolinebreak\thinspace#2%
19
           }%
20
      }%
21 }
23 \ensuremath{\mbox{VerifyCommand[lwarp][parnotes]{NPN@parnotes@real}{AF1257823BFCBC31ADDA4AAE1F3F3710}} \\
25 \def\PN@parnotes@real{%
26 \ifPN@inparnotes
27 \else
      \LWR@stoppars%
28
```

Avoid nested paragraphs:

```
29
      \addtocounter{LWR@spandepth}{1}%
      % We call \par later, so this avoids recursion with \PN@parnotes@auto
31
      \PN@inparnotestrue
32 %
        \unless\ifvmode\par\fi
      % Avoid page breaks between a paragraph and its parnotes
33
        \nopagebreak\addvspace{\parnotevskip}%
34 %
      \begin{BlockClass}(note){footnotes}%
35
                                               lwarp
      \leavevmode\LWR@orignewline%
36
```

Typeset the parnote inside its own group to avoid global changes:

```
37
      {%
          \parnotefmt{\PN@text}%
38
39
40
      \leavevmode\LWR@orignewline%
41
      \end{BlockClass}%
                                                lwarp
      \leavevmode\LWR@orignewline%
42
      \global\def\PN@text{}%
43
44
      % These can be enabled or disabled by package options
45
46
47
      \PN@disable@indent
      \PN@reset@optional
48
      \PN@inparnotesfalse
49
Reenable normal paragraph handling:
50
      \addtocounter{LWR@spandepth}{-1}%
51\fi
52 }
53 \newbool{LWR@parnotes@doingauto}
54 \boolfalse{LWR@parnotes@doingauto}
55 \VerifyCommand[lwarp][parnotes]{\PN@parnotes@auto}{\08CC1722ABA55FA01D64F2B29C919D70}
57 \def\PN@parnotes@auto{%
58
      \ifbool{LWR@parnotes@doingauto}{
59
          \ifx\@currenvir\@PN@autopn
              \unless\ifPN@inparnotes
60
                   \unless\ifx\PN@text\@empty
61
                       \expandafter\PN@parnotes@real
62
                   \fi
63
              \fi
64
          \fi
65
66
      }{}%
67 }
Replace original logic due to the use of new LATEXparagraph hook handling:
68 \renewenvironment{autopn}%
      {\booltrue{LWR@parnotes@doingauto}}
70
      {\PN@parnotes@auto}%
If cleveref is in use, name the new notes:
71 \AtBeginDocument{
      \ifdef{\crefname}{
73
          \crefname{parnotemark}{paragraph note}{paragraph notes}
74
          \Crefname{parnotemark}{Paragraph note}{Paragraph notes}
75
      }{}
76 }
To nullify the footnotes where necessary:
77 \apptocmd{\LWR@nullifyfootnotes}{%
      \renewcommand{\parnote}[2][]{}%
```

\renewcommand\parnotemark[1]{}%

```
80 }{}{}
                   For MATHIAX:
                  81 \begin{warpMathJax}
                  82 \providecommand{\parnotename}{parnote}
                  83 \appto\LWR@syncnotenumbers{%
                        \addtocounter{parnotemark}{-1}% specific to parnotes
                        \LWR@synconenotenumber{LWRparnote}{\theparnotemark}%
                  85
                        \addtocounter{parnotemark}{1}% specific to parnotes
                  86
                  87 }
                  88 \appto\LWR@syncnotenames{\LWR@synconenotename{LWRparnote}{\parnotename}}
                  89 \CustomizeMathJax{\def\LWRparnote{1}}
                  90 \CustomizeMathJax{\newcommand{\parnote}[2][\LWRparnote]{{}^{\mathrm{#1}}}}
                  91 \CustomizeMathJax{\newcommand{\parnotemark}[1][\LWRparnote]{{}^{\mathrm{#1}}}}
                  92 \end{warpMathJax}
         File 363 lwarp-parskip.sty
         Package parskip
§ 472
                  parskip is ignored.
    parskip(Pkg)
                   Discard all options for lwarp-parskip.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]
         File 364 lwarp-pbalance.sty
         Package pbalance
§ 473
                  pbalance is ignored.
   pbalance(Pkg)
for HTML output:
                   1 \RequirePackage{balance}
                   3 \LWR@ProvidesPackageDrop{pbalance}[2022/07/28]
                   4\newcommand\shrinkLastPage[1]{}
                   5 \newcommand\balancePageNum[1]{}
                   6 \newcommand\nopbalance{}
         File 365 lwarp-pbox.sty
         Package pbox
§ 474
                   (Emulates or patches code by Simon Law.)
       pbox(Pkg) pbox is emulated.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{pbox}[2011/12/07]
```

```
2 \NewDocumentCommand{\pbox}{0{t} 0{} 0{t} m +m}{%
3 \global\booltrue{LWR@minipagefullwidth}%
4 \parbox[#1][#2][#3]{#4}{#5}%
5 }
6
7 \newcommand{\settominwidth}[3][\columnwidth]{%
8 \settowidth{#2}{#3}%
9 }
10
11 \newcommand{\widthofpbox}[1]{%
12 \widthof{#1}%
13 }
```

File 366 lwarp-pdfcol.sty

§475 Package pdfcol

pdfcol (Pkg) pdfcol is ignored.

File 367 lwarp-pdfcolfoot.sty

5 \newcommand*{\pdfcolfoot@current}{}

```
File 368 lwarp-pdfcolmk.sty
             Package pdfcolmk
    §477
                     pdfcolmk is ignored.
       pdfcolmk(Pkg)
    for HTML output:
                      1 \LWR@ProvidesPackageDrop{pdfcolmk}[2016/05/16]
             File 369 lwarp-pdfcolparallel.sty
             Package pdfcolparallel
    § 478
 pdfcolparallel(Pkg)
                      pdfcolparallel is ignored.
    for HTML output:
                      1 \RequirePackage{keyval}%
                      3 \LWR@ProvidesPackageDropA{pdfcolparallel}{2016/05/16}
                      Pass options to parallel:
                      4 \DeclareOption*{%
                           \PassoptionsToPackage{\CurrentOption}{parallel}%
                      6 }
                      Process the options:
                      7 \LWR@ProvidesPackageDropB
                      Require parallel with the given options:
                      8 \RequirePackage{parallel}[2003/04/13]
                      Ignore the new key:
                      9 \define@key{parallel}{rulebetweencolor}{}
             File 370 lwarp-pdfcolparcolumns.sty
             Package pdfcolparcolumns
    §479
                      pdfcolparcolumns is ignored.
pdfcolparcolumns(Pkg)
    for HTML output:
                      1 \LWR@ProvidesPackageDropA{pdfcolparcolumns}{2016/05/16}
                      Pass options to parcolumns:
                      2 \DeclareOption*{%
                           \PassoptionsToPackage{\CurrentOption}{parcolumns}%
                      4 }
```

```
Process the options:
                 5 \LWR@ProvidesPackageDropB
                 Require parcolumns with the given options:
                 6 \RequirePackage{parcolumns}[2004/11/25]
                 Ignore the new key:
                 7\define@key{LWRparcols}{rulebetweencolor}{}
        File 371 lwarp-pdfcomment.sty
        Package pdfcomment
pdfcomment (Pkg) pdfcomment is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{pdfcomment}[2016/06/13]
                 2 \newenvironment{pdfsidelinecomment}[2][]{}{}
                 3 \newcommand{\pdfcomment}[2][]{}
                 4 \newcommand{\pdfmargincomment}[2][]{}
                 5 \newcommand{\pdfmarkupcomment}[3][]{#2}
                 6 \newcommand{\pdffreetextcomment}[2][]{}
                 7 \newcommand{\pdfsquarecomment}[2][]{}
                 8 \newcommand{\pdfcirclecomment}[2][]{}
                 9 \newcommand{\pdflinecomment}[2][]{}
                 10 \newcommand{\pdftooltip}[3][]{#2}
                 11 \newcommand{\pdfcommentsetup}[2][]{}
                 12 \newcommand{\listofpdfcomments}[1][]{}
                 13 \newcommand{\setliststyle}[1]{}
                 14 \newcommand{\defineliststyle}[2]{}
                 15 \newcommand{\defineavatar}[2]{}
                 16 \newcommand{\definestyle}[2]{}
                 For MathJax:
                 17 \begin{warpMathJax}
                 18 \CustomizeMathJax{\newcommand{\pdfmarkupcomment}[3][]{#2}}
                 19 \CustomizeMathJax{\newcommand{\pdftooltip}[3][]{#2}}
                 20 \end{warpMathJax}
        File 372 lwarp-pdfcrypt.sty
        Package pdfcrypt
  pdfcrypt (Pkg) pdfcrypt is ignored.
```

1 \LWR@ProvidesPackageDrop{pdfcrypt}[2016/05/16]

2 \newcommand*{\pdfcryptsetup}[1]{}

§ 480

§ 481

for HTML output:

File 373 lwarp-pdflscape.sty

§482 Package pdflscape

pdflscape (Pkg) pdflscape is ignored.

for HTML output: Discard all options for lwarp-pdflscape:

1 \LWR@ProvidesPackageDrop{pdflscape}[2019/12/05]

2 \let\landscape\relax

3 \let\endlandscape\relax

4

5 \newenvironment*{landscape}{}{}

File 374 lwarp-pdfmarginpar.sty

§ 483 Package pdfmarginpar

pdfmarginpar (Pkg) pdfmarginpar is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfmarginpar}[2011/08/05]

2 \newcommand{\pdfmarginpar}[2][]{}
3 \newcommand{\pdfmarginparset}[1]{}

File 375 lwarp-pdfpages.sty

§484 Package pdfpages

(Emulates or patches code by Andreas Matthias.)

pdfpages (Pkg) pdfpages is patched for use by lwarp.

Option link and linkname work:

\hyperlink{<filename>.pdf.<pagenubmer}{some text}
\hyperlink{<linkname>.<pagenubmer}{some text}</pre>

Options which make no sense in HTML are disabled.

for HTML output: 1 \LWR@ProvidesPackagePass{pdfpages}[2024-01-21]

Disable option which have no meaning for HTML output:

2 \define@key{pdfpages}{fitpaper}[false]{}
3 \define@key{pdfpages}{landscape}[false]{}

```
4\define@key{pdfpages}{openright}[false]{}
5 \define@key{pdfpages}{signature}{}
6 \define@key{pdfpages}{signature*}{}
7\define@key{pdfpages}{booklet}[false]{}
8 \define@key{pdfpages}{rotateoversize}[false]{}
9\define@key{pdfpages}{doublepages}[false]{}
10 \define@key{pdfpages}{doublepagestwist}[false]{}
11 \define@key{pdfpages}{doublepagestwistodd}[false]{}
12 \define@key{pdfpages}{doublepagestwist*}[false]{}
13 \define@key{pdfpages}{doublepagestwistodd*}[false]{}
14 \define@key{pdfpages}{duplicatepages}[2]{}
15 \define@key{pdfpages}{thread}[false]{}
16 \define@key{pdfpages}{threadname}{}
17 \define@key{pdfpages}{linkfit}{}
18 \define@key{pdfpages}{linktodoc}[false]{}
19 \define@key{pdfpages}{linktodocfit}{}
20 \define@key{pdfpages}{linkfilename}{}
21 \define@key{pdfpages}{survey}[false]{}
22 \define@key{pdfpages}{survey-nolink}[false]{}
23 \define@key{pdfpages}{newwindow}[false]{}
Use print mode while measuring the page numbers:
24\xpretocmd{\AM@getpagecount}{\LWR@restoreorigformatting}{}{}
Emulate a bit of eso-pic:
25 \newif\ifESO@texcoord
27 \newcommand{\ESO@HookIIBG}{}
29 \renewcommand{\AM@AddToShipoutPicture}{\g@addto@macro\ESO@HookIIBG}
31\renewcommand{\ClearShipoutPicture}{}
  At each \newpage.
32 \newcommand*{\LWR@esopic@newpage}{%
Is there something to draw?
33 \ifdefvoid{\ESO@HookIIBG}%
34 { }%
35 {%
If the link option was specified, add a hyper target:
      \ifAM@link%
36
37
          \hypertarget{\AM@linkname.\AM@page}{}%
Draw inside a picture environment of the size of a virtual page:
      \begingroup%
39
      \setlength{\unitlength}{1in}%
40
      \begin{picture}(8,10.5)%
41
      \ESO@HookIIBG%
      \end{picture}%
43
44
      \endgroup%
      \global\let\ESO@HookIIBG\@empty%
45
46 }
47 }
```

\LWR@esopic@newpage

```
Patched to use \LWR@esopic@newpage.
\AM@output
                          48 \ Verify Command [lwarp] [pdfpages] {AM@output@i} {A962EC58215FABF2447E4ADEEDC3D3D5} \\
                          50 \xpatchcmd{\AM@output@i}
                                {\clearpage}%
                          51
                                {\LWR@esopic@newpage}
                          52
                          53
                          54
                                {\LWR@patcherror{pdfpages}{AM@output-1}}
                          55
                          56 \xpatchcmd{\AM@output@i}
                                {\clearpage}%
                                {\LWR@esopic@newpage}
                          59
                                {\LWR@patcherror{pdfpages}{AM@output-2}}
                          60
                          61
                          62 \xpatchcmd{\AM@output@i}
                                {\newpage}
                          63
                                {\LWR@esopic@newpage}
                          64
                          65
                          66
                                {\LWR@patcherror{pdfpages}{AM@output-3}}
                            Patched to set the user's paper size.
\includepdf
                          67 \xpretocmd{\includepdf}{%
                                \begingroup%
                                \setlength{\paperheight}{\LWR@userspaperheight}%
                          70
                          71 }{}{}
                          73 \xapptocmd{\includepdf}{%
                                \endgroup%
                          75 }{}{}
\includepdfmerge
                            Patched to set the user's paper size.
                          76 \xpretocmd{\includepdfmerge}{%
                                 \begingroup%
                                 \setlength{\paperwidth}{\LWR@userspaperwidth}%
                          79
                                \setlength{\paperheight}{\LWR@userspaperheight}%
                          80 }{}{}
                          82 \xapptocmd{\includepdfmerge}{%
                                \endgroup%
                          83
                          84 }{}{}
\AM@hyper@begin@i
                            Hyper links are created by \LWR@esopic@newpage, so don't create them here:
                           85 \renewcommand{\AM@hyper@begin@i}{}
                  File 376 lwarp-pdfprivacy.sty
                 Package pdfprivacy
        § 485
```

pdfprivacy (*Pkg*) pdfprivacy is ignored.

for HTML output:

1 \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

File 377 lwarp-pdfrender.sty

§ 486 Package

Package pdfrender

pdfrender (Pkg)

pdfrender is allowed during HTML, but it has no effect on HTML text output. pdfrender is enabled for use with xfakebold, and it is enabled during HTML so that it may be in use when an svG math image is started. I.e. xfakebold's \setBold may be used outside of a math expression and still be detected when the math begins.

The lwarp-pdfrender package is present because it used to disable pdfrender, so this newer version is to overwrite older versions.

for HTML output:

1 \LWR@ProvidesPackagePass{pdfrender}[2019/12/29]

File 378 lwarp-pdfsync.sty

§ 487 Package

Package pdfsync

(Emulates or patches code by J. Laurens.)

pdfsync (Pkg)

pdfsync is ignored.

for HTML output:

Discard all options for lwarp-pdfsync:

1 \LWR@ProvidesPackageDrop{pdfsync}[2008/01/26]

2 \newcommand*{\pdfsync}{}

4 \newcommand*{\pdfsyncstop}{}

File 379 lwarp-pdftricks.sty

§ 488 Package

Package pdftricks

(Emulates or patches code by C. V. Radhakrishnan, C. V. Rajagopal, Antoine Chambert-Loir.)

pdftricks (*Pkg*) pdftricks is patched for use by lwarp.

convert image files

The pdftricks image files <jobname>-fig*.pdf must be converted to .svg, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ lwarpmk pdftosvg <jobname>-fig*.pdf

for HTML output: 1 \LWR@ProvidesPackagePass{pdftricks}[2003/08/10]

Reuse the print-mode images:

2\def\PDFTfigname{\BaseJobname-fig\thepsfig}

If the .pdf images have not yet been converted to .svg then an error about a missing file will occur. Warn the user to convert the images.

```
3 \PackageWarning{lwarp-pdftricks}{%
4 When the pdftricks images change,
5 remember to convert PDF images to SVG using 'lwarpmk pdftosvg *-fig.pdf',
6 }
7
8 \AfterEndDocument{\typeout{***}}
9 \AfterEndDocument{\typeout{*** Note: If pdftricks images are not found, new, or updated,}}
10 \AfterEndDocument{\typeout{*** \space use 'lwarpmk pdftosvg \BaseJobname-fig*.pdf'}}
11 \AfterEndDocument{\typeout{***}}
```

File 380 lwarp-pdfx.sty

§489 Package pdfx

pdfx (Pkg) pdfx is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]

File 381 lwarp-perpage.sty

§ 490 Package **perpage**

(Emulates or patches code by DAVID KASTRUP.)

perpage (Pkg) perpage is mostly ignored, but support is added for footnote counters.

There is no page number in HTML, so most counters are not reset. If the document redefines \the<countername> to include \theperpage, it is necessary to place that redefininition inside a warpprint environment to avoid modifying the HTML defintions.

\AddAbsoluteCounter must not be inside warpprint, as the counter must be added for html also, although it is not incremented.

footnote numbering

To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For bigfoot, manyfoot, or perpage:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by FootnoteDepth, which is not necessarily by HTML page. This is recommended for \alph, \Alph, or \fnsymbol footnotes, due to the limited number of symbols which are available.

for HTML output:

1 \LWR@ProvidesPackageDrop{perpage}[2014/10/25]

```
2 \newcommand\AddAbsoluteCounter[1]
3 {
      \@ifundefined{c@abs#1}{%
5
           \verb|\expandafter\\| newcount\\| csname c@abs\#1\\| endcsname
6
           \global\value{abs#1}\@ne
             \global\expandafter\let\csname cl@abs#1\endcsname\@empty
7 %
           \expandafter\xdef\csname theabs#1\endcsname{%
8
9 %
                 \noexpand\number \csname c@abs#1\endcsname
           }%
10
11 %
             \global\@namedef{c@pabs@#1}{\pp@cl@begin
12 %
             \stepcounter{abs#1}%
13 %
             \pp@cl@end}%
14 %
             \@addtoreset{pabs@#1}{#1}
      }
16
      {}
17 }
19 \AddAbsoluteCounter{page}
20 \def\theabspage{1}
21
22 \newcommand*\MakePerPage[2][1]{%
      \ifltxcounter{#2Reset}{%
23
           \setcounter{#2Reset}{#1}%
24
25
26
27 }%
28 }
29
30 \newcommand*\MakeSorted[1]{}
31
32 \newcommand*\MakeSortedPerPage[2][1]{%
      \ifltxcounter{#2Reset}{%
33
           \setcounter{#2Reset}{#1}%
34
35
      }{
36 }%
37 }
39 \newcommand*{\theperpage}{1}
```

File 382 lwarp-pfnote.sty

§ 491 Package pfnote

pfnote (Pkg) pfnote is ignored.

pfnote numbers

pfnote While emulating pfnote, lwarp is not able to reset HTML footnote numbers per page numbers on match the printed version, as HTML has no concept of page numbers. lwarp therefore uses continuous footnote numbering even for pfnote.

for HTML output: 1 \LWR@ProvidesPackageDrop{pfnote}[1999/07/14]

File 383 lwarp-phfqit.sty

§ 492 Package phfqit

(Emulates or patches code by Philippe Faist.)

phfqit (*Pkg*) phfqit is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{phfqit}[2017/08/16]

2 \LetLtxMacro\LWR@origbitstring\bitstring
3
4 \renewcommand\bitstring[1]{%
5 \InlineClass[%
6 text-decoration: overline underline;
7]{bitstring}{#1}%
8% \phfqit@bitstring{#1}%
9 }
10
11 \appto\LWR@restoreorigformatting{%
12 \LetLtxMacro\bitstring\LWR@origbitstring%

File 384 lwarp-physics.sty

13 }

§493 Package physics

(Emulates or patches code by Sergio C. de la Barrera.)

physics (*Pkg*) physics works as-is for HTML with svg math.

For MathJax, the MathJax v3 physics extension is used.

for HTML output: 1 \LWR@ProvidesPackagePass{physics}% No date is provided by the package.

2 \begin{warpMathJax}

4 \CustomizeMathJax{\require{physics}}

5\end{warpMathJax}

File 385 lwarp-physunits.sty

§494 Package physunits

(Emulates or patches code by Brian W. Mulligan.)

physunits (*Pkg*) physunits is supported as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{physunits}[2020/03/26]

```
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{physunits}
5 \CustomizeMathJax{\newcommand{\micro}{\mu}}
6 \CustomizeMathJax{\newcommand{\V}[1][ ]{\,\mathrm{#1V}}}
7 \CustomizeMathJax{\newcommand{\Volt}[1][ ]{\,\mathrm{#1V}}}
8 \CustomizeMathJax{\newcommand{\Coulomb}[1][ ]{\,\mathrm{#1C}}}
9 \CustomizeMathJax{\newcommand{\esu}{\,\mathrm{esu}}}
10 \CustomizeMathJax{\newcommand{\Ohm}[1][ ]{\,\mathrm{#1\Omega}}}
11 \CustomizeMathJax{\newcommand{\Amp}[1][ ]{\,\mathrm{#1A}}}
12 \CustomizeMathJax{\newcommand{\Farad}[1][ ]{\,\mathrm{#1F}}}
13 \CustomizeMathJax{\newcommand{\Tesla}[1][ ]{\,\mathrm{#1T}}}
14 \CustomizeMathJax{\newcommand{\Gauss}[1][ ]{\,\mathrm{#1G}}}
15 \CustomizeMathJax{\newcommand{\Henry}[1][ ]{\,\mathrm{#1H}}}
16 \CustomizeMathJax{\newcommand{\eV}[1][ ]{\,\mathrm{#1eV}}}
17 \CustomizeMathJax{\newcommand{\keV}{\,\mathrm{keV}}}
18 \CustomizeMathJax{\newcommand{\MeV}{\,\mathrm{MeV}}}
19 \CustomizeMathJax{\newcommand{\J}[1][ ]{\,\mathrm{#1J}}}
20 \CustomizeMathJax{\newcommand{\Joule}[1][ ]{\,\mathrm{#1J}}}
21 \CustomizeMathJax{\newcommand{\erg}{\,\mathrm{erg}}}
{\tt 22 \ CustomizeMathJax{\ newcommand{\ kcal}{\ ,\ mathrm{kcal}}}}
23 \CustomizeMathJax{\newcommand{\Cal}{\,\mathrm{Cal}}}
24 \CustomizeMathJax{\newcommand{\calorie}[1][ ]{\,\mathrm{#1cal}}}
25 \CustomizeMathJax{\newcommand{\BTU}{\,\mathrm{BTU}}}
26 \CustomizeMathJax{\newcommand{\tnt}{\,\mathrm{ton\, of\, TNT}}}
27 \CustomizeMathJax{\newcommand{\Watt}[1][ ]{\,\mathrm{#1W}}}
28 \CustomizeMathJax{\newcommand{\hpi}{\,\mathrm{hp(I)}}}
29 \CustomizeMathJax{\newcommand{\hpm}{\,\mathrm{hp(M)}}}
30 \CustomizeMathJax{\newcommand{\hp}{\,\mathrm{hp}}}
31 \CustomizeMathJax{\newcommand{\meter}[1][ ]{\,\mathrm{#1m}}}
32 \CustomizeMathJax{\newcommand{\m}[1][ ]{\,\mathrm{#1m}}}
{\tt 33 \CustomizeMathJax{\newcommand{\km}{\newcommand{\km}}}}
34 \command{\au}{\,\mathrm{au}}}
35 \CustomizeMathJax{\newcommand{\pc}[1][ ]{\,\mathrm{#1pc}}}
36 \CustomizeMathJax{\newcommand{\ly}[1][ ]{\,\mathrm{#1ly}}}
37 \CustomizeMathJax{\newcommand{\cm}{\,\mathrm{cm}}}
38 \CustomizeMathJax{\newcommand{\nm}{\,\mathrm{nm}}}
39 \CustomizeMathJax{\newcommand{\ft}{\,\mathrm{ft}}}
40 \CustomizeMathJax{\newcommand{\inch}{\,\mathrm{in}}}
41 \CustomizeMathJax{\newcommand{\mi}{\,\mathrm{mi}}}
43 \customizeMathJax{\newcommand{\Sec}[1][ ]{\,\mathrm{#1s}}}
44 \CustomizeMathJax{\newcommand{\Min}{\,\mathrm{min}}}
45 \CustomizeMathJax{\newcommand{\h}{\,\mathrm{h}}}
46 \CustomizeMathJax{\newcommand{\y}[1][ ]{\,\mathrm{#1y}}}
47 \CustomizeMathJax{\newcommand{\Day}{\,\mathrm{d}}}
49 \CustomizeMathJax{\newcommand{\gm}[1][ ]{\,\mathrm{#1g}}}
50 \CustomizeMathJax{\newcommand{\kg}{\,\mathrm{kg}}}
51 \CustomizeMathJax{\newcommand{\lb}{\,\mathrm{lb}}}
52 \CustomizeMathJax{\newcommand{\amu}{\,\mathrm{amu}}}
  53 \customizeMathJax{\newcommand{\N}[1][ ]{\,\mathrm{#1N}}} 
54 \converged {\newcommand{\Newton}[1][ ]{\,\mathrm{#1N}}}
55 \CustomizeMathJax{\newcommand{\dyne}[1][ ]{\,\mathrm{#1dyn}}}
56 \CustomizeMathJax{\newcommand{\lbf}{\,\mathrm{lbf}}}
57 \CustomizeMathJax{\newcommand{\kmps}{\,\mathrm{km}\,\mathrm{s}^{-1}}}
58 \converged hath Jax{\newcommand{\kmph}{\,\mathrm{km}\,\mathrm{h}^{-1}}}
59 \customizeMathJax{\newcommand{\mps}[1][ ]{\,\mathrm{#1m}\,\mathrm{s}^{-1}}}
60 \CustomizeMathJax{\newcommand{\miph}{\,\mathrm{mi}\,\mathrm{h}^{-1}}}
61 \CustomizeMathJax{\newcommand{\kts}{\,\mathrm{kts}}}
```

```
 63 \customizeMathJax{\newcommand{\mpss}[1][ ]{\,\mathrm{#1m}\,\mathrm{s}^{-2}}} 
64 \command{\gacc}{\,\mathrm{g}}}
 65 \customize MathJax {\newcommand {\ftpss}{\,\mathrm{ft}\,\mathrm{s}^{-2}}} 
66 \CustomizeMathJax{\newcommand{\K}[1][ ]{\,\mathrm{#1K}}}
67 \CustomizeMathJax{\newcommand{\Kelvin}[1][ ]{\,\mathrm{#1K}}}
68 \CustomizeMathJax{\newcommand{\Celcius}{\,^\circ{\mathrm{C}}}}
\label{lem:command} $$ \customizeMathJax{\newcommand{\Rankine}_{\,^\circ{\mathbb{R}}}}$
\label{lem:customizeMathJax{\newcommand{\Fahrenheit}{\,^\circ{\mathbb{F}}}}} \\
72 \colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colon
74 \CustomizeMathJax{\newcommand{\Hz}[1][ ]{\,\mathrm{\#1Hz}}}
75 \colone{10} \
76 \CustomizeMathJax{\newcommand{\atm}{\,\mathrm{atm}}}
77 \CustomizeMathJax{\newcommand{\Pa}[1][ ]{\,\mathrm{#1Pa}}}
78 \CustomizeMathJax{\newcommand{\mmHg}{\,\mathrm{mmHg}}}
79 \CustomizeMathJax{\newcommand{\inHg}{\,\mathrm{inHg}}}
80 \verb|\CustomizeMathJax{\newcommand{\lbsi}{\normalfont{bsi}}}|
81 \CustomizeMathJax{\newcommand{\lbsf}{\,\mathrm{psf}}}
82 \CustomizeMathJax{\newcommand{\Ba}[1][ ]{\,\mathrm{#1Ba}}}
83 \CustomizeMathJax{\newcommand{\Torr}[1][ ]{\,\mathrm{#1Torr}}}
84 \CustomizeMathJax{\newcommand{\mol}{\,\mathrm{mol}}}
85 \end{warpMathJax}
```

File 386 lwarp-picinpar.sty

§ 495 Package picinpar

(Emulates or patches code by Friedhelm Sowa.)

picinpar (*Pkg*) picinpar is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{picinpar}% No date is assigned.

The window is floated by a BlockClass style.

```
2 \long\def\LWR@HTML@window[#1,#2,#3,#4] {%
      \if #2r%
          \begin{BlockClass}[float:right](note){marginblock}%
      \else%
5
6
          \begin{BlockClass}[float:left](note){marginblock}%
      \fi%
7
8
      #3\par%
      #4%
9
      \end{BlockClass}%
10
11 }
12
13 \def\endLWR@HTML@window{}
15 \LWR@formattedenv{window}
```

The framepic and wframepic are placed inside a BlockClass of class framebox.

```
16 \def\LWR@HTML@framepic#1{%
17 \begin{BlockClass}{framebox}
18 \expandafter\box\csname #1box\endcsname%
```

```
19 \end{BlockClass}
20 }
21 \LWR@formatted{framepic}

22 \def\LWR@HTML@wframepic#1{%
23 \begin{BlockClass}{framebox}
24 \expandafter\box\csname #1box\endcsname%
25 \end{BlockClass}
26 }
27 \LWR@formatted{wframepic}
```

The caption is placed inside a BlockClass of class figurecaption.

```
28 \long\def\LWR@HTML@@makewincaption#1#2{%
29 \begin{BlockClass}{figurecaption}
30 #1: #2
31 \end{BlockClass}
32 }
33 \LWR@formatted{@makewincaption}
```

With HTML output, figwindow and tabwindow must not pre-decrement their counters.

```
34 \long\def\LWR@HTML@figwindow[#1,#2,#3,#4] {%
35 % \advance\c@figure -1
36 \window[#1,#2,{#3},{\def\@captype{figure}%
37 \wincaption#4\par}] }
38
39 \def\endLWR@HTML@figwindow{\endwindow}
40
41 \LWR@formattedenv{figwindow}
```

For tabwindow, to change the catcode of &, \StartDefiningTabulars is used before absorbing the arguments, and \EndDefiningTabulars is used at the end of the environment.

```
42 \long\def\LWR@HTML@subtabwindow[#1,#2,#3,#4] {%
43 %
         \advance\c@table -1
44
       \window[#1,#2,{#3},{\def\@captype{table}%
45
          \wincaption#4\par}] }
47 \newcommand*{\LWR@HTML@tabwindow}{%
48
      \StartDefiningTabulars%
49
      \LWR@HTML@subtabwindow%
50 }
52 \def\endLWR@HTML@tabwindow{%
53
      \endwindow%
      \StopDefiningTabulars%
54
55 }
57 \LWR@formattedenv{tabwindow}
```

File 387 lwarp-pifont.sty

§ 496 Package **pifont**

(Emulates or patches code by Walter Schmidt.)

pifont (*Pkg*) pifont is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

for HTML output:

```
1 \LWR@ProvidesPackagePass{pifont}[2005/04/12]
```

```
2 \renewcommand{\Pisymbol}[2]{%
3  \begin{lateximage}*[Pisymbol][pisymbol#1#2]%
4  {\Pifont{#1}\char#2}%
5  \end{lateximage}%
6 }
7
8 \newcommand{\LWR@HTML@Pifill}[2]{
9  \Pisymbol{#1}{#2} \Pisymbol{#1}{#2}
10 }
11 \LWR@formatted{Pifill}
12
13 \newcommand{\LWR@HTML@Piline}[2]{%
14  \par\noindent\hspace*{0.5in}
15  \Pifill{#1}{#2} \Pifill{#1}{#2}
16 }
17 \LWR@formatted{Piline}
```

File 388 lwarp-pinlabel.sty

§497 Package pinlabel

(Emulates or patches code by Colin Rourke.)

pinlabel (*Pkg*) pinlabel is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{pinlabel}% no date given
```

```
2 \mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb
```

File 389 lwarp-placeins.sty Package placeins **§ 498** (Emulates or patches code by Donald Arseneau.) placeins(Pkg)placeins is ignored. Discard all options for lwarp-placeins: 1 \LWR@ProvidesPackageDrop{placeins}[2005/04/18] for HTML output: 2 \newcommand*{\FloatBarrier}{} File 390 lwarp-plarydshln.sty Package plarydshln § 499 plarydshln is emulated by lwarp-arydshln. plarydshln (Pkg) for HTML output: 1 \LWR@ProvidesPackageDrop{plarydshln}[2018/10/20] 2 \LWR@origRequirePackage{lwarp-arydshln} File 391 lwarp-plext.sty Package plext **§ 500** plext is preloaded by jtarticle and related classes. plext(Pkg)for HTML output: 1 \LWR@loadbefore{plext} 3 \LWR@ProvidesPackagePass{plext}[2017/07/21] 4 \let\tate\relax 6 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3} 8% \layoutfloat(width,height)[pos]#4 $\\ {\tt 9 \backslash Declare Document Command \{ \backslash layout float \} \{ d() o m \} \{ \} }$ 11 % \DeclareLayoutCaption{type} <dir>(width)[pos1pos2] 12 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{} 13 14 \LetLtxMacro\pcaption\caption

16% \layoutcaption<dir>(width)[pos]

19 \let\captiondir\relax

17 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}

Add the optional <t/y> direction:

picture, as modified by pext, is encapsulated by the lwarp core.

File 392 lwarp-plextarydshln.sty

§501 Package plextarydshln

plextarydshln (Pkg) plextarydshln is emulated by lwarp-arydshln.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \LWR@ProvidesPackageDrop{plextarydshln}[2018/10/20] \end{tabular}$

2 \LWR@origRequirePackage{lwarp-arydshln}

File 393 lwarp-plextcolortbl.sty

§ 502 Package plextcolortbl

plextcolortbl (*Pkg*) plextcolortbl is emulated by lwarp-colortbl.

for HTML output: 1 \LWR@ProvidesPackageDrop{plextcolortbl}[2018/09/19]

2 \LWR@origRequirePackage{lwarp-colortbl}

File 394 lwarp-plimsoll.sty

§ 503 Package plimsoll

(Emulates or patches code by Palle Jørgensen.)

plimsoll (*Pkg*) plimsoll is used as-is for svg math, and emulated for MATHJAX.

The circ option is honored. For MathJax, \plimsollsans is the same as \plimsollroman.

```
for HTML output:
                                                  1 \LWR@ProvidesPackagePass{plimsoll}[2020/10/09]
                                                  2 \begin{warpMathJax}
                                                  3 \CustomizeMathJax{\newcommand{\plimsollroman}{\unicode{x029B5}}}
                                                  5 \CustomizeMathJax{\let\plimsoll\plimsollroman}
                                                  6 \CustomizeMathJax{\let\plimsollsans\plimsoll}
                                                  8\ifdefstring{\stst}{^{\circ}}
                                                                {\continuous} 
                                                 11 \end{warpMathJax}
                                                 lwarp-prelim2e.sty
                         File 395
                                               prelim2e
                        Package
§ 504
                                                  (Emulates or patches code by Martin Schröder.)
                                                  prelim2e is ignored.
          prelim2e (Pkg)
                                                  Discard all options for lwarp-prelim2e:
  for HTML output:
                                                  1 \LWR@ProvidesPackageDrop{prelim2e}[2009/05/29]
                                                  2 \newcommand{\PrelimText}{}
                                                  3 \newcommand{\PrelimTextStyle}{}
                                                  4 \newcommand{\PrelimWords}{}
                         File 396 lwarp-prettyref.sty
                        Package prettyref
§ 505
                                                  (Emulates or patches code by Kevin S. Ruland.)
      prettyref (Pkg) prettyref is patched for use by lwarp.
  for HTML output:
                                                   1 \LWR@ProvidesPackagePass{prettyref}[1998/07/09]
                                                  2\newrefformat{fig}{Figure \ref{#1}}
                                                  3 \newrefformat{tab}{Table \ref{#1}}
                         File 397 lwarp-preview.sty
                        Package preview
$506
            preview (Pkg) preview is ignored.
  for HTML output:
                                                  1 \LWR@ProvidesPackageDrop{preview}[2017/04/24]
```

```
2 \newenvironment{preview}{}{}
3 \newenvironment{nopreview}{}{}
4 \NewDocumentCommand{\PreviewMacro}{s o o +m}{}
5 \NewDocumentCommand{\PreviewEnvironment}{s o o +m}{}
6 \newcommand{\PreviewSnarfEnvironment}[2][]{}
7 \NewDocumentCommand{\PreviewOpen}{s o}{}
8 \NewDocumentCommand{\PreviewClose}{s o}{}
9 \let\ifPreview\iffalse% \fi for syntax highlighting
```

File 398 lwarp-psfrag.sty

§ 507 Package **psfrag**

(Emulates or patches code by Michael C. Grant, David Carlisle.)

psfrag (*Pkg*) psfrag is patched for use by lwarp.

The psfrags environment is modified to use lateximage to encapsulate the image. Always use a psfrags environment to contain any local \psfrag macros and the associated \includegraphics or \epsfig calls. Outside of a psfrags environment, psfrags adjustments will not be seen by lwarp.

 \triangle

Tip: Use a mono-spaced font for the tags in the EPS file.

for HTML output:

1 \LWR@ProvidesPackagePass{psfrag}[1998/04/11]

A lateximage captures the modified image from the document.

```
2 \BeforeBeginEnvironment{psfrags}{%
3     \begin{lateximage}[-psfrags-~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{psfrags}{\end{lateximage}}
```

File 399 lwarp-psfragx.sty

§ 508 Package **psfragx**

(Emulates or patches code by PASCAL KOCKAERT.)

psfragx (Pkg) psfragx is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{psfragx}[2012/05/02]

A lateximage captures the modified image from the document.

```
2 \VerifyCommand[lwarp][psfragx]{\pfx@includegraphicx}{45FCF58D66C0BFFC685913A78CADF20D}
3
4 \def\pfx@includegraphicx#1#2{%
5   \begin{lateximage}[-psfragx-~\PackageDiagramAltText]%
6   \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
7   \end{lateximage}%
8 }
9
```

```
12 \def\@@overpix[#1]<#2>[#3]#4{%
                      \begin{lateximage}[-psfragx-~\PackageDiagramAltText]%
                 14
                      \pfx@overpix{#1,ovpfgd={#2},ovpbgd={#3}}{#4}%
                 15 }
                16
                18
                19 \def\endoverpix{%
                20
                      \endpfx@overpix%
                21
                      \end{lateximage}%
                22 }
         File 400 lwarp-pst-eps.sty
        Package pst-eps
                 (Emulates or patches code by Herbert Voss.)
    pst-eps (Pkg) pst-eps is patched for use by lwarp.
 for HTML output:
                 1 \LWR@ProvidesPackagePass{pst-eps}[2005/05/20]
                 2\renewenvironment{TeXtoEPS}{}{}
                 3 \renewcommand{\PSTtoEPS}[3][]{}
         File 401 lwarp-pstool.sty
                pstool
        Package
                 (Emulates or patches code by Zebb Prime, Will Robertson.)
     pstool (Pkg) pstool is patched for use by lwarp.
                 \graphicspath is ignored, and the file directory must be stated.
path and filename
                 The filename must not have a file extension.
                 Use
                     Enter \Rightarrow
                            lwarpmk html
                 followed by
                     Enter ⇒
                            lwarpmk limages
 for HTML output:
                 1 \LWR@ProvidesPackagePass{pstool}[2018/01/20]
                 Each image is placed inside a lateximage to capture the results of psfrag.
                 2 \renewcommand\pstool@alwaysprocess[3][]{%
```

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```
\begin{lateximage}[-pstool-~\PackageDiagramAltText]%
                 3
                      \includegraphics{#2.pdf}%
                      \end{lateximage}%
                 6 }
                 7 \LetLtxMacro\pstool@neverprocess\pstool@alwaysprocess
                 8 \LetLtxMacro\pstool@maybeprocess\pstool@alwaysprocess
                10 \renewcommand\pstool@@psfragfig[4]{%
                      \begin{lateximage}[-pstool-~\PackageDiagramAltText]%
                11
                      \includegraphics{#2.pdf}%
                12
                13
                      \end{lateximage}%
                14 }
        File 402 lwarp-pstricks.sty
       Package pstricks
                 (Emulates or patches code by Timothy Van Zandt.)
  pstricks (Pkg) pstricks is patched for use by lwarp.
 use pspicture All pstricks content should be contained inside a pspicture environment.
                 {\tt 1 LWR@ProvidesPackagePass\{pstricks\}[2018/01/06]}
                 2\BeforeBeginEnvironment{pspicture}{%
                      \begin{lateximage}[pspicture]%
                 4 }
                 5 \AfterEndEnvironment{pspicture}{\end{lateximage}}
                 7\BeforeBeginEnvironment{pspicture*}{%
                      \begin{lateximage}[pspicture]%
                 9 }
                10 \AfterEndEnvironment{pspicture*}{\end{lateximage}}
        File 403 lwarp-pxatbegshi.sty
       Package pxatbegshi
pxatbegshi (Pkg) pxatbegshi is ignored.
                 1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]
                 2 \LWR@origRequirePackage{lwarp-atbegshi}
        File 404 lwarp-pxeveryshi.sty
       Package pxeveryshi
pxeveryshi (Pkg) pxeveryshi is ignored.
```

1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]

§511

§512

§ 513

for HTML output:

for HTML output:

for HTML output:

2 \LWR@origRequirePackage{lwarp-everyshi}

File 405 lwarp-pxfonts.sty

§514 Package **pxfonts**

(Emulates or patches code by Young Ryu.)

pxfonts (*Pkg*) pxfonts is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{pxfonts}[2008/01/22]

For MATHJAX:

2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}

3

4\begin{warpMathJax}

5 \LWR@infoprocessingmathjax{pxfonts}

6

7 \LWR@mathjax@addgreek@l@up{}{up}

8 \end{warpMathJax}

File 406 lwarp-pxftnright.sty

§515 Package pxftnright

pxftnright (Pkg) pxftnright is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]

2 \LWR@origRequirePackage{lwarp-ftnright}

File 407 lwarp-pxjahyper.sty

§516 Package **pxjahyper**

pxjahyper (*Pkg*) pxjahyper is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

File 408 lwarp-quotchap.sty

§517 Package quotchap

 $(Emulates\ or\ patches\ code\ by\ Karsten\ Tinnefeld,\ Jan\ Klever.)$

quotchap (Pkg) quotchap is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{quotchap}[2019/07/09]

```
2 \newcommand{\@quotchap}{}
3 \newlength{\LWR@quotchapwidth}
5 \let\@printcites\relax
7 \newcommand*{\@iprintcites}{%
Place the quotes inside a <div> of class quotchap, of the maximum selected width:
8 \begin{BlockClass}[max-width: \LWR@printlength{\LWR@quotchapwidth}]{quotchap}
9%\begin{minipage}{\LWR@quotchapwidth}
10 \@quotchap
11 %\end{minipage}
12 \end{BlockClass}
Deactivate the quote printing:
13 \global\let\@printcites\relax
14 }
16 \NewEnviron{savequote}[1][\linewidth]{%
Remember the width, adjusted for HTML, and make the length assignment global,
https://tex.stackexchange.com/questions/300823/
      why-is-setlength-ineffective-inside-a-tabular-environment
17 \setlength{\LWR@quotchapwidth}{#1*2}%
18 \global\LWR@quotchapwidth=\LWR@quotchapwidth%
Remember the body, and activate the quote printing:
19 \global\let\@quotchap\BODY
20 \global\let\@printcites\@iprintcites%
21 }
The quotation author is placed inside a <div> of class qauthor:
22 \newcommand{\qauthor}[1]{%
      \LWR@stoppars%
23
      \begin{BlockClass}{qauthor}%
24
      {#1}%
      \end{BlockClass}%
26
27
      \LWR@startpars%
28 }
Fonts are ignored. Use css.
29 \newcommand{\qsetcnfont}[1]{}
30 \providecommand*{\quotefont}{}
31 \providecommand*{\qauthorfont}{}
```

File 409 lwarp-quoting.sty

```
quoting
         Package
§518
                   (Emulates or patches code by Thomas Titz.)
                   quoting is patched for use by lwarp.
     quoting (Pkg)
for HTML output:
                   1 \LWR@ProvidesPackagePass{quoting}[2014/01/28]
                   2 \VerifyEnvironment[lwarp][quoting]{quoting}
                         {AEC586766C9109C2889BDED4AE083C05}{8CE7FB71438699772DFD79A2BC803AB3}
                   5 \xpatchcmd{\quoting}{\quo@begintext}
                         {\begin{LWR@blocktextcurrentfont}\quo@begintext}
                         {\tt \{LWR@patcherror\{quoting\}\{quoting\}\}}
                   8
                   10 \xpatchcmd{\endquoting}{\quo@endtext}
                         {\quo@endtext\end{LWR@blocktextcurrentfont}\LWR@stoppars}
                   11
                   12
                         {}
                         {\LWR@patcherror{quoting}{endquoting}}
                   13
```

File 410 lwarp-ragged2e.sty

§519 Package ragged2e

(Emulates or patches code by Martin Schröder.)

ragged2e (*Pkg*) ragged2e is emulated.

Discard all options for lwarp-ragged2e:

for HTML output: 1 \LWR@ProvidesPackageDrop{ragged2e}[2009/05/21]

```
2 \LetLtxMacro\Centering\centering
3 \LetLtxMacro\RaggedLeft\raggedleft
4 \LetLtxMacro\RaggedRight\raggedright
5 \newcommand*{\justifying}{}
6 \newlength{\CenteringLeftskip}
7 \newlength{\RaggedLeftLeftskip}
8 \newlength{\RaggedRightLeftskip}
9 \newlength{\CenteringRightskip}
10 \newlength{\RaggedLeftRightskip}
11 \newlength{\RaggedRightRightskip}
12 \newlength{\CenteringParfillskip}
13 \newlength{\RaggedLeftParfillskip}
14 \newlength{\RaggedRightParfillskip}
15 \newlength{\JustifyingParfillskip}
16 \newlength{\CenteringParindent}
17 \newlength{\RaggedLeftParindent}
18 \newlength{\RaggedRightParindent}
19 \newlength{\JustifyingParindent}
```

```
20 \newenvironment*{Center}{\center}
21 \newenvironment*{FlushLeft}{\flushleft}{\endflushleft}
22 \newenvironment*{FlushRight}{\flushright}{\endflushright}
23 \newenvironment*{justify}{\justifying}{\endjustifying}
```

File 411 lwarp-realscripts.sty

§ 520 Package realscripts

(Emulates or patches code by Will Robertson.)

realscripts (Pkg) realscripts is emulated. See lwarp.css for the of class supsubscript.

for HTML output: 1 \LWR@ProvidesPackagePass{realscripts}[2016/02/13]

```
2 \ExplSyntaxOn
4 \DeclareDocumentCommand \LWR@HTML@realsubscript {m} {
      \LWR@HTML@textsubscript{#1}
6 }
8 \LWR@formatted{realsubscript}
11 \DeclareDocumentCommand \LWR@HTML@realsuperscript {m} {
      \LWR@HTML@textsuperscript{#1}
12
13 }
15 \LWR@formatted{realsuperscript}
17
18 \ExplSyntaxOff
19
20
21 \newcommand*{\LWR@realscriptsalign}{}
22
23 \newcommand*{\LWR@setrealscriptsalign}[1]{%
      \renewcommand*{\LWR@realscriptsalign}{}%
24
      \left( \frac{\#1}{c} \right)
25
26
          \renewcommand{\LWR@realscriptsalign}{%
27
              \LWR@print@mbox{text-align:center}; %
28
      }{}%
29
      \left\{ \frac{\#1}{r} \right\}
30
          \renewcommand{\LWR@realscriptsalign}{%
31
              \LWR@print@mbox{text-align:right} ; %
32
          }%
33
      }{}%
34
35 }
36
37 \DeclareDocumentCommand \LWR@HTML@textsubsuperscript {s O{l} mm} {%
      \LWR@setrealscriptsalign{#2}%
      \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
39
          \textsuperscript{#4}\textsubscript{#3}%
40
      }%
41
42 }
43 \LWR@formatted{textsubsuperscript}
```

```
45 \FilenameNullify{%
     \RenewDocumentCommand{\textsuperscript}{s m}{}%
47
     48
     \renewcommand{\fakesubscript}[1]{}%
     \renewcommand{\fakesuperscript}[1]{}%
49
     \renewcommand{\realsubscript}[1]{}%
50
     \renewcommand{\realsuperscript}[1]{}%
51
     \renewcommand{\textsubsuperscript}[2]{}%
52
     \renewcommand{\textsupersubscript}[2]{}%
53
54 }
```

File 412 lwarp-refcheck.sty

```
refcheck

refcheck (Pkg) refcheck is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{refcheck}[2013/02/14]

2 \def\showrefnames{}
3 \def\norefnames{}
4 \def\showcitenames{}
5 \def\nocitenames{}
6 \def\setoffmsgs{}
7 \def\setoffmsgs{}
8 \def\checkunlbld{}
9 \def\ignoreunlbld{}
```

File 413 lwarp-register.sty

§ 522 Package register

 $({\it Emulates\ or\ patches\ code\ by\ Matthew\ Lovell.})$

10 \newcommand*{\refcheckxrdoc}[2][]{}

register (*Pkg*) register is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{register}[2019/01/01]

Not using \VerifyCommand here because these patches are not likely to be affected by changes in the original.

```
2 \xpatchcmd{\register}
     {\centering}
3
     {%
4
5
          \begin{center}%
          \begin{lateximage}[-register-~\PackageDiagramAltText]%
6
7
     }
8
      {\LWR@patcherror{register}{register}}
9
10
11 \xpatchcmd{\endregister}
```

```
{\leftskip}
12
13
      {%
          \end{lateximage}\end{center}%
14
15
          \leftskip%
      }%
16
17
      {\LWR@patcherror{register}{endregister}}
18
19
20\expandafter\xapptocmd\csname register*\endcsname
21
22
          \begin{center}%
23
          \begin{lateximage}[-register-~\PackageDiagramAltText]%
24
      }
25
      {}
      {\LWR@patcherror{register}{register*}}
26
28 \expandafter\xpatchcmd\csname endregister*\endcsname
      {\leftskip}
29
30
      {%
          \end{lateximage}\end{center}%
31
32
          \leftskip%
33
      }%
34
      {}
      {\LWR@patcherror{register}{endregister*}}
37\setlength{\regWidth}{5in}
```

File 414 lwarp-relsize.sty

§ 523 Package relsize

(Emulates or patches code by Donald Arseneau, Bernie Cosell, Matt Swift.)

relsize (*Pkg*) relsize is patched for use by lwarp, and emulated for MATHJAX.

For HTML, only the inline macros are supported: \textlarger, \textsmaller, and \textscale. Each becomes an inline span of a modified font-size.

\relsize, \larger, \smaller, and \relscale are ignored.

While creating svg math for HTML, the original definitions are temporarilty restored, and so should work as expected.

⚠ not small

The HTML browser's setting for minumum font size may limit how small the output will be displayed.

```
for HTML output: 1 \LWR@ProvidesPackagePass{relsize}[2013/03/29]

2 \let\LWR@origrelsize\relsize
3 \LetLtxMacro\LWR@origlarger\larger
4 \LetLtxMacro\LWR@origsmaller\smaller
```

5\let\LWR@relscale\relscale
6\LetLtxMacro\LWR@origtextlarger\textlarger
7\LetLtxMacro\LWR@origtextsmaller\textsmaller

8 \let\LWR@textscale\textscale

9

10 \appto\LWR@restoreorigformatting{%

```
11 \let\relsize\LWR@origrelsize%
12 \LetLtxMacro\larger\LWR@origlarger%
13 \LetLtxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscale%
15 \LetLtxMacro\textlarger\LWR@origtextlarger%
16 \LetLtxMacro\textsmaller\LWR@origtextsmaller%
17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@relsizetemp}
22 \renewcommand*{\relsize}[1]{}
23 \renewcommand*{\larger}[1][]{}
24 \renewcommand*{\smaller}[1][]{}
25 \renewcommand*{\relscale}[1]{}
27\renewcommand*{\textlarger}[2][1]{%
28 \setcounter{LWR@relsizetemp}\{100+(#1*20)\}%
29 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textlarger}{#2}%
30 }
32\renewcommand*{\textsmaller}[2][1]{%
33 \setcounter{LWR@relsizetemp}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textsmaller}{#2}%
35 }
36
37\renewcommand*{\textscale}[2]{%
38\setcounter{LWR@relsizetemp}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textscale}{#2}%
40 }
For MATHJAX:
41 \begin{warpMathJax}
42 \CustomizeMathJax{\newcommand{\mathlarger}[1]{#1}}
43 \CustomizeMathJax{\newcommand{\mathsmaller}[1]{#1}}
44 \end{warpMathJax}
```

File 415 lwarp-repeatindex.sty

§ 524 Package repeatindex

repeatindex (Pkg) repeatindex is emulated for lwarp.

\usepackage[makeindex,makeindexStyle={lwarp_repeatindex}]{lwarp}

where lwarp_repeatindex.ist may be copied from the following modified version of lwarp.ist:

```
preamble
"\begin{theindex}
  \\providecommand*\\lettergroupDefault[1]{}
  \\providecommand*\\lettergroup[1]{%
   \\par\\textbf{#1}\\par
```

```
\\nopagebreak
                  }
                "
                headings_flag 1
                heading_prefix "
                  \\lettergroup{"
                heading_suffix "}"
                delim_0 "], \\hyperindexref{"
                delim_1 ", \\hyperindexref{"
                delim_2 ", \\hyperindexref{"
               delim_n "}, \\hyperindexref{"
delim_r "} -- \\hyperindexref{"
delim_t "}"
                item_0 "\n \\item ["
               (The modifications are the delim_0 and item_0 entries.)
               1 \LWR@ProvidesPackageDrop{repeatindex}[2001/10/13]
               In the lwarp core, \LWR@indexitem is modified to accept the optional \item argu-
               ment.
               2 \RequirePackage{makeidx}
               3 \def\entryprefix{\itshape}
               4 \def\entrypostfix{\dots}
     File 416 lwarp-repltext.sty
     Package repltext
repltext (Pkg) repltext is ignored.
               1 \LWR@ProvidesPackageDrop{repltext}[2020/09/25]
               2 \newcommand{\repltext}[2]{#2}
               3 \newcommand*{\prevrepl}{}
               For MATHJAX:
               4 \begin{warpMathJax}
               5 \CustomizeMathJax{\newcommand{\repltext}[2]{#2}}
               6 \end{warpMathJax}
     File 417 lwarp-resizegather.sty
     Package resizegather
```

§ 526

for HTML output:

§ 525

for HTML output:

resizegather (Pkg) resizegather is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]

```
2 \newcommand*{\resizegathersetup}[1]{}
```

File 418 lwarp-returntogrid.sty

```
§ 527 Package returntogrid
```

returntogrid (Pkg) returntogrid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{returntogrid}[2018/08/21]

- File 419 lwarp-rlepsf.sty

§ 528 Package rlepsf

(Emulates or patches code by Michael Greene, Colin Rourke.)

rlepsf (*Pkg*) rlepsf is patched for use by lwarp.

A Rename the style file! The file rlepsf. tex must

The file rlepsf.tex must be copied to rlepsf.sty for lwarp to detect and patch it.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \LWR@ProvidesPackagePass{rlepsf}\% \ No \ date \ given. \end{tabular}$

```
2 \mathbb{xpretocmd{\relabelbox}
3      {\begin{lateximage}}
4      {}
5      {\LWR@patcherror{rlepsf}{relabelbox}}
6
7 \mathbb{xapptocmd{\endrelabelbox}
8      {\end{lateximage}}
9      {}
10      {\LWR@patcherror{rlepsf}{endrelabelbox}}
```

File 420 lwarp-rmathbr.sty

§ 529 Package rmathbr

(Emulates or patches code by Denis Ryabov.)

rmathbr (Pkg) rmathbr is used as-is for svG math, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{rmathbr}[2020/12/11]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\def\*{~}}
4 \CustomizeMathJax{\newcommand{\cdott}{\cdot}}
5 \CustomizeMathJax{\newcommand{\nobr}{}}
6 \end{warpMathJax}
```

```
File 421 lwarp-rmpage.sty
               Package rmpage
      § 530
           rmpage (Pkg)
                        rmpage is ignored.
       for HTML output:
                         1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]
                File 422 lwarp-romanbar.sty
               Package romanbar
      § 531
                         (Emulates or patches code by H.-MARTIN MÜNCH.)
          romanbar (Pkg) romanbar is patched for use by lwarp.
                         An inline class with an overline and underline is used.
       for HTML output:
                         1 \LWR@ProvidesPackagePass{romanbar}[2012/01/01]
                          2\DeclareRobustCommand {\Roman@bar}[1]{\% \ \#1 \ is \ in \ Roman, \ i.e. \ MMXII } 
                         3 \InlineClass[%
                              text-decoration: overline underline ;
                         5]{romanbar}{#1}%
                         6 }
                File 423 lwarp-romanbarpagenumber.sty
                        romanbarpagenumber
      § 532
               Package
                         romanbarpagenumber is ignored.
romanbarpagenumber (Pkg)
       for HTML output:
                         {\tt 1 \LWR@ProvidesPackageDrop\{romanbarpagenumber\}[2015/02/06]}
                File 424 lwarp-rotating.sty
               Package rotating
      § 533
                         (Emulates or patches code by Robin Fairbairns, Sebastian Rahtz, Leonor Barroca.)
          rotating (Pkg)
                        rotating is emulated.
                         All rotations are ignored in HTML output.
                         1 \LWR@ProvidesPackagePass{rotating}[2016/08/11]
       for HTML output:
                         2 \RequirePackage{graphicx}
```

```
3 \LetLtxMacro\LWR@HTML@sidewaystable\table
4 \let\endLWR@HTML@sidewaystable\endtable
5 \LWR@formattedenv{sidewaystable}
7 \LetLtxMacro\LWR@HTML@sidewaysfigure\figure
8 \let\endLWR@HTML@sidewaysfigure\endfigure
9 \LWR@formattedenv{sidewaysfigure}
11 \newenvironment*{LWR@HTML@sideways}{}{}
12 \LWR@formattedenv{sideways}
14 \newenvironment*{LWR@HTML@turn}[1]{}{}
15 \LWR@formattedenv{turn}
17 \newenvironment*{LWR@HTML@rotate}[1]{}{}
18 \LWR@formattedenv{rotate}
20 \NewDocumentCommand{\LWR@HTML@turnbox}{m +m}{#2}
21 \LWR@formatted{turnbox}
23 \let\LWR@HTML@rotcaption\caption
24 \LWR@formatted{rotcaption}
26 \let\LWR@HTML@@makerotcaption\@makecaption
27 \LWR@formatted{@makerotcaption}
```

File 425 lwarp-rotfloat.sty

§534 Package rotfloat

(Emulates or patches code by Axel Sommerfeldt.)

\newfloat $\{\langle 1: type \rangle\}$ $\{\langle 2: placement \rangle\}$ $\{\langle 3: ext \rangle\}$ $[\langle 4: within \rangle]$

rotfloat (Pkg) rotfloat is emulated.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{rotfloat}[2004/01/04]
2
3 \RequirePackage{float}
4 \RequirePackage{rotating}
```

Emulates the \newfloat command from the float package. Sideways floats are \let to the same as regular floats.

"placement" is ignored.

```
5 \RenewDocumentCommand{\newfloat}{m m m o}{%
6 \IfValueTF{#4}%
7 {%
8  \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
9 }%
10 {%
11  \DeclareFloatingEnvironment[fileext=#3]{#1}%
12 }%
13 \csletcs{sideways#1}{#1}%
14 \csletcs{endsideways#1}{end#1}%
```

Remember the float style:

```
15 \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
16 \csedef{LWR@floatstyle@sideways#1}{\LWR@floatstyle}%
```

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later:

```
17 \cslet{listof#1s}\relax%
18 \cslet{listof#1es}\relax%
19 \cslet{listofsideways#1s}\relax%
20 \cslet{listofsideways#1es}\relax%
21 }
```

File 426 lwarp-rviewport.sty

§ 535 Package rviewport

rviewport(Pkg) rviewport is honored inside a lateximage, and otherwise ignored for HTML output.

If rviewport is important for an image, enclose the image inside a lateximage environment.

for HTML output: 1 \LWR@ProvidesPackagePass{rviewport}[2011/08/27]

2\define@key{igraph}{rviewport}{}

File 427 lwarp-savetrees.sty

§ 536 Package Savetrees

savetrees (Pkg) savetrees is ignored.

for HTML output: Discard all options for lwarp-savetrees:

1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]

File 428 lwarp-scalefnt.sty

§537 Package scalefnt

($Emulates\ or\ patches\ code\ by\ D.\ Carlisle.$)

scalefnt (Pkg) scalefnt is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{scalefnt}

2 \DeclareRobustCommand\scalefont[1]{}

File 429 lwarp-scalerel.sty

Package scalerel **§ 538** (Emulates or patches code by Steven B. Segletes.) scalerel (Pkg) scalerel is used as-is for svg math, and is emulated and ignored for MATHJAX. for HTML output: 1 \LWR@ProvidesPackagePass{scalerel}[2016/12/29] For MATHJAX: 2 \begin{warpMathJax} 3 \LWR@infoprocessingmathjax{scalerel} 5 \CustomizeMathJax{\newcommand{\scalerel}{\ifstar{\scalerelplain}{\scalerelplus}}} 6 \CustomizeMathJax{\newcommand{\scalerelplain}[3][]{#2}} 7 \CustomizeMathJax{\newcommand{\scalerelplus}[3][]{#2#3}} $\\ 8 \customize Math Jax {\newcommand {\stretchrel} {\stretchrelplain} {\stretchrelplus}} \}$ 9 \CustomizeMathJax{\newcommand{\stretchrelplain}[3][]{#2}} 10 \CustomizeMathJax{\newcommand{\stretchrelplus}[3][]{#2#3}} 11 \CustomizeMathJax{\newcommand{\scaleto}[3][]{#2}} 12 \CustomizeMathJax{\newcommand{\stretchto}[3][]{#2}} 13 \CustomizeMathJax{\newcommand{\scaleleftright}[4][]{#2#3#4}} 14 \CustomizeMathJax{\newcommand{\stretchleftright}[4][]{#2#3#4}} 15 \CustomizeMathJax{\newcommand{\hstretch}[2]{#2}} 16 \CustomizeMathJax{\newcommand{\vstretch}[2]{#2}} 17 \CustomizeMathJax{\newcommand{\scaleobj}[2]{#2}} 18 \CustomizeMathJax{\newcommand{\ThisStyle}[1]{#1}} 19 \CustomizeMathJax{\newcommand{\SavedStyle}{}} ${\tt 20 \CustomizeMathJax\{\def\scriptstyleScaleFactor\{.7\}\}}$ 21 \CustomizeMathJax{\def\scriptscriptstyleScaleFactor{.5}} 22 \CustomizeMathJax{\newcommand{\discernmathstyle}{}} 23 \CustomizeMathJax{\newcommand{\ignoremathstyle}[1][T]{}} 24 \CustomizeMathJax{\newcommand{\Isnextbyte}[3][v]{}} 25 \end{warpMathJax} File 430 lwarp-schemata.sty

```
$539 Package Schemata

(Emulates or patches code by Charles P. Schaum.)

schemata (Pkg) schemata is patched for use by lwarp.

1 \LWR@ProvidesPackagePass{schemata}[2020/11/23]

2 \LetLtxMacro\LWR@schemata@origschema\schema
3 \LetLtxMacro\LWR@schemata@origSchema\Schema
4
5 \renewcommand{\schema}[3][open]{%
6 \begin{lateximage}[-schemata-~\PackageDiagramAltText]%
7 \LWR@print@normalsize%
```

```
8  \LWR@schemata@origschema[#1]{#2}{#3}%
9  \end{lateximage}%
10 }
11
12 \renewcommand{\Schema}[5][open]{%
13  \begin{lateximage}[-schemata~~\PackageDiagramAltText]%
14  \LWR@print@normalsize%
15  \LWR@schemata@origSchema[#1]{#2}{#3}{#4}{#5}%
16  \end{lateximage}%
17 }
```

File 431 lwarp-scrextend.sty

§ 540 Package scrextend

scrextend (Pkg) scrextend is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. \DeclareDocumentCommand is used to overwrite the koma-script definitions.

for HTML output: 1 \LWR@ProvidesPackageDrop{scrextend}[2020/01/24]

```
2 \DeclareDocumentCommand{\setkomafont}{m m}{}
3 \DeclareDocumentCommand{\addkomafont}{m m}{}
4 \DeclareDocumentCommand{\usekomafont}{m}{}
5
6 \DeclareDocumentCommand{\usefontofkomafont}{m}{}
7 \DeclareDocumentCommand{\useencodingofkomafont}{m}{}
8 \DeclareDocumentCommand{\useencodingofkomafont}{m}{}
9 \DeclareDocumentCommand{\usefamilyofkomafont}{m}{}
10 \DeclareDocumentCommand{\useseriesofkomafont}{m}{}
11 \DeclareDocumentCommand{\useshapeofkomafont}{m}{}
12
13 \providecommand*{\coverpagetopmargin}{}
14 \providecommand*{\coverpagebottommargin}{}
15 \providecommand*{\coverpageleftmargin}{}
16 \providecommand*{\coverpagerightmargin}{}
17
```

Title page:

```
18 \AtBeginDocument{
      \let\LWR@koma@orig@maketitle\maketitle
      \DeclareDocumentCommand{\maketitle}{o}{\LWR@koma@orig@maketitle}
20
21 }
23 \providecommand*{\@maketitle}{}
24 \renewrobustcmd{\@maketitle}{%
      \ifdefvoid{\@titlehead}{}{%
          \begin{BlockClass}{titlehead}%
26
27
          \@titlehead%
28
          \end{BlockClass}%
29
      \ifdefvoid{\@subject}{}{%
30
          \begin{BlockClass}{subject}%
31
```

```
32
                            \@subject%
                            \end{BlockClass}%
33
34
35
                \LWR@stoppars%
36
                \LWR@htmltag{\LWR@tagtitle}%
37
                \@title%
                \LWR@htmltag{\LWR@tagtitleend}%
38
                \ifdefvoid{\@subtitle}{}{%
39
                           \begin{BlockClass}{subtitle}%
40
                            \@subtitle%
41
                            \end{BlockClass}%
42
43
                }%
44
                 \LWR@startpars%
45
                 \begin{BlockClass}{author}%
                \renewcommand*{\cr}{}%
46
47
                \renewcommand*{\crcr}{}%
                 \renewcommand*{\noalign}{}%
48
                           \renewcommand{\and}{%
49
                                      \end{BlockClass}%
50
51
                                      \begin{BlockClass}{oneauthor}%
52
                            \begin{BlockClass}{oneauthor}%
53
                                      \@author%
55
                           \end{BlockClass}%
                \end{BlockClass}%
56
                \begin{BlockClass}{titledate}%
57
                \@date%
58
                \end{BlockClass}%
59
                \ifdefvoid{\equivar}{}
60
                            \begin{BlockClass}{published}%
61
                            \@published%
62
63
                            \end{BlockClass}%
                }%
65 }
67 \AddSubtitlePublished
69 \DeclareDocumentCommand{\extratitle}{m}{}
70 \DeclareDocumentCommand{\frontispiece}{m}{}
72 \def\@titlehead{}%
73 \DeclareDocumentCommand{\titlehead}m{\gdef\@titlehead{#1}}%
75 \def\@subject{}%
76 \end{\textsubject} \end{\textsubject} \final \e
77
78% \subtitle and \published are defined by \AddSubtitlePublished
80 \label{lem:lem:lem:mand} $$ \end{\publishers} {m}{\published{\#1}} $$
81
82 \DeclareDocumentCommand{\uppertitleback}{m}{}
83 \DeclareDocumentCommand{\lowertitleback}{m}{}
84 \DeclareDocumentCommand{\dedication}{m}{}
86 \DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
89 \DeclareDocumentCommand{\cleardoubleemptypage}{}{}
```

```
90 \DeclareDocumentCommand{\cleardoubleplainpage}{}{}
91 \DeclareDocumentCommand{\cleardoublestandardpage}{}{}
92 \DeclareDocumentCommand{\cleardoubleoddpage}{}{}
93 \verb|\DeclareDocumentCommand{\cleardoubleoddpageusingstyle}{m}{} 
94 \DeclareDocumentCommand{\cleardoubleoddemptypage}{}{}
95 \DeclareDocumentCommand{\cleardoubleoddplainpage}{}{}
96 \DeclareDocumentCommand{\cleardoubleoddstandardpage}{}{}
97 \DeclareDocumentCommand{\cleardoubleevenpage}{}{}
98 \DeclareDocumentCommand{\cleardoubleevenpageusingstyle}\{m\}{}
99 \DeclareDocumentCommand{\cleardoubleevenemptypage}{}{}
100 \DeclareDocumentCommand{\cleardoubleevenplainpage}{}{}
101 \DeclareDocumentCommand{\cleardoubleevenstandardpage}{}{}
{\tt 103 \setminus Declare Document Command \{\setminus multiple footnote separator\} \{\} \{\% \}}
104
    \begingroup\let\thefootnotemark\multfootsep\@makefnmark\endgroup
105 }
106
107 \DeclareDocumentCommand{\multfootsep}{}{,}
108
109 \DeclareDocumentCommand{\footref}{m}{%
    \begingroup
110
       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
111
112
    \endgroup
    \@footnotemark
114 }
115
116 \DeclareDocumentCommand{\deffootnote}{o m m m}{}
117 \DeclareDocumentCommand{\deffootnotemark}{m}{}
118 \DeclareDocumentCommand{\setfootnoterule}{o m}{}
119 \DeclareDocumentCommand{\raggedfootnote}{}{}
120 \DeclareDocumentCommand{\dictum}{o m}{
123
       \IfValueT{#1}
124
           \LWR@stoppars%
125
           \ifbool{FormatWP}
126
        {\begin{BlockClass}[\LWR@print@mbox{border-top:} 1px solid gray]{dictumauthor}}
127
           {\begin{BlockClass}{dictumauthor}}
128
           \dictumauthorformat{#1}
129
           \end{BlockClass}
130
131
132 \end{LWR@BlockClassWP}
133 }
135 \DeclareDocumentCommand{\dictumwidth}{}{}
136 \DeclareDocumentCommand{\dictumauthorformat}{m}{(#1)}
137 \DeclareDocumentCommand{\dictumrule}{}{}
138 \DeclareDocumentCommand{\raggeddictum}{}{}
{\tt 139 \backslash Declare Document Command \{ \backslash ragged dictumtext \} \{ \} \{ \} \}}
140 \DeclareDocumentCommand{\raggeddictumauthor}{}{}
141
142 \DeclareDocumentEnvironment{labeling}{o m}
143 { %
144 \def\sc@septext{#1}%
145 \list{}{}%
146 \let\makelabel\labelinglabel%
147 }
148 {
```

```
149 \endlist
150 }
\label{limination} \mbox{152 \ensuremath{\mbox{\sc NeclareDocumentCommand{\labelinglabel}{\{m\}\{\%\}}}} \label{limination}
153 #1 \qquad \sc@septext%
156 \let\addmargin\relax
157 \let\endaddmargin\relax
158 \cslet{addmargin*}{\relax}
159 \cslet{endaddmargin*}{\relax}
160 \NewDocumentEnvironment{addmargin}{s 0{} m}
162 \LWR@stoppars%
163 \setlength{\LWR@templengthtwo}{#3}
164 \ifblank{#2}
165 {
       \begin{BlockClass}[
166
           \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
167
            \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
168
169
       ]{addmargin}
170 }
171 {
172
       \setlength{\LWR@templengthone}{#2}
173
       \begin{BlockClass}[
           \label{lem:lembox} $$ LWR@printlength{\LWR@templengthone}$ ;
174
           \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
175
176
       ]{addmargin}
177 }
178 }
179 {\end{BlockClass}\LWR@startpars}
 Ref to create a starred environment:
 https://tex.stackexchange.com/questions/45401/
       use-the-s-star-argument-with-newdocumentenvironment
180
181 \ExplSyntaxOn
182 \cs_new:cpn {addmargin*} {\addmargin*}
183 \cs_new_eq:cN {endaddmargin*} \endaddmargin
184 \ExplSyntaxOff
185
186 \DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}
```

File 432 lwarp-scrhack.sty

for HTML output:

```
§ 541 Package Scrhack
scrhack (Pkg) scrhack is ignored.
```

1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

File 433 lwarp-scrlayer.sty

Package scrlayer **§ 542**

(Emulates or patches code by MARKUS KOHM.)

scrlayer (Pkg) scrlayer is emulated.

```
Not fully tested! Please send bug reports!
for HTML output:
                   1 \LWR@ProvidesPackageDrop{scrlayer}[2018/03/30]
                   2 \newcommand*{\DeclareSectionNumberDepth}[2]{}
                   3 \newcommand*{\DeclareLayer}[2][]{}
                   4 \newcommand*{\DeclareNewLayer}[2][]{}
                   5 \newcommand*{\ProvideLayer}[2][]{}
                   6 \newcommand*{\RedeclareLayer}[2][]{}
```

- 7 \newcommand*{\ModifyLayer}[2][]{} 8 \newcommand*{\layerhalign}{} 9 \newcommand*{\layervalign}{} 10 \newcommand*{\layerxoffset}{}
- 11 \newcommand*{\layeryoffset}{} 12 \newcommand*{\layerwidth}{} 13 $\mbox{\label{layerheight}{}}$
- 15 \newcommand*{\putUL}[1]{} 16 \newcommand*{\putUR}[1]{} 17 \newcommand*{\putLL}[1]{} 18 \newcommand*{\putLR}[1]{}
- 19 \newcommand*{\putC}[1]{} 20 \newcommand*{\GetLayerContents}[1]{}
- 21 \newcommand{\IfLayerExists}[3]{#3} 22 \newcommand*{\DestroyLayer}[1]{} 23 \newcommand*{\layercontentsmeasure}{}
- 24 \newcommand*{\currentpagestyle}{} 25 \newcommand*{\BeforeSelectAnyPageStyle}[1]{}
- 26 \newcommand*{\AfterSelectAnyPageStyle}[1]{} 27 \newcommand*{\DeclarePageStyleAlias}[2]{}
- 28 \newcommand*{\DeclareNewPageStyleAlias}[2]{} 29 \newcommand*{\ProvidePageStyleAlias}[2]{}
- 30 \newcommand*{\RedeclarePageStyleAlias}[2]{}
- 31 \newcommand*{\DestroyPageStyleAlias}[1]{}
- 32 \newcommand*{\GetRealPageStyle}[1]{}
- 33 \newcommand*{\DeclarePageStyleByLayers}[3][]{} 34 \newcommand*{\DeclareNewPageStyleByLayers}[3][]{}
- 35 \newcommand*{\ProvidePageStyleByLayers}[3][]{}
- 36 \newcommand*{\RedeclarePageStyleByLayers}[3][]{} 37 \NewDocumentCommand{\ForEachLayerOfPageStyle}{s m m}{}
- 38 \newcommand*{\AddLayersToPageStyle}[2]{}
- 39 \newcommand*{\AddLayersAtBeginOfPageStyle}[2]{} 40 \newcommand*{\AddLayersAtEndOfPageStyle}[2]{}
- 41 \newcommand*{\RemoveLayersFromPageStyle}[2]{}
- 42 \newcommand*{\AddLayersToPageStyleBeforeLayer}[3]{} 43 \newcommand*{\AddLayersToPageStyleAfterLayer}[3]{}
- 44 \newcommand*{\UnifyLayersAtPageStyle}[1]{}
- 45 \newcommand*{\ModifyLayerPageStyleOptions}[2]{}

```
46 \newcommand*{\AddToLayerPageStyleOptions}[2]{}
47 \newcommand{\IfLayerPageStyleExists}[3]{#3}
48 \newcommand{\IfRealLayerPageStyleExists}[3]{#3}
49 \newcommand{\IfLayerAtPageStyle}[4]{#4}
50 \newcommand{\IfSomeLayerAtPageStyle}[4]{#4}
51 \newcommand{\IfLayersAtPageStyle}[4]{#4}
52 \newcommand*{\DestroyRealLayerPageStyle}[1]{}
53 \@ifundefined{footheight}{\newlength\footheight}{}
54 \DeclareDocumentCommand{\automark}{s o m}{}
55 \DeclareDocumentCommand{\manualmark}{}{}
56 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
57 \newcommand{\partmarkformat}{}
58 \if@chapter
59 \newcommand{\chaptermarkformat}{}
60\fi
61 \newcommand{\sectionmarkformat}{}
62 \DeclareDocumentCommand{\GenericMarkFormat}{m}{}
63 \newcommand*{\@mkleft}[1]{}
64 \newcommand*{\@mkright}[1]{}
65 \newcommand*{\@mkdouble}[1]{}
66 \newcommand*{\@mkboth}[2]{}
 67 \end{*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\co
68 \newcommand{\scrlayerAddToInterface}[3][]{}
69 \newcommand{\scrlayerAddCsToInterface}[3][]{}
70 \newcommand{\scrlayerOnAutoRemoveInterface}[2][]{}
```

File 434 lwarp-scrlayer-notecolumn.sty

Package scrlayer-notecolumn **§ 543**

(Emulates or patches code by MARKUS KOHM.)

scrlayer-notecolumn (Pkg) scrlayer-notecolumn is emulated.

⚠ Not fully tested! Please send bug reports!

1 \LWR@ProvidesPackageDrop{scrlayer-notecolumn}[2018/02/02] for HTML output:

> 2 \newcommand*{\DeclareNoteColumn}[2][]{} 3 \newcommand*{\DeclareNewNoteColumn}[2][]{} 4 \newcommand*{\ProvideNoteColumn}[2][]{} 5 \newcommand*{\RedeclareNoteColumn}[2][]{} 6 \NewDocumentCommand{\makenote}{s o m}{\marginpar{#3}}

7 \newcommand*{\syncwithnotecolumn}[1][]{} 8 \newcommand*{\syncwithnotecolumns}[1][]{} 9 \newcommand*{\clearnotecolumn}[1][]{}

10 \newcommand*{\clearnotecolumns}[1][]{}

File 435 lwarp-scrlayer-scrpage.sty

Package scrlayer-scrpage **§ 544**

(Emulates or patches code by Markus Kohm.)

```
scrlayer-scrpage(Pkg)
                      scrlayer-scrpage is ignored.
 ⚠ Not fully tested!
                       Please send bug reports!
     for HTML output:
                       1 \LWR@ProvidesPackageDrop{scrlayer-scrpage}[2018/03/30]
                       2 \@ifundefined{footheight}{\newlength\footheight}{}
                       3 \NewDocumentCommand{\lehead}{s o m}{}
                       4 \NewDocumentCommand{\cehead}{s o m}{}
                       5 \NewDocumentCommand{\rehead}{s o m}{}
                       6 \NewDocumentCommand{\lohead}{s o m}{}
                       7 \NewDocumentCommand{\cohead}{s o m}{}
                       8 \NewDocumentCommand{\rohead}{s o m}{}
                       9 \NewDocumentCommand{\lefoot}{s o m}{}
                       10 \NewDocumentCommand{\cefoot}{s o m}{}
                       11 \NewDocumentCommand{\refoot}{s o m}{}
                       12 \NewDocumentCommand{\lofoot}{s o m}{}
                       13 \NewDocumentCommand{\cofoot}{s o m}{}
                       14 \NewDocumentCommand{\rofoot}{s o m}{}
                       15 \NewDocumentCommand{\ohead}{s o m}{}
                       16 \NewDocumentCommand{\chead}{s o m}{}
                       17 \NewDocumentCommand{\ihead}{s o m}{}
                       18 \NewDocumentCommand{\ofoot}{s o m}{}
                       19 \NewDocumentCommand{\cfoot}{s o m}{}
                       20 \NewDocumentCommand{\ifoot}{s o m}{}
                       21 \NewDocumentCommand{\automark}{som}{}
```

- 22 \newcommand*{\manualmark}{}
- 23 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}

```
24 \let\headmark\leftmark
```

- ${\tt 25 \normalfont} \\ {\tt normalfont} \\ \\ \\$

```
27 \newcommand*{\defpairofpagestyles}[3][]{}
```

- 28 \newcommand*{\newpairofpagestyles}[3][]{}
- 29 \newcommand*{\renewpairofpagestyles}[3][]{}
- 30 \newcommand*{\providepairofpagestyles}[3][]{}
- 31 \newcommand*{\clearmainofpairofpagestyles}{}
- 32 \newcommand*{\clearplainofpairofpagestyles}{}

- 35 \newcommand*{\clearscrheadfoot}{}
- 36 \newcommand*{\clearscrplain}{}
- 37 \NewDocumentCommand{\deftriplepagestyle}{m o o m m m m m}{}
- 38 $\MewDocumentCommand{\newtriplepagestyle}{m o o m m m m m}{}$
- 39 $\MewDocumentCommand{\renewtriplepagestyle}{m o o m m m m m}{}$
- 40 \NewDocumentCommand{\providetriplepagestyle}{m o o m m m m m}{}
- 41 \newcommand*{\defpagestyle}[3]{}
- 42 \newcommand*{\newpagestyle}[3]{}
- 43 \newcommand*{\providepagestyle}[3]{}
- 44 \newcommand*{\renewpagestyle}[3]{}

File 436 lwarp-scrpage2.sty

scrpage2 Package **§ 545**

(Emulates or patches code by MARKUS KOHM.)

scrpage2 (Pkg) scrpage2 is ignored.

Not fully tested! Please send bug reports!

```
for HTML output:
                  1 \LWR@ProvidesPackageDrop{scrpage2}[2018/03/30]
                  2 \@ifundefined{footheight}{\newlength\footheight}{}
                  3 \NewDocumentCommand{\lehead}{o m}{}
                  4 \NewDocumentCommand{\cehead}{o m}{}
                  5 \NewDocumentCommand{\rehead}{o m}{}
                  6 \NewDocumentCommand{\lohead}{o m}{}
                  7 \NewDocumentCommand{\cohead}{o m}{}
                  8 \NewDocumentCommand{\rohead}{o m}{}
                  9 \NewDocumentCommand{\lefoot}{o m}{}
                  10 \NewDocumentCommand{\cefoot}{o m}{}
                  11 \NewDocumentCommand{\refoot}{o m}{}
                  12 \NewDocumentCommand{\lofoot}{o m}{}
                  13 \NewDocumentCommand{\cofoot}{o m}{}
                  14 \NewDocumentCommand{\rofoot}{o m}{}
                  15 \NewDocumentCommand{\ohead}{o m}{}
                  16 \NewDocumentCommand{\chead}{o m}{}
                  17 \NewDocumentCommand{\ihead}{o m}{}
                  18 \NewDocumentCommand{\ofoot}{o m}{}
                  19 \NewDocumentCommand{\cfoot}{o m}{}
                  20 \NewDocumentCommand{\ifoot}{o m}{}
                  21 \DeclareDocumentCommand{\automark}{o m}{}
                  22 \DeclareDocumentCommand{\manualmark}{}{}
                 23 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
                  24 \NewDocumentCommand{\deftripstyle}{m o o m m m m m m}{}
                 25 \NewDocumentCommand{\defpagestyle}{s m m m}{}
                  26 \NewDocumentCommand{\newpagestyle}{s m m m}{}
                  27 \NewDocumentCommand{\renewpagestyle}{s m m m}{}
                  28 \NewDocumentCommand{\providepagestyle}{s m m m}{}
                  29 \newcommand{\partmarkformat}{}
                  30 \if@chapter
                  31 \newcommand{\chaptermarkformat}{}
                  33 \newcommand{\sectionmarkformat}{}
                  34 \newcommand{\subsectionmarkformat}{}
                  35 \newcommand{\subsubsectionmarkformat}{}
                 36 \newcommand{\paragraphmarkformat}{}
                  37 \newcommand{\subparagraphmarkformat}{}
                 39 \newcommand*{\clearscrheadings}{}
                  40 \newcommand*{\clearscrheadfoot}{}
                  41 \newcommand*{\clearscrplain}{}
```

File 437 lwarp-section.sty

```
Package section
§ 546
     section (Pkg) section is ignored.
                    (Emulates or patches code by Oliver Pretzel.)
for HTML output:
                    1 \LWR@ProvidesPackageDrop{section}
                    2\ifx\chapter\undefined
                    3 \def\chsize{\Large}\def\hdsize{\huge}\else
                    \label{lem:defhdsize} $$4 \def\hdsize{\Huge}$
                    5∖fi
                    6 \let\ttsize\LARGE
                    7 \let\ausize\large
                    8 \let\dasize\large
                    9 \let\secsize\Large
                    10 \let\subsize\large
                   11 \let\hdpos\raggedright
                   12 \newcounter{hddepth}
                   13 \left\lceil \frac{13}{e} \right\rceil
                   14 \def\ttfnt{}
                   15 \def\hdfnt{}
                   16 \def\fefnt{}
                   17 \def\thfnt{}
                   18 \def\pgfnt{}
                   19 \def\hmkfnt{}
                   20 \let\mkcse\uppercase
                   21 \def \hddot{}
                   22 \def\cpdot{:}
                   23 \def\nmdot{}
                   24 \ifx\secindent\undefined
                   25 \newdimen\secindent
                   26 \newskip\secpreskp
                   27 \newskip\secpstskp
                   28 \newdimen\subindent
                   29 \newskip\subpreskp
                   30 \newskip\subpstskp
                   31 \newskip\parpstskp
```

File 438 lwarp-sectionbreak.sty

32 \newcount\c@hddepth

§ 547 Package sectionbreak

33\fi

(Emulates or patches code by Michal Hoffich.)

sectionbreak (*Pkg*) sectionbreak is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{sectionbreak}[2018-01-03]

```
2\renewcommand\asterism{\HTMLunicode{2042}}
                   4\renewcommand\pre@sectionbreak{}
                   5 \renewcommand\post@sectionbreak{}
                   7\renewcommand\print@sectionbreak[1]{%
                   8 \begin{center}
                   9 #1
                  10 \end{center}
                  11 }
                  12
         File 439 lwarp-sectsty.sty
         Package Sectsty
§ 548
                   (Emulates or patches code by Rowland McDonnell.)
    sectsty (Pkg) sectsty is ignored.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{sectsty}[2002/02/25]
                   2 \newcommand*{\partfont}
                                                      [1] {}
                   3 \newcommand*{\partnumberfont}
                                                      [1] {}
                   4 \newcommand*{\parttitlefont}
                                                      [1] {}
                   5 \newcommand*{\chapterfont}
                                                      [1] {}
                   6 \newcommand*{\chapternumberfont} [1] {}
                   7\newcommand*{\chaptertitlefont} [1] {}
                   8 \newcommand*{\sectionfont}
                                                      [1] {}
                   9 \newcommand*{\subsectionfont}
                                                      [1] {}
                  10 \newcommand*{\subsubsectionfont} [1] {}
                  11 \newcommand*{\paragraphfont}
                                                      [1] {}
                  12 \newcommand*{\subparagraphfont} [1] {}
                  13 \newcommand*{\minisecfont} [1] {}
                  14 \newcommand*{\allsectionsfont}[1] {}
                  15 \newcommand{\nohang}{}
                   \sectionrule is only to be used in *font commands, thus it is ignored.
                  16 \newcommand*{\sectionrule}[5]{}
                  18 \def\ulemheading#1#2{}
         File 440 lwarp-selectp.sty
         Package selectp
§ 549
```

1 \LWR@ProvidesPackageDrop{selectp}% no date given

2 \newcommand*{\outputonly}[1]{}

selectp (Pkg) selectp is ignored.

for HTML output:

File 441 lwarp-semantic-markup.sty

§ 550 Package semantic-markup

(Emulates or patches code by Andrew A. Cashner.)

semantic-markup (*Pkg*) semantic-markup is patched for use by lwarp.

 \triangle

If using the endnotes option, add \theendnotes where desired.

for HTML output:

1 \LWR@ProvidesPackagePass{semantic-markup}[2018/05/21]

The endnotes must be printed by the user before the end of the document, since the end is after the HTML footer, etc.

```
2 \ifendnotes
3 \RenewDocumentCommand{\SetupEndnotes}{}{%
4  \let\footnote=\endnote
5 %  \AtEndDocument{\DoBeforeEndnotes{\EndnoteFont\theendnotes}}%
6 }
7 \fi
```

HTML unicode characters from musicography are used.

```
8 \RequirePackage{musicography}
9
10 \let\fl\musFlat
11 \let\sh\musSharp
12 \let\na\musNatural
```

The \musfig is placed inside a hashed image, with a simple alt tag.

```
13 \RequirePackage{amsmath}
15 \RenewDocumentCommand{\musfig}{ m m }{%
     \LWR@subsingledollar*%
16
        {#1/#2}% alt tag
17
        {musfig}% addl' hashing
18
19
        {% contents
20
            \LWR@origensuredmath{%
21
               }%
22
        }%
23
24 }
```

The \meter is taken from musicography, and becomes a hashed image with a simple alt tag.

```
25 \RenewDocumentCommand{\meter}{ m m }{%
26 \musMeter{#1}{#2}%
27 }
```

File 442 lwarp-seqsplit.sty

§551 Package seqsplit

(Emulates or patches code by Boris Veytsman.)

seqsplit (*Pkg*) seqsplit is patched for use by lwarp.

For HTML output, the results are similar to print mode, and respond to window size

For svG math, the output differs from print mode in that the contents are formatted in a minipage, which is then inline with the surrounding math.

For MathJax, the contents are used as-is.

for HTML output:

1 \LWR@ProvidesPackagePass{seqsplit}[2006/08/07]

Special handling because lwarp uses a box for svg math, which does not normally allow line breaks, so a print-mode minipage must be used to allow line breaks. The minipage will not be wrapped inline with any surrounding math.

```
2 \begin{warpHTML}
3 \LetLtxMacro\LWR@orig@seqsplit\seqsplit
5 \renewcommand*{\seqsplit}[1]{%
      \ifmmode%
7
          \begin{LWR@print@minipage}{6in}%
8
          \LWR@orig@seqsplit{#1}%
9
          \end{LWR@print@minipage}%
10
        \InlineClass[word-wrap:break-word]{seqsplit}{\LWR@orig@seqsplit{#1}}%
11
      \fi
12
13 }
```

Between characters, an empty ${\tt HTML}$ comment is placed to allow a line wrap in the ${\tt HTML}$ source, without adding spaces in the output.

File 443 lwarp-setspace.sty

§ 552 Package **SetSpace**

(Emulates or patches code by Robin Fairbairns.)

setspace (Pkg) setspace is emulated.

```
Discard all options for lwarp-setspace:
                   1 \LWR@ProvidesPackageDrop{setspace}[2011/12/19]
for HTML output:
                   3 \newcommand*{\setstretch}[1]{}
                   4 \newcommand*{\SetSinglespace}[1]{}
                   5 \newcommand*{\singlespacing}{}
                   6 \newcommand*{\onehalfspacing}{}
                   7 \newcommand*{\doublespacing}{}
                   9 \newenvironment*{singlespace}
                  10 {
                  11 \LWR@forcenewpage
                  12 \BlockClass{singlespace}
                  13 }
                  14 {\endBlockClass}
                  16 \newenvironment*{singlespace*}
                  18 \LWR@forcenewpage
                  19 \BlockClass{singlespace}
                  20 }
                  21 {\endBlockClass}
                  23 \newenvironment*{spacing}[1]{
                  25 }{
                  26
                  27 }
                  29 \newenvironment*{onehalfspace}
                  30 {
                  31 \LWR@forcenewpage
                  32 \BlockClass{onehalfspace}
                  34 {\endBlockClass}
                  36 \newenvironment*{doublespace}
                  38 \LWR@forcenewpage
                  39 \BlockClass{doublespace}
                  40 }
                  41 {\endBlockClass}
```

File 444 lwarp-shadethm.sty shadethm Package **§ 553** (Emulates or patches code by Jim Hefferon.) shadethm(Pkg)shadethm is patched for use by lwarp. for HTML output: 1 \LWR@ProvidesPackagePass{shadethm}[1999/11/23] 2 \newenvironment{LWR@HTML@shadebox} 3 {% \convertcolorspec{named}{shadethmcolor}{HTML}\LWR@tempcolor% 5 \convertcolorspec{named}{shaderulecolor}{HTML}\LWR@tempcolortwo% \begin{BlockClass}[% 6 background: \LWR@origpound\LWR@tempcolor ; border: 1px solid \LWR@origpound\LWR@tempcolortwo ; 8]{shadebox} 9 10 }% 11 {\end{BlockClass}} 12 \LWR@formattedenv{shadebox} File 445 lwarp-shadow.sty

```
§ 554 Package shadow
```

(Emulates or patches code by Mauro Orlandini.)

shadow (*Pkg*) shadow is emulated.

for HTML output: Discard all options for lwarp-shadow:

1 \LWR@ProvidesPackageDrop{shadow}[2003/02/19]

```
2 \newdimen\sboxsep
3 \newdimen\sboxrule
4 \newdimen\sdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8}
```

File 446 lwarp-shapepar.sty

§ 555 Package shapepar

(Emulates or patches code by Donald Arseneau.)

shapepar (*Pkg*) shapepar is patched for use by lwarp. Shapes appear in print mode, as well as inside a lateximage, but are ignored for HTML.

for HTML output: 1 \LWR@ProvidesPackagePass{shapepar}[2013/03/26]

2 \newcommand*{\LWR@HTML@shapepar}[2][]{}

3 \LWR@formatted{shapepar}

4

5 \NewDocumentCommand{\LWR@HTML@cutout}{m d()}{}

6 \LWR@formatted{cutout}

File 447 lwarp-showidx.sty

§ 556 Package **showidx**

showidx (Pkg) showidx is ignored.

for HTML output: Discard all options for lwarp-showidx:

1 \LWR@ProvidesPackageDrop{showidx}[2014/09/29]

\@wrindex is redefined \AtBeginDocument by the lwarp core.

File 448 lwarp-showkeys.sty

§ 557 Package showkeys

(Emulates or patches code by David Carlisle, Morten Høgholm.)

showkeys (Pkg) showkeys is ignored.

for HTML output: Discard all options for lwarp-showkeys:

1 \LWR@ProvidesPackageDrop{showkeys}[2014/10/28]

 ${\tt 2 \ NewDocumentCommand \{ \ showkeys \} \{ s \} \{ \} }$

File 449 lwarp-showlabels.sty

§ 558 Package showlabels

showlabels (*Pkg*) showlabels is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{showlabels}[2021/10/27]

2\providecommand{\showlabelfont}{}

3 \providecommand{\showlabelsetlabel}[1]{}

4 \newcommand*{\showlabels}[2][]{}

5 \newcommand*{\showlabelrefline}{}

6 \newcommand*{\showlabelsinline}{}

File 450 lwarp-showtags.sty

§ 559 Package showtags

showtags (Pkg) showtags is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{showtags}% no version is given

2 \newcommand{\thecitetag}[1]{}

File 451 lwarp-shuffle.sty

§ 560 Package shuffle

(Emulates or patches code by Julian Gilbey and Antoine Lejay.)

shuffle (Pkg) shuffle is emulated for svG math, and also emulated for MATHJAX.

The font used for shuffle may not render correctly when converted to svg math, so a picture environment drawing is used instead.

For MathJax, the Unicode character is used, and for \cshuffle a \bar is added.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{shuffle}[2008/10/27]
2 \LWR@origRequirePackage{lwarp-common-mathjax-overlaysymbols}
```

```
3 \newcommand*{\LWR@shuffle@start}{%
       \hspace*{.2em}
       \begin{picture}(.75,0.65)
       \setlength{\unitlength}{1em}
       \put(0,0){\line(1,0){.75}}
8
       \put(0,0){\line(0,1){.5}}
       \put(.375,0){\line(0,1){.5}}
       \begin{array}{l} \begin{array}{l} \text{(.75,0)} \\ \text{(ine(0,1)(.5)} \end{array} \end{array}
10
11 }
13 \newcommand*{\LWR@shuffle@finish}{%
       \end{picture}
14
       \hspace*{.75em}
15
       \hspace*{.2em}
16
17 }
18
19 \newcommand*{\shuffle}{%
       \LWR@shuffle@start%
20
21
       \LWR@shuffle@finish%
22 }
23
24 \newcommand*{\cshuffle}{%
       \LWR@shuffle@start%
       \put(.05,.65){\line(1,0){.65}}%
26
       \LWR@shuffle@finish%
27
28 }
```

```
29 \begin{warpMathJax}
            30 \CustomizeMathJax{\newcommand{\shuffle}{\mathbin{\unicode{0x29E2}}}}
            31 \CustomizeMathJax{\newcommand{\cshuffle}{%
                  33 }}
            34 \end{warpMathJax}
    File 452 lwarp-sidecap.sty
    Package sidecap
             (Emulates or patches code by Rolf Niepraschk, Hubert Gässlein.)
sidecap(Pkg)
             sidecap is emulated.
             Discard all options for lwarp-sidecap.
             1 \LWR@ProvidesPackageDrop{sidecap}[2003/06/06]
             See:
             http://tex.stackexchange.com/questions/45401/
             use-the-s-star-argument-with-newdocumentenvironment
             regarding the creation of starred environments with xparse.
             2 \NewDocumentEnvironment{SCtable}{soo}
             3 {\IfValueTF{#3}{\table[#3]}{\table}}
             4 {\endtable}
             6 \ExplSyntaxOn
             7\cs_new:cpn {SCtable*} {\SCtable*}
             8 \cs_new_eq:cN {endSCtable*} \endSCtable
             9 \ExplSyntaxOff
             10
            12 \NewDocumentEnvironment{SCfigure}{soo}
            13 {\IfValueTF{#3}{\figure[#3]}{\figure}}
            14 {\endfigure}
            16 \ExplSyntaxOn
            17 \cs_new:cpn {SCfigure*} {\SCfigure*}
            18 \cs_new_eq:cN {endSCfigure*} \endSCfigure
            19 \ExplSyntaxOff
            20
```

File 453 lwarp-sidenotes.sty

22 \newenvironment*{wide}{}{}

Package sidenotes **§ 562**

21

(Emulates or patches code by Andy Thomas, Oliver Schebaum.)

sidenotes (Pkg) Patched for lwarp.

for HTML output:

§561

for HTML output:

Load the original package:

```
1 \LWR@ProvidesPackagePass{sidenotes}
```

The following patch sidenotes for use with lwarp.

An ARIA note role is not assigned since the caption is an important part of the figure.

\sidecaption

```
* [\langle entry \rangle] [\langle offset \rangle] \{\langle text \rangle\}
2 \VerifyCommand[lwarp][sidenotes]{\sidecaption}{2EFE2196F612943BCF13746EC12E69D6}
4\RenewDocumentCommand \sidecaption {s o o m}
5 {
      \LWR@stoppars
6
      \begingroup
7
    \captionsetup{style=sidecaption}%
8
    \IfBooleanTF{#1}
9
    { % starred
10
      \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}%
11
12
      \caption*{#4}%
      \end{BlockClass}
13
14
    }
    { % unstarred
15
    \IfNoValueOrEmptyTF{#2}
16
17
      {\def\@sidenotes@sidecaption@tof{#4}}
18
      {\def\@sidenotes@sidecaption@tof{#2}}
      \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}%
19
      \caption[\@sidenotes@sidecaption@tof]{#4}
20
21
      \end{BlockClass}
22
23
      \endgroup
      \verb|\LWR@startpars||
24
25 }
```

Borrowed from the lwarp version of keyfloat:

```
26 \NewDocumentEnvironment{KFLTsidenotes@marginfloat}{O{-1.2ex} m}
27 {% start
28
      \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
29
      \renewcommand*{\@captype}{#2}%
30 }
31 {%
32
      \endLWR@BlockClassWP%
33 }
35 \RenewDocumentEnvironment{marginfigure}{o}
   {\begin{KFLTsidenotes@marginfloat}{figure}}
37
    {\end{KFLTsidenotes@marginfloat}}
39 \RenewDocumentEnvironment{margintable}{o}
   {\begin{KFLTsidenotes@marginfloat}{table}}
    {\end{KFLTsidenotes@marginfloat}}
```

The following were changed by sidenotes, and now are reset back to their lwarp-supported originals:

Restoring the definition from the LATEX $2_{\mathcal{E}}$ article.cls source:

```
42 \renewenvironment{figure*}
43 {\@dblfloat{figure}}
44 {\end@dblfloat}
45
46 \renewenvironment{table*}
47 {\@dblfloat{table}}
48 {\end@dblfloat}
```

For MATHJAX:



Note that sidenotes does not support \sidenote inside math in print mode. Use \sidenotemark and \sidenotetext instead.

```
49 \begin{warpMathJax}
50 \providecommand{\sidenotename}{sidenote}
51 \appto\LWR@syncnotenumbers{\LWR@synconenotenumber{LWRsidenote}{\thesidenote}}
52 \appto\LWR@syncnotenames{\LWR@synconenotename{LWRsidenote}{\sidenotename}}
53 \CustomizeMathJax{\def\LWRsidenote{1}}
54 \CustomizeMathJax{\newcommand{\sidenotemark}[1][\LWRsidenote]{{}^{\mathrm{#1}}}}
55 \end{\warpMathJax}
```

The following is not defined since is not allowed inside math in print mode, and also would have to be modified to parse the optional offset argument:

\CustomizeMathJax{\newcommand{\sidenote}[2][\LWRsidenote]{{}^{\mathrm{#1}}}}

File 454 lwarp-simplebnf.sty

§ 563 Package simplebnf

(Emulates or patches code by JAY LEE.)

simplebnf (*Pkg*) simplebnf is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{simplebnf}[2023-11-25]

The entire object is placed inside a lateximage whose alt text is the LATEX source BNF expression.

```
2 \ExplSyntaxOn
4 \VerifyEnvironment[lwarp][simplebnf]{bnf}
      {A7E8911B9291D4EB7C1CD8366CD75341}{3B45D7D9107687D718F5303B6632776C}
7 \RenewDocumentEnvironment { bnf } { d() 0{llcll} +b }
8
      \begin{lateximage}[bnf:\space\detokenize{#3}]%
9
                                                               lwarp
10
      \IfNoValueF { #1 }
11
        { \keys_set:nn { simplebnf } { #1 } }
12
13
      \__simplebnf_build_grammar:n { #3 }
14
15
```

```
\begin{@simplebnf_tblr_env}[expand=\l__simplebnf_table_tl]{#2}
16
        \tl_use:N \l__simplebnf_table_tl
17
      \end{@simplebnf_tblr_env}
18
19
      \end{lateximage}%
                                       lwarp
20
   }
21
   { }
22
23 \VerifyEnvironment[lwarp][simplebnf]{bnfgrammar}
      {E7326E6CAE6E35827E866B4A08C5CEA8}{A9B27A2478E8BD67B19E94ECF8A44F14}
25
26\RenewDocumentEnvironment { bnfgrammar } { 0{||c||} 0{[^\|]} 0{\|\|} +b }
27
28
      \msg_warning:nn { simplebnf } { dep }
29
      \begin{center}
        \begin{lateximage}[bnf:\space\detokenize{#4}]%
30
                                                              lwarp
31
        \begin{tabular}{#1}
          \@dep__simplebnf_typeset_grammar:nnn { #2 } { #3 } { #4 }
32
          \tl_use:N \l__simplebnf_table_tl
33
        \end{tabular}
34
        \end{lateximage}%
                                       lwarp
35
36
      \end{center}
37
   }
38
   { }
40 \ExplSyntaxOff
```

File 455 lwarp-SIunits.sty

§ 564 Package

Package Slunits

(Emulates or patches code by Marcel Heldoorn.)

SIunits (*Pkg*) Slunits is patched for use by lwarp.

For svG math, it is recommended to use \unit where possible, which combines the entire expression into a single lateximage, and adds the alt tag containing the LATEX code, allowing for copy/paste. When units are used outside of the \unit macro, each unit macro will have its own lateximage, and each will have the alt tag set according to \MathImageAltText, which defaults to (math image).

For MathJax, individual units used in text will appear as svg images, since \ensuremath is used in the original defintions, and \ensuremath often has expressions which do not work well in MathJax, so it is always forced to an svg image. If, however, \unit is used, the result is expressed with MathJax instead of an svg image.

for HTML output:

1 \LWR@ProvidesPackagePass{SIunits}[2007/12/02]

Patched for copy/paste with the HTML alt tag:

```
2 \ifbool{mathjax}{
3    \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
4    \begingroup%
5    \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
6    \LWR@subsingledollar*% lwarp
7    {% alt tag
8    \textbackslash{}unit%
```

```
9
                                               \{\LWR@HTMLsanitizedetokenized{\detokenize{#1}}\}%
                                                   \{ \LWR@HTMLsanitizedetokenized{\detokenize{#2}}\}% extra space
10
                                  }%
11
12
                                  {SIunits}% add'l hashing
13
                                  {%
14
                                               #1\,{#2}%
                                  }% contents
15
                                  \endgroup%
16
                    }
17
18 }{% not MathJax
                    \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
19
20
                                  \@inunitcommandtrue%
                                                                                                                   original
21
                                  \LWR@subsingledollar*% lwarp
22
                                  {% alt tag
23
                                  \textbackslash{}unit\{\LWR@HTMLsanitizedetokenized{\detokenize{#1}}\}%
24
                                                   \{ \LWR@HTMLsanitizedetokenized{\detokenize{#2}}\}% extra space
                                  }%
25
                                  {SIunits}% add'l hashing
26
                                  {%
27
                                                \LWR@origensuredmath{% lwarp modification
28
                                                             \SI@fstyle{%
29
                                                                          {#1}\@qsk\period@active{#2}%
30
31
                                                             }% original
                                               }%
32
33
                                  }% contents
34
                                  \@inunitcommandfalse%
                                                                                                                  original
35
                    }
36 }% not MathJax
37 \LWR@formatted{unit}
  For MATHJAX:
38 \begin{warpMathJax}
{\tt 39 \LWR@infoprocessing mathjax\{SIunits\}}
41 \CustomizeMathJax{\newcommand{\one}{}}
42 \CustomizeMathJax{\newcommand{\meter}{\metre}}
43 \CustomizeMathJax{\newcommand{\deka}{\deca}}
44 \CustomizeMathJax{\newcommand{\dekad}{\decad}}
45 \CustomizeMathJax{\newcommand{\per}{/}}
46 \CustomizeMathJax{\newcommand{\usk}{\;}}
47 \CustomizeMathJax{\newcommand{\unit}[2]{\#1\,{\#2}}}
48 \CustomizeMathJax{\newcommand{\power}[2]{\#1^{\#2}}}
49
50 \AtBeginDocument{%
51 \if@redefsquare
52
            \CustomizeMathJax{\renewcommand{\square}[1]{\power{#1}{2}}}
53
          \else
                 \if@defsquaren
54
                    \coloner{1}{\coloner{1}{2}}
55
56
                        \colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}{\colone{1}
57
                 \fi %\if@defsquaren
58
59 \fi
                          %\if@redefsquare
60 }
                          %\AtBeginDocument
61
62 \CustomizeMathJax{\newcommand{\squared}{^{2}}}
63 \CustomizeMathJax{\newcommand{\cubic}[1]{\power{#1}{3}}}
64 \CustomizeMathJax{\newcommand{\cubed}{^{3}}}
65 \cont = 65 \cont
```

```
67 \CustomizeMathJax{\newcommand{\rp}{\reciprocal}}
  68 \contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\contine{1}{\
  69 \colone{1}{CustomizeMathJax{\newcommand{\rpsquared}{^{-2}}}}
  71 \colone{1} (\customizeMathJax{\newcommand{\rpcubed}{^{-3}}}
  73 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
  74 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
  75 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
  76 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
  77 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
  78 \CustomizeMathJax{\newcommand{\nano}{\mathbb{N}}}
  79 \colone{10} \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
  80 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
  81 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
  82 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
  83 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
  84 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
   85 \customizeMathJax{\newcommand{\kilo}{\mathrm{k}}} 
  86 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
  87 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}}
  88 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
  89 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
  90 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
  91 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
  92 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
  93 \CustomizeMathJax{\newcommand{\yoctod}{\power{10}{-24}}}
  94 \compared \
  95 \CustomizeMathJax{\newcommand{\attod}{\power{10}{-18}}}
  96 \CustomizeMathJax{\newcommand{\femtod}{\power{10}{-15}}}
  97 \CustomizeMathJax{\newcommand{\picod}{\power{10}{-12}}}
  98 \CustomizeMathJax{\newcommand{\nanod}{\power{10}{-9}}}
  99 \CustomizeMathJax{\newcommand{\microd}{\power{10}{-6}}}
100 \CustomizeMathJax{\newcommand{\millid}{\power{10}{-3}}}
101 \CustomizeMathJax{\newcommand{\centid}{\power{10}{-2}}}
102 \CustomizeMathJax{\newcommand{\decid}{\power{10}{-1}}}
103 \CustomizeMathJax{\newcommand{\decad}{\power{10}{1}}}
104 \compared \newcommand{\hectod}{\power{10}{2}}}
105 \CustomizeMathJax{\newcommand{\kilod}{\power{10}{3}}}
\label{loss} 106 \costomizeMathJax{\newcommand{\megad}{\power{10}{6}}} \\
107 \CustomizeMathJax{\newcommand{\gigad}{\power{10}{9}}}
108 \CustomizeMathJax{\newcommand{\terad}{\power{10}{12}}}
109 \CustomizeMathJax{\newcommand{\petad}{\power{10}{15}}}
110 \CustomizeMathJax{\newcommand{\exad}{\power{10}{18}}}
111 \CustomizeMathJax{\newcommand{\zettad}{\power{10}{21}}}
112 \cont \cont\
113 \compared 
114 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
115 \CustomizeMathJax{\newcommand{\kilogram}{\kilo\gram}}
116 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
\label{lem:limit} $$117 \customizeMathJax{\newcommand{\ampere}_{\mbox{\mbox{mathrm}$\{A$}\}}$}
118 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
119 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
120 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
121 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
122 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
123 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
125 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
```

```
\label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
127 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
128 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
130 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
131 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\ohega}}}
132 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
133 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
134 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
\label{lem:limit} $$135 \subset \mathcal{H}_{newcommand}{\operatorname{H}}} $$
\label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
137 \CustomizeMathJax{\newcommand{\celsius}{\degreecelsius}}
138 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
139 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
140 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
141 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
142 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
144 \ifdef{\radianbase}{
145 \CustomizeMathJax{\newcommand{\radianbase}%
                         {\metre\usk\reciprocal\metre}}
147 \CustomizeMathJax{\newcommand{\steradianbase}%
                         {\squaremetre\usk\rpsquare\metre}}
149 \CustomizeMathJax{\newcommand{\hertzbase}%
                         {\reciprocal\second}}
151 \CustomizeMathJax{\newcommand{\newtonbase}%
                         {\metre\usk\kilogram\usk\second\rpsquared}}
153 \CustomizeMathJax{\newcommand{\pascalbase}%
154
                         {\reciprocal\metre\usk\kilogram\usk\second\rpsquared}}
155 \CustomizeMathJax{\newcommand{\joulebase}%
                         {\squaremetre\usk\kilogram\usk\second\rpsquared}}
156
157 \CustomizeMathJax{\newcommand{\wattbase}%
                         {\squaremetre\usk\kilogram\usk\rpcubic\second}}
158
159 \CustomizeMathJax{\newcommand{\coulombbase}%
                         {\ampere\usk\second}}
160
161 \CustomizeMathJax{\newcommand{\voltbase}%
                      {\squaremetre\usk\kilogram\usk\rpcubic\second\usk\reciprocal\ampere}}
163 \CustomizeMathJax{\newcommand{\faradbase}%
                   {\rpsquare\metre\usk\reciprocal\kilogram\usk\fourth\second\usk\ampere\squared}}
165 \CustomizeMathJax{\newcommand{\ohmbase}%
                         {\squaremetre\usk\kilogram\usk\rpcubic\second\usk\rpsquare\ampere}}
167 \CustomizeMathJax{\newcommand{\siemensbase}%
                   {\rpsquare\metre\usk\reciprocal\kilogram\usk\cubic\second\usk\ampere\squared}}
169 \CustomizeMathJax{\newcommand{\weberbase}%
                   {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
171 \CustomizeMathJax{\newcommand{\teslabase}%
                         {\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
173 \CustomizeMathJax{\newcommand{\henrybase}%
                     {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\rpsquare\ampere}}
175 \CustomizeMathJax{\newcommand{\celsiusbase}%
                         {\kelvin}}
{\tt 177 \ CustomizeMathJax{\newcommand{\lumenbase}}\%}
                         {\candela\usk\squaremetre\usk\rpsquare\metre}}
179 \CustomizeMathJax{\newcommand{\luxbase}%
                         {\candela\usk\squaremetre\usk\rpfourth\metre}}
181 \CustomizeMathJax{\newcommand{\becquerelbase}%
                         {\hertzbase}}
183 \CustomizeMathJax{\newcommand{\graybase}%
                         {\squaremetre\usk\second\rpsquared}}
185 \CustomizeMathJax{\newcommand{\sievertbase}%
```

```
{\graybase}}
186
187 \CustomizeMathJax{\newcommand{\katalbase}%
                     {\rp\second\usk\mole }}
188
189 }{}
191 \ifdef{\derradian}{
192 \CustomizeMathJax{\newcommand{\derradian}%
                    {\metre\usk\reciprocal\metre}}
194 \CustomizeMathJax{\newcommand{\dersteradian}%
                    {\squaremetre\usk\rpsquare\metre}}
{\tt 196 \ CustomizeMathJax{\ newcommand{\ derhertz}}\%}
                    {\reciprocal\second}}
198 \CustomizeMathJax{\newcommand{\dernewton}%
                    {\metre\usk\kilogram\usk\second\rpsquared}}
200 \CustomizeMathJax{\newcommand{\derpascal}%
                    {\newton\usk\rpsquare\metre}}
202 \CustomizeMathJax{\newcommand{\derjoule}%
                    {\newton\usk\metre}}
204 \CustomizeMathJax{\newcommand{\derwatt}%
                    {\joule\usk\reciprocal\second}}
{\tt 206 \ CustomizeMathJax{\ newcommand{\ dercoulomb}}\%}
                    {\ampere\usk\second}}
208 \CustomizeMathJax{\newcommand{\dervolt}%
                    {\watt\usk\reciprocal\ampere}}
210 \CustomizeMathJax{\newcommand{\derfarad}%
                    {\coulomb\usk\reciprocal\volt}}
212 \CustomizeMathJax{\newcommand{\derohm}%
                    {\volt\usk\reciprocal\ampere}}
214 \CustomizeMathJax{\newcommand{\dersiemens}%
215
                    {\ampere\usk\reciprocal\volt}}
216 \CustomizeMathJax{\newcommand{\derweber}%
               \label{logram} $$ {\simeq \noinder \noinde
217
218 \CustomizeMathJax{\newcommand{\dertesla}%
                     {\weber\usk\rpsquare\metre}}
220 \CustomizeMathJax{\newcommand{\derhenry}%
                     {\weber\usk\reciprocal\ampere}}
222 \CustomizeMathJax{\newcommand{\dercelsius}%
                    {\kelvin}}
224 \CustomizeMathJax{\newcommand{\derlumen}%
                     {\candela\usk\steradian}}
226 \CustomizeMathJax{\newcommand{\derlux}%
                    {\lumen\usk\rpsquare\metre}}
{\tt 228 \ CustomizeMathJax{\ newcommand{\ derbecquerel}\%}}
                     {\derhertz}}
230 \CustomizeMathJax{\newcommand{\dergray}%
                    {\joule\usk\reciprocal\kilogram}}
232 \CustomizeMathJax{\newcommand{\dersievert}%
                    {\dergray}}
234 \CustomizeMathJax{\newcommand{\derkatal}%
235
                    {\katalbase}}
236 }{}
238 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
239 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
240 \CustomizeMathJax{\newcommand{\dday}{\mathrm{d}}}
241 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
242 \CustomizeMathJax{\newcommand{\paminute}{^\prime}}
243 \CustomizeMathJax{\newcommand{\arcminute}{^\prime}}
244 \CustomizeMathJax{\newcommand{\pasecond}{^{\prime\prime}}}
245 \comizeMathJax{\newcommand{\arcsecond}{^{\prime\prime}}}
```

```
246 \CustomizeMathJax{\newcommand{\ton}{\mathrm{t}}}
247 \converged This converged The Mathyan Customize Mathyan This converged Theorem The Mathyan This converged This converged Theorem Theorem
248 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
249 \CustomizeMathJax{\newcommand{\litre}{\mathbb{l}}}
250 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
251 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
252 \CustomizeMathJax{\newcommand{\curie}{\mathrm{Ci}}}
253 \CustomizeMathJax{\newcommand{\rad}{\mathrm{rad}}}
254 \CustomizeMathJax{\newcommand{\arad}{\mathrm{rd}}}
255 \converged (\converged (
256 \contine{The Math Jax{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\n
257 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}}
258 \CustomizeMathJax{\newcommand{\atomicmass}{\mathrm{u}}}
259 \constant{{\tt atomicmassunit}{\tt mathrm{u}}} \\
260 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{Da}}}
261 \CustomizeMathJax{\newcommand{\are}{\mathrm{a}}}
262 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{\hecto\are}}}
263 \converged \conv
264 \command{\bar}{\mathrm{bar}}}
265 \CustomizeMathJax{\newcommand{\gal}{\mathrm{Gal}}}
266 \constant{angstrom}{\mathbf {\newcommand}{\mathbf {\
267 \CustomizeMathJax{\newcommand{\rperminute}{\mathrm{r}\per\minute}}
268 \CustomizeMathJax{\newcommand{\rpersecond}{\mathrm{r}\per\second}}
269 \CustomizeMathJax{\newcommand{\squaremetre}{\power{\metre}{2}}}
270 \CustomizeMathJax{\newcommand{\cubicmetre}{\cubic\metre}}
271 \CustomizeMathJax{\newcommand{\graypersecond}{\gray\per\second}}
272 \CustomizeMathJax{\newcommand{\graypersecondnp}{\gray\usk\reciprocal\second}}
273 \CustomizeMathJax{\newcommand{\metrepersquaresecond}{\metre\per\second\squared}}
274 \CustomizeMathJax{\newcommand{\metrepersquaresecondnp}{\metre\usk\second\rpsquared}}
275 \CustomizeMathJax{\newcommand{\joulepermole}{\joule\per\mole}}
276 \CustomizeMathJax{\newcommand{\joulepermolenp}{\joule\usk\reciprocal\mole}}
277 \CustomizeMathJax{\newcommand{\molepercubicmetre}{\mole\per\cubic\metre}}
278 \CustomizeMathJax{\newcommand{\molepercubicmetrenp}{\mole\usk\rpcubic\metre}}
279 \CustomizeMathJax{\newcommand{\radianpersquaresecond}{\radian\per\second\squared}}
280 \CustomizeMathJax{\newcommand{\radianpersquaresecondnp}{\radian\usk\second\rpsquared}}
281 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecond}{%
                          \kilogram\usk\squaremetre\per\second%
283 }}
284 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecondnp}{%
                          \kilogram\usk\squaremetre\usk\reciprocal\second%
285
287 \CustomizeMathJax{\newcommand{\radianpersecond}{\radian\per\second}}
288 \CustomizeMathJax{\newcommand{\radianpersecondnp}{\radian\usk\reciprocal\second}}
289 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetre}{\squaremetre\per\cubic\metre}}
290 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetrenp}{%
                          \squaremetre\usk\rpcubic\metre%
293 \CustomizeMathJax{\newcommand{\katalpercubicmetre}{\katal\per\cubic\metre}}
294 \CustomizeMathJax{\newcommand{\katalpercubicmetrenp}{\katal\usk\rpcubic\metre}}
295 \CustomizeMathJax{\newcommand{\coulombpermol}{\coulomb\per\mole}}
296 \CustomizeMathJax{\newcommand{\coulombpermolnp}{\coulomb\usk\reciprocal\mole}}
298 \ Customize Math Jax {\newcommand {\amperepersquaremetrenp} {\ampere \netre}} \} \\
299 \CustomizeMathJax{\newcommand{\kilogrampercubicmetre}{\kilogram\per\cubic\metre}}
300 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrenp}{\kilogram\usk\rpcubic\metre}}
301 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecond}{%
                          \squaremetre\per\newton\usk\second%
303 }}
304 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecondnp}{%
                          \squaremetre\usk\reciprocal\newton\usk\reciprocal\second%
```

```
306 }}
307 \CustomizeMathJax{\newcommand{\pascalsecond}{\pascal\usk\second}}
308 \CustomizeMathJax{\newcommand{\coulombpercubicmetre}{\coulomb\per\cubic\metre}}
{\tt 309 \customizeMathJax{\newcommand{\coulombpercubicmetrenp}{\coulomb\usk\rpcubic\metre}}}
310 \CustomizeMathJax{\newcommand{\amperemetresecond}{\ampere\usk\metre\usk\second}}
311 \CustomizeMathJax{\newcommand{\voltpermetre}{\volt\per\metre}}
312 \CustomizeMathJax{\newcommand{\voltpermetrenp}{\volt\usk\reciprocal\metre}}
313 \CustomizeMathJax{\newcommand{\coulombpersquaremetre}{\coulomb\per\squaremetre}}
315 \CustomizeMathJax{\newcommand{\faradpermetre}{\farad\per\metre}}
{\it 316 \ Customize MathJax \{\ newcommand \{\ far adpermet renp\} \{\ far ad \ veciprocal \ metre\}\}}
317 \CustomizeMathJax{\newcommand{\ohmmetre}{\ohm\usk\metre}}
318 \CustomizeMathJax{\newcommand{\kilowatthour}{\kilo\watt\hour}}
319 \CustomizeMathJax{\newcommand{\wattpersquaremetre}}\
320 \CustomizeMathJax{\newcommand{\wattpersquaremetrenp}{\watt\usk\rpsquare\metre}}
321 \CustomizeMathJax{\newcommand{\joulepersquaremetre}{\joule\per\squaremetre}}
322 \CustomizeMathJax{\newcommand{\joulepersquaremetrenp}{\joule\usk\rpsquare\metre}}
323 \CustomizeMathJax{\newcommand{\newtonpercubicmetre}{\newton\per\cubic\metre}}
324 \costomizeMathJax{\newcommand{\newtonpercubicmetrenp}{\newton\newcommand{\newtonpercubicmetre}}}
{\tt 325 \ CustomizeMathJax{\ newcommand{\ newtonperkilogram}} \\ {\tt 125 \ CustomizeMathJax{\ newcommand{\ newtonperkilogram}}} \\ {\tt 126 \ newtonperkilogram}} \\ {\tt 126 \ newtonperkilogram
326 \land Customize Math Jax \{\newcommand \{\newtonperkilogramnp\} \{\newton\newkless in State (\newton)\} \} and the property of the
327 \CustomizeMathJax{\newcommand{\jouleperkelvin}{\joule\per\kelvin}}
328 \CustomizeMathJax{\newcommand{\jouleperkelvinnp}{\joule\usk\reciprocal\kelvin}}
329 \CustomizeMathJax{\newcommand{\jouleperkilogram}{\joule\per\kilogram}}
330 \CustomizeMathJax{\newcommand{\jouleperkilogramnp}{\joule\usk\reciprocal\kilogram}}
331 \CustomizeMathJax{\newcommand{\coulombperkilogram}{\coulomb\per\kilogram}}
332 \CustomizeMathJax{\newcommand{\coulombperkilogramnp}{\coulomb\usk\reciprocal\kilogram}}
333 \CustomizeMathJax{\newcommand{\squaremetrepersecond}{\squaremetre\per\second}}
334 \CustomizeMathJax{\newcommand{\squaremetrepersecondnp}{%
335
              \squaremetre\usk\reciprocal\second%
336 }}
337 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecond}{%
              \squaremetre\per\second\squared%
338
339 }}
340 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecondnp}{%
              \squaremetre\usk\second\rpsquared%
341
342 }}
343 \CustomizeMathJax{\newcommand{\kilogrammetrepersecond}{%
              \kilogram\usk\metre\per\second%
345 }}
346 \CustomizeMathJax{\newcommand{\kilogrammetrepersecondnp}{%
             \kilogram\usk\metre\usk\reciprocal\second%
347
349 \CustomizeMathJax{\newcommand{\candelapersquaremetre}{\candela\per\squaremetre}}
350 \CustomizeMathJax{\newcommand{\candelapersquaremetrenp}{\candela\usk\rpsquare\metre}}
351 \CustomizeMathJax{\newcommand{\amperepermetre}{\ampere\per\metre}}
352 \CustomizeMathJax{\newcommand{\amperepermetrenp}{\ampere\usk\reciprocal\metre}}
353 \CustomizeMathJax{\newcommand{\joulepertesla}{\joule\per\tesla}}
354 \CustomizeMathJax{\newcommand{\jouleperteslanp}{\joule\usk\reciprocal\tesla}}
355 \CustomizeMathJax{\newcommand{\henrypermetre}{\henry\per\metre}}
356 \CustomizeMathJax{\newcommand{\henrypermetrenp}{\henry\usk\reciprocal\metre}}
359 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecond}{%
             \kilogram\per\squaremetre\usk\second%
361 }}
362 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecondnp}{%
              \kilogram\usk\rpsquare\metre\usk\reciprocal\second%
363
364 }}
365 \land Customize Math Jax \{\newcommand \{\kilogrampersquaremetre\} \{\kilogram \per \squaremetre\} \}
```

```
366 \CustomizeMathJax{\newcommand{\kilogrampersquaremetrenp}{\kilogram\usk\rpsquare\metre}}
367 \CustomizeMathJax{\newcommand{\kilogrampermetre}{\kilogram\per\metre}}
368 \costomizeMathJax{\newcommand{\kilogrampermetrenp}{\kilogram\usk\reciprocal\metre}} \\
369 \costomize Math Jax {\newcommand {\joulepermolekelvin} {\joule\per\mole\kelvin}} \\
370 \CustomizeMathJax{\newcommand{\joulepermolekelvinnp}{%
       \joule\usk\reciprocal\mole\usk\reciprocal\kelvin%
372 }}
373 \CustomizeMathJax{\newcommand{\kilogramperkilomole}{\kilogram\per\kilo\mole}}
374 \CustomizeMathJax{\newcommand{\kilogramperkilomolenp}{%
       \kilogram\usk\kilo\reciprocal\mole%
376 }}
377 \CustomizeMathJax{\newcommand{\kilogramsquaremetre}{\kilogram\usk\squaremetre}}
378 \CustomizeMathJax{\newcommand{\kilogramsquaremetrenp}{\kilogramsquaremetre}}
{\tt 379 \ Customize Math Jax \{\ new command \{\ kilogrammet repersquare second \} \{\%, \}}
       \kilogram\usk\metre\per\second\squared%
381 }}
382 \CustomizeMathJax{\newcommand{\kilogrammetrepersquaresecondnp}{%
       \kilogram\usk\metre\usk\second\rpsquared%
384 }}
385 \CustomizeMathJax{\newcommand{\newtonpersquaremetre}{\newton\per\squaremetre}}
386 \costomizeMathJax{\newcommand{\newtonpersquaremetrenp}{\newton\newton}} \label{lem:metre} \\
387 \CustomizeMathJax{\newcommand{\persquaremetresecond}{1\per\squaremetre\usk\second}}
388 \CustomizeMathJax{\newcommand{\persquaremetresecondnp}{%
       \rpsquare\metre\usk\reciprocal\second%
390 }}
391 \CustomizeMathJax{\newcommand{\wattperkilogram}{\watt\per\kilogram}}
392 \CustomizeMathJax{\newcommand{\wattperkilogramnp}{\watt\usk\reciprocal\kilogram}}
393 \CustomizeMathJax{\newcommand{\wattpercubicmetre}{\watt\per\cubic\metre}}
394 \CustomizeMathJax{\newcommand{\wattpercubicmetrenp}{\watt\usk\rpcubic\metre}}
395 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradian}{%
       \watt\per\squaremetre\usk\steradian%
396
397 }}
398 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradiannp}{%
       \watt\usk\rpsquare\metre\usk\rp\steradian%
401 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvin}{\joule\per\kilogram\usk\kelvin}}
402 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvinnp}{%
       \joule\usk\reciprocal\kilogram\usk\reciprocal\kelvin%
403
404 }}
{\tt 405 \ CustomizeMathJax{\ newcommand{\ squaremetreperkilogram}} \{ squaremetre \ per\ kilogram \} \}}
406 \CustomizeMathJax{\newcommand{\rpsquaremetreperkilogram}{%
       \squaremetre\usk\reciprocal\kilogram%
407
409 \CustomizeMathJax{\newcommand{\cubicmetreperkilogram}{\cubic\metre\per\kilogram}}
410 \CustomizeMathJax{\newcommand{\rpcubicmetreperkilogram}{%
411
       \cubic\metre\usk\reciprocal\kilogram%
413 \CustomizeMathJax{\newcommand{\newtonpermetre}{\newton\per\metre}}
414 \CustomizeMathJax{\newcommand{\newtonpermetrenp}{\newton\usk\reciprocal\metre}}
415 \CustomizeMathJax{\newcommand{\Celsius}{\unicode{x2103}}}
416 \CustomizeMathJax{\newcommand{\wattpermetrekelvin}{\watt\per\metre\usk\kelvin}}
417 \CustomizeMathJax{\newcommand{\wattpermetrekelvinnp}{%
       \watt\usk\reciprocal\metre\usk\reciprocal\kelvin%
418
419 }}
420 \CustomizeMathJax{\newcommand{\newtonmetre}{\newton\usk\metre}
421 \CustomizeMathJax{\newcommand{\newtonmetrenp}{\newtonmetre}}}
422 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecond}{%
423
       \squaremetre\per\cubic\second%
424 }}
425 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecondnp}{%
```

```
426
     \squaremetre\usk\rpcubic\second%
427 }}
430 \CustomizeMathJax{\newcommand{\joulepercubicmetre}{\joule\per\cubicmetre}}
431 \CustomizeMathJax{\newcommand{\joulepercubicmetrenp}{\joule\usk\rpcubic\metre}}
432 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulomb}{%
     \kilogram\per\cubic\metre\usk\coulomb%
434 }}
435 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulombnp}{%
436
     \kilogram\usk\rpcubic\metre\usk\reciprocal\coulomb%
437 }}
438 \CustomizeMathJax{\newcommand{\cubicmetrepersecond}{\cubicmetre\per\second}}
440 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetre}{%
     \kilogram\per\second\usk\cubicmetre%
442 }}
443 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetrenp}{%
     \kilogram\usk\reciprocal\second\usk\rpcubic\metre%
444
445 }}
446 \end{warpMathJax}
```

File 456 lwarp-siunitx.sty

§ 565 Package Siunitx

25

26

(Emulates or patches code by Joseph Wright.)

```
siunitx (Pkg) siunitx is patched for use by lwarp, and is emulated for MATHJAX.
for HTML output:
                     1\providecommand\DeclareRelease[3]{}
                     2\providecommand\DeclareCurrentRelease[2]{}
                     4 \DeclareRelease{2}{2010-05-23}{lwarp-siunitx-v2.sty}
                     \label{eq:continuous} \mbox{5 \ensuremath{\mbox{DeclareRelease}\{v2\}\{2010\ensuremath{\mbox{0}}\mbox{-}05\ensuremath{\mbox{2}}\mbox{2}\}\{lwarp\ensuremath{\mbox{siunitx-}}\mbox{-}v2.sty\}}
                     6 \DeclareCurrentRelease{}{2021-05-17}
                     8 \RequirePackage{xcolor}% for \convertcolorspec
                    10 \LWR@ProvidesPackagePass{siunitx}[2023-11-14]
                    12 \ExplSyntaxOn
                    13 \VerifyCommand[lwarp][siunitx]{\siunitx_number_format:nN}{33A1ECC8D70AC60AEB82D78E598155E6}
                    15 \cs_set_protected:Npn \siunitx_number_format:nN #1#2
                    16
                        {
                           \group_begin:
                    17
                              \bool_if:NTF \l_siunitx_number_parse_bool
                    18
                    19
                    20
                                  \siunitx_number_parse:nN {#1} \l__siunitx_number_parsed_tl
                              \siunitx_number_process:NN \l__siunitx_number_parsed_tl \l__siunitx_number_parsed_tl
                    21
                                  \tl_set:Nx \l__siunitx_number_outputted_tl
                                     { \siunitx_number_output:N \l__siunitx_number_parsed_tl }
                    23
                                }
                    24
```

\tl_set:Nn \l__siunitx_number_outputted_tl

```
27
                                  {
                                           \boolfalse{mathjax}%
28
                                                                                                                                           lwarp
                                                                                                                                           lwarp
                                           \LWR@subsingledollar{%
30
                                                    \textbackslash( % space
                                                                                                                                           lwarp ALT text
31
                                                    \LWR@HTMLsanitizedetokenized{%
32
                                                              \detokenize{#1}%
                                                    } \textbackslash)%
                                                                                                                                           lwarp
33
                                           }%
34
                                                                                                                                           lwarp add'l hashing
                                           {siunitx unparsed}%
35
                                           {\ensuremath{#1}}%
                                                                                                                                           lwarp
36
37
                                  }
38
                        }
39
               \exp_args:NNNV \group_end:
40
              \tl_set:Nn #2 \l__siunitx_number_outputted_tl
41
44 \cs_set_protected:Npn \__siunitx_compound_unparsed:n #1
45
         {
46
               \tl_if_blank:nF {#1}
                   { \seq_put_right:Nn \l__siunitx_compound_tmp_seq
47
48
                        {
49
                                  \boolfalse{mathjax}%
                                                                                                                                 lwarp
50
                                  \LWR@subsingledollar{%
                                                                                                                                 lwarp
                                           \textbackslash( % space
                                                                                                                                 lwarp ALT tag
51
                                           \LWR@HTMLsanitizedetokenized{%
52
                                                    \detokenize{#1}%
53
                                           } \textbackslash)%
                                                                                                                                 lwarp
54
                                  }%
55
                                                                                                                                 lwarp add'l hashing
                                  {siunitx unparsed}%
56
57
                                  {\ensuremath{#1}}%
                                                                                                                                 lwarp
58
                        }
59
                   }
60
        }
     \{\langle text \rangle\}
  If in text mode, use \textrm instead. Avoids crashing while using \mathrm in text
61 \LetLtxMacro\LWR@siunitx@orig@mathrm\mathrm
63 \newcommand*{\LWR@siunitx@mathrm}[1]{%
              \ifmmode{\LWR@siunitx@orig@mathrm{#1}}\else{#1}\fi%
64
65 }
  If not in a lateximage, always use text mode. Ignore current text font if resetting
  text family, series, and shape.
66 \end{Constraint} [warp] [siunitx] {\clinetright limits ann} {FD2679699363E8095304C0665CAC4072} {\clinetright limits and constraint limits are constraint. The constraint limits are constraint limits and constraint limits are constraint. The constraint limits are constraint limits and constraint limits are constraint. The constraint limits are constraint limits are constraint limits and constraint limits are constraint. The constraint limits are constraint limits are constraint limits and constraint limits are constraint. The constraint limits are constraint limits are constraint limits and constraint limits are constraint. The constraint limits are constraint limits are constraint limits and constraint limits are constraint. The constraint limits are constraint limits are constraint limits and constraint limits are constraint. The constraint limits are constraint limits are constraint limits are constraint. The constraint limits are constraint limits are constraint limits are constraint. The constraint limits are constraint. The constraint limits are constraint. The constraint limits are constraint limits are constraint limits are constraint. The constraint limits are constraint limits a
67
68 \cs_set_protected:Npn \__siunitx_print_aux:nn #1#2
69
         {
70
               \LetLtxMacro\mathrm\LWR@siunitx@mathrm%
                                                                                                                                                     lwarp
71
              \tl_if_empty:oF {#2}
```

\tl_if_empty:cTF { l__siunitx_print_ #1 _color_tl }

{ \ExpandArgs { v } \textcolor { l__siunitx_print_ #1 _color_tl } }

\LWR@siunitx@mathrm

72

73 74

75

{

{ \use:n }

```
76
                {
                    \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
77
                                                                               lwarp
78
                    {
79
                         \use:c
80
                             {
                             siunitx_print_
81
                             \tl_use:c { l__siunitx_print_ #1 _mode_tl } :n
82
                             }
83
                             {#2}
84
                    }
85
                    {
86
87
                         \bool_lazy_all:nTF%
                                                    lwarp
88
                             {
89
                                  {\l_siunitx_print_text_family_bool}
90
                                  {\l_siunitx_print_text_series_bool}
91
                                  {\l__siunitx_print_text_shape_bool}
92
                             {% No font control if reset-text-family/series/shape
93
                                  \use:c
94
                                      {
95
                                     siunitx_print_%
                                                                                 lwarp
96
97
                                          text%
                                                                                 lwarp
                                                                                 lwarp
98
                                          :n%
                                      }%
                                                                                 lwarp
99
100
                                     {#2}%
                                                                                 lwarp
101
                             }
102
                             {
                                 \LWR@textcurrentfont{%
103
                                                                                 lwarp
                                      \use:c
104
105
                                          siunitx_print_%
                                                                                 lwarp
106
107
                                              text%
                                                                                 lwarp
                                              :n%
                                                                                 lwarp
108
                                          }%
                                                                                 lwarp
109
                                          {#2}%
                                                                                 lwarp
110
111
                                  }
                             }
112
                    }
113
                }
114
115
       }
116 }
```

To determine whether to make a complex root be italic or upright, \l_siunitx_complex_output_root_tl is compared to \LWR@siunitx@complexrm<i/j>, and the css style for i,j is set to ijit or ijup.

```
117 \newcommand*{\LWR@siunitx@complexrootstyle}{textrm}
119 \newcommand*{\LWR@siunitx@complexrmi}{\mathrm{i}}
\label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
121
122 \newcommand*{\LWR@siunitx@setcomplexroot}{%
                              \renewcommand*{\LWR@siunitx@complexrootstyle}{ijit}%
123
                         \ifdefequal{\l__siunitx_complex_output_root_tl}{\LWR@siunitx@complexrmi}%
124
                                                {\renewcommand*{\LWR@siunitx@complexrootstyle}{ijup}}%
125
126
                        127
                                                {\renewcommand*{\LWR@siunitx@complexrootstyle}{ijup}}%
128
129
                                                {}%
130 }
```

```
131 \VerifyCommand[lwarp][siunitx]{\_siunitx_complex_format_cartesian_auxii:n}
      {DC0897DBE172C13B6F7282D266BE1156}
134 \cs_set_protected:Npn \__siunitx_complex_format_cartesian_auxii:n #1
135
136
      \LWR@siunitx@setcomplexroot%
                                                           lwarp
      \__siunitx_complex_format_cartesian_units:n {#1}
137
      \tl_if_empty:NF \l__siunitx_complex_real_tl
138
      { \exp_after:wN \__siunitx_complex_drop_exponent:nnnnnn \l__siunitx_complex_real_tl }
139
     140
      \tl_set:Nx \l__siunitx_complex_tmp_tl
141
142
        { \siunitx_number_output:NN \l__siunitx_complex_img_tl \q_nil }
143
     \exp_after:wN \__siunitx_complex_extract_exponent:w \l__siunitx_complex_tmp_tl \q_stop
144
      \tl_set:Nx \l__siunitx_complex_tmp_tl
145
        {
146
          \bool_lazy_or:nnTF
147
            {
              \bool_lazy_and_p:nn
148
                { \l_siunitx_number_bracket_ambiguous_bool }
149
                { ! \tl_if_empty_p:N \l__siunitx_complex_exp_tl }
150
             }
151
             {
152
               ! \bool_lazy_any_p:n
153
154
                {
                  { \tl_if_blank_p:n {#1} }
155
                  { \tl_if_empty_p:N \l__siunitx_complex_real_tl }
156
157
                  { \tl_if_empty_p:N \l__siunitx_complex_img_tl }
158
159
             }
160
            { \__siunitx_complex_format_bracket:n }
            { \use:n }
161
162
            {
              \siunitx_number_output:N \l__siunitx_complex_real_tl
163
              \exp_not:V \l__siunitx_complex_sign_tl
164
              \bool_if:NF \l__siunitx_complex_root_after_bool
165
166
                {
                  \InlineClass{\LWR@siunitx@complexrootstyle}%
167
                                                                   lwarp
168
                           \exp_not:V \l__siunitx_complex_output_root_tl
169
                      }
170
171
                }
               \exp_not:V \l__siunitx_complex_tmp_tl
172
              \bool_if:NT \l__siunitx_complex_root_after_bool
173
174
                {
                  \InlineClass{\LWR@siunitx@complexrootstyle}%
175
                      {
                           \exp_not:V \l__siunitx_complex_output_root_tl
178
                      }
179
                }
              }
180
            \exp_not:V \l__siunitx_complex_exp_tl
181
        }
182
183
    }
```

 $\{\langle 1: deg/min/sec\ character\rangle\}\ \{\langle 2: ?\rangle\}\ \{\langle 4: integer\ part\ of\ angle\rangle\}\ \{\langle 5: decimal\ point\ character\rangle\}\ \{\langle 6: decimal\ part\ of\ angle\rangle\}\ \{\langle 7: ?\rangle\}\ \{\langle 8: ?\rangle\}$

If not in a lateximage, print a simplified verison without the box measurement things which conflict with lwarp:

```
184 \VerifyCommand[lwarp][siunitx]{\__siunitx_angle_arc_print_auxii:nw}
       {7CEE155CD4C7A9CDFEAE3AF8DD154B03}
185
186
187 \cs_set_protected:Npn \__siunitx_angle_arc_print_auxii:nw
    #1#2 \q_nil #3 \q_nil #4 \q_nil #5 \q_nil #6 \q_nil #7 \q_nil #8 \q_stop
188
189
    {
190
       \mode_if_math:TF
         { \bool_set_true:N \l__siunitx_angle_tmp_bool }
191
         { \bool_set_false:N \l__siunitx_angle_tmp_bool }
192
193
       \siunitx_print_number:n {#2#3#4}
194
       \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
                                                              lwarp
195
                                                              lwarp
           \tl_if_blank:nTF {#6}
196
           { \__siunitx_angle_arc_print_auxvi:n {#1} }
197
198
           {
               \hbox_set:Nn \l__siunitx_angle_marker_box
199
200
               {
201
                    \__siunitx_angle_arc_print_auxiii:n
202
                    { \siunitx_print_number:n {#5} }
203
204
               \hbox_set:Nn \l__siunitx_angle_unit_box
205
               {
206
                      _siunitx_angle_arc_print_auxiii:n
207
                        \siunitx_unit_format:nN {#1} \l__siunitx_angle_tmp_tl
208
                        \siunitx_print_unit:V \l__siunitx_angle_tmp_tl
209
                        \skip_horizontal:n { -\scriptspace }
210
                    }
211
212
               }
               \dim_compare:nNnTF { \box_wd:N \l__siunitx_angle_marker_box } >
213
               { \box_wd:N \l__siunitx_angle_unit_box }
214
215
216
                    \__siunitx_angle_arc_print_auxiv:NN
217
                    \l__siunitx_angle_marker_box
                    \l__siunitx_angle_unit_box
218
219
               }
               {
220
                    \__siunitx_angle_arc_print_auxiv:NN
221
                    \l__siunitx_angle_unit_box
222
223
                    \l__siunitx_angle_marker_box
225
               \hbox_set_to_wd:Nnn \l__siunitx_angle_marker_box
226
               \l__siunitx_angle_tmp_dim
227
                    \hbox_overlap_right:n
228
                    { \box_use_drop:N \l__siunitx_angle_marker_box }
229
230
                    \hbox_overlap_right:n
                    { \box_use_drop:N \l__siunitx_angle_unit_box }
231
                    \tex_hfil:D
232
233
               \box_use:N \l__siunitx_angle_marker_box
235
               \skip_horizontal:N \scriptspace
236
               \siunitx_print_number:n {#6}
237
       }%
238
```

 $\{\langle 1: deg/min/sec\ character\rangle\}\ \{\langle 2: ?\rangle\}\ \{\langle 4: integer\ part\ of\ angle\rangle\}\ \{\langle 5: decimal\ point\ character\rangle\}\ \{\langle 6: decimal\ part\ of\ angle\rangle\}\ \{\langle 7: ?\rangle\}\ \{\langle 8: ?\rangle\}$

```
239
                    lwarp: not in a lateximage, simplify for HTML
240
           \tl_if_blank:nTF {#6}
           { \__siunitx_angle_arc_print_auxvi:n {#1} }
241
242
243
                \__siunitx_angle_arc_print_auxiii:n
244
                {
                    \siunitx_print_number:n {#5}
245
246
247
                   _siunitx_angle_arc_print_auxiii:n
                {
248
                    \siunitx_unit_format:nN {#1} \l__siunitx_angle_tmp_tl
249
                    \siunitx_print_unit:V \l__siunitx_angle_tmp_tl
250
251
252
                \siunitx_print_number:n {#6}
253
           }
254
       }%
                    lwarp
255
     }
```

If not in a lateximage, print a simple inline fraction, avoiding the use of svg math:

```
256 \VerifyCommand[lwarp][siunitx]{\__siunitx_print_text_fraction:Nnn}
257
       {F47521F256C661719258012969E7AE04}
258
259 \cs_set_protected:Npn \__siunitx_print_text_fraction:Nnn #1#2#3
260
       \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
261
262
         \ensuremath
263
264
         {
265
             { \mbox { \__siunitx_print_text_replace:n {#2} } }
266
               \mbox { \__siunitx_print_text_replace:n {#3} } }
267
268
         }
       }%
269
       {%
                                                                       lwarp
270
271
             { \mbox { \__siunitx_print_text_replace:n {#2} } }%
                                                                       lwarp
272
                                                                       lwarp
273
             { \mbox { \__siunitx_print_text_replace:n {#3} } }%
                                                                       lwarp
274
       }%
               lwarp
     }
275
```

If not in a lateximage, print a \textsubscript:

```
276 \VerifyCommand[lwarp][siunitx]{\_siunitx_unit_format_qualifier_subscript:}
       {543B01848C00E4089F0E0C53988F6A28}
277
278
{\tt 279 \backslash cs\_set\_protected:Npn \backslash \_siunitx\_unit\_format\_qualifier\_subscript:}
280
     {
281
       \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
                                                                  lwarp
282
       {%
283
            \__siunitx_unit_format_font:
            \tl_set:Nx \l__siunitx_unit_part_tl
284
285
286
                \c__siunitx_unit_math_subscript_tl
287
                     \exp_not:V \l_siunitx_unit_font_tl
288
                     { \exp_not:V \l__siunitx_unit_part_tl }
289
```

```
290
               }
           }
291
292
       }
293
       {%
                lwarp simplified for HTML:
294
           \__siunitx_unit_format_font:
295
           \tl_set:Nx \l__siunitx_unit_part_tl
296
                \textsubscript
297
298
                {
                    \exp_not:V \l_siunitx_unit_font_tl
299
                    { \exp_not:V \l__siunitx_unit_part_tl }
300
301
                }
302
           }
303
       }
304
305 \VerifyCommand[lwarp][siunitx]{\siunitx_quantity:nn}
       {AEF3237DB5107FE46437AF1D3ABD03DE}
306
307
308 \cs_set_protected:Npn \siunitx_quantity:nn #1#2
309
     {
310
       \group_begin:
311
         \siunitx_unit_options_apply:n {#2}
         \tl_if_blank:nTF {#1}
312
313
              \siunitx_unit_format:nN {#2} \l__siunitx_quantity_unit_tl
314
              \siunitx_print_unit:V \l__siunitx_quantity_unit_tl
315
           }
316
317
              \bool_if:NTF \l_siunitx_number_parse_bool
318
                 \__siunitx_quantity_parsed:nn {#1} {#2} }
319
                {
320
321
                  \tl_set:Nn \l__siunitx_quantity_number_tl {
322
                    \boolfalse{mathjax}%
                                                               lwarp
323
                    \LWR@subsingledollar{%
                                                               lwarp
324
                        \textbackslash( % space
                                                               lwaro ALT tag
                        \LWR@HTMLsanitizedetokenized{%
325
                            \detokenize{#1}%
326
                        } \textbackslash)%
                                                               lwarp
327
                    }%
328
                    {siunitx unparsed}%
                                                               lwarp add'l hashing
329
330
                    {\ensuremath{#1}}%
                                                               lwarp
331
332
                  \siunitx_unit_format:nN {#2} \l__siunitx_quantity_unit_tl
333
                  \siunitx_quantity_print:VV
                    \l__siunitx_quantity_number_tl \l__siunitx_quantity_unit_tl
334
335
           }
336
337
       \group_end:
338
     }
 \cancel for HTML does not work yet.
339 \newcommand*{\LWR@siunitx@nocancel}[1]{%
       \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
341
           {\cancel{#1}}% SVG
342
           {#1}%
                            HTML
343 }
345 \AtBeginDocument{
```

```
346\__siunitx_unit_set_symbolic:Npnn \cancel
                                                                    347 { }
                                                                                         { \__siunitx_unit_parse_special:n { \cancel } }
                                                                    349 { \__siunitx_unit_parse_special:n { \LWR@siunitx@nocancel } }%
                                                                    350 }
                                                                          For HTML, use a simple unaligned \num:
                                                                    351 \mbox{ } \mbox{
                                                                    352 \LWR@formatted{tablenum}
                                                                          For HTML, the S column is simplified to a c column. Keys are set locally, allowing
                                                                          drop-exponent, etc.
                                                                    353 \AtBeginDocument{
                                                                    354 \label{lem:sisetup} $$354 \HTMLnewcolumntype{S}[1][]{>{\logingroup\sisetup{\#1}}c<{\endgroup}}$
                                                                    355 }
                                                                          To define simplified units for HTML:
\label{lem:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma:lemma
                                                                    356 \NewDocumentCommand{\HTMLDeclareSIUnit}{o +m m}
                                                                    357 {
                                                                    358
                                                                                               \ifcsdef{ __siunitx_unit_ \token_to_str:N #2 :w }
                                                                                                              {}
                                                                    359
                                                                                                              {
                                                                    360
                                                                                                                              \PackageError{lwarp}
                                                                    361
                                                                    362
                                                                                                                                              {%
                                                                                                                                                             First~use\MessageBreak
                                                                    363
                                                                    364
                                                                                                                                                                              \space\space\protect\DeclareSIUnit{
                                                                    365
                                                                                                                                                                                     \token_to_str:N#2}{...}\MessageBreak
                                                                                                                                                             before~using\MessageBreak
                                                                    367
                                                                                                                                                                             \space\space\protect\HTMLDeclareSIUnit{
                                                                    368
                                                                                                                                                                                     \token_to_str:N#2}{...}%
                                                                    369
                                                                                                                                              }
                                                                                                                                              {%
                                                                    370
                                                                                                                                                             See~the~Lwarp~manual~section~about~special~cases,~
                                                                    371
                                                                    372
                                                                                                                                                             regarding~siunitx.%
                                                                    373
                                                                                                                                              }
                                                                    374
                                                                                                              }
                                                                                               \csNewCommandCopycs
                                                                    375
                                                                                                              { __orig_siunitx_unit_ \token_to_str:N #2 :w }
                                                                    376
                                                                    377
                                                                                                              { __siunitx_unit_ \token_to_str:N #2 :w }
                                                                    378
                                                                                               \DeclareSIUnit[#1]{#2}
                                                                    379
                                                                                                                              \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
                                                                    380
                                                                                                                                              {\csuse{ __orig_siunitx_unit_ \token_to_str:N #2 :w }}
                                                                    381
                                                                    382
                                                                                                                                              {#3}
                                                                                                              }
                                                                    383
                                                                    384 }
                                                                    385 \ExplSyntaxOff
                                                                          HTML versions for existing units:
                                                                    386 \AtBeginDocument{
                                                                    387 \HTMLDeclareSIUnit\celsius{\LWR@siunitx@textcelsius}
```

```
388 \HTMLDeclareSIUnit\arcminute{\LWR@siunitx@textprime}
389 \HTMLDeclareSIUnit\arcsecond{\LWR@siunitx@textdblprime}
390 \HTMLDeclareSIUnit\elementarycharge{\textit{e}}
391 %
392 \HTMLDeclareSIUnit\clight{\text{\textit{c}\textsubscript{0}}}
393 \HTMLDeclareSIUnit\bohr{\text{\textit{a}\textsubscript{0}}}
394 \HTMLDeclareSIUnit\electronmass{\text{\textit{m}\textsubscript{e}}}
395 \HTMLDeclareSIUnit\hartree{\text{\textit{E}\textsubscript{h}}}
396 \HTMLDeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
397 }% \AtBeginDocument
 Initial options:
398 \AtBeginDocument{
399 \sisetup{
      per-mode=symbol,
                           % fraction is not seen by pdftotext
      angle-symbol-degree = {\LWR@siunitx@textdegree},
402
      angle-symbol-minute = {\LWR@siunitx@textprime} ,
      angle-symbol-second = {\LWR@siunitx@textdblprime} ,
403
404 }
405 }
 Load late paches for lltip-siunitx:
406 \AtBeginDocument{
407 \ifdef{\ltj@allalchar}
      {\LWR@origRequirePackage{lwarp-lltjp-siunitx}}
      {}
410 }
 For MATHJAX:
411 \LWR@origRequirePackage{lwarp-common-mathjax-siunitx}
413 \begin{warpMathJax}
414 \CustomizeMathJax{\let\unit\si}
415 \CustomizeMathJax{\let\qty\SI}
416 \CustomizeMathJax{\let\qtylist\SIlist}
417 \CustomizeMathJax{\let\qtyrange\SIrange}
418 \CustomizeMathJax{\let\numproduct\num}
419 \CustomizeMathJax{\let\qtyproduct\SI}
420 \CustomizeMathJax{\let\complexnum\num}
421 \CustomizeMathJax{\newcommand{\complexqty}[3][]{(\complexnum{#2})\si{#3}}}
422 \end{warpMathJax}
 Pass range-phrase to common-mathjax-siunitx:
423 \ExplSyntaxOn
424 \AtBeginDocument{
425 \edef\LWR@siunitx@rangephrase{\l_siunitx_range_phrase_tl}
426 \expandafter\CustomizeMathJax\expandafter{%
       \expandafter\def\expandafter\LWRsiunitxrangephrase%
428
      \expandafter{\LWR@siunitx@rangephrase}%
429 }
430 }
431 \ExplSyntaxOff
```

File 457 lwarp-siunitx-v2.sty

§ 566 Package Siunitx-v2

(Emulates or patches code by Joseph Wright.)

siunitx-v2 (*Pkg*) siunitx-v2 is patched for use by lwarp, and is emulated for MATHJAX.

siunitx is well supported by lwarp.

Limitations Some general limitations:

Tractions Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

\cancel is not currently supported for siunitx v3.

Negative values are not automatically colored.

Tabular S and s columns are rendered as simple c columns, although key settings will be set. If using scientific notation, table-format, table-align-uncertainty, drop-exponent, etc.. use \tablenum for each cell. This is especially required for

drop-exponent, without which the value will be shown incorrectly.

table-auto-round table-auto-round is ignored.

tabular

drop-exponent

Math rendering Math may be rendered in several ways in the same document:

For math mode with svG display: The original siunitx code is used while generating the svG image.

For HTML text mode: lwarp uses siunitx code patched for HTML, and simplified units.

For math expressions while using MATHJAX: A limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. The result usually looks fine, and otherwise is enough to get the meaning across.

Custom units siunitx allows customized units:

 $\label{eq:definition} $$ \DeclareSIUnit $$ {\langle name \rangle} $ {\langle definition \rangle}$$

\DeclareSIUnit declares a version of the unit for the print version. This is also used when the unit is printed in svg math or a lateximage. It is also used for HTML if an HTML-specific version is not defined with \HTMLDeclareSIUnit.

\DeclareSIUnit\myunit{\ensuremath{\text{m}_y}}

\HTMLDeclareSIUnit $\{\langle name \rangle\} \{\langle definition \rangle\}$

v3 only! Use this after the print unit has been defined. For siunitx v3, \HTMLDeclareSIUnit

declares a simplified version of the unit for HTML, for example if the print-mode unit uses TEX boxes or $\ensuremath{:}$

```
\HTMLDeclareSIUnit\myunit{\text{m}\textsubscript{\textit{y}}}
```

It is also possible to provide a custom unit for MATHJAX:

```
\CustomizeMathJax{\newcommand{\myunit}{\text{m}_y}}
```

Predefined units Most units work as-is with HTML. For the following units, lwarp has already set \HTMLDeclareSIUnit: \celsius, \arcminute, \arcsecond, \elementarycharge, \clight, \bohr, \electronmass, \hartree, \planckbar.

Document modifications required for MATHJAX

• Place \sisetup in the preamble before \begin{document}. Changes made later may be ignored, especially with MATHJAX. The MATHJAX emulation also ignores most macro options.

• Complex numbers are displayed as entered, ignoring output-complex-root.

custom units

• Custom units may be added with \CustomizeMathJax. For example, from lwarp-common-mathjax-siunitx:

\CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_{\mathrm{h}}}} \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x212B}}}}

• Units work better using ~ between units instead of using periods.

⚠ \square,\cubic

 To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

• For \numlist, the argument is printed as text as-is, so use space between semicolons for improved readability.

Missing \$ inserted

 If using parse-numbers = false, also use \num or \qty. siunitx=siunitx>Missing \$ inserted.

Also see MathJax option, section 8.7.5.

```
for HTML output:
```

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
```

3 \LWR@ProvidesPackagePass{siunitx}[=v2]% 2021-04-17

```
4 \AtBeginDocument{% in case textcomp was not loaded
```

- 5 \DeclareSIUnit\bohr{\textit{a}\textsubscript{0}}
- 6 \DeclareSIUnit\clight{\textit{c}\textsubscript{0}}
- 7 \DeclareSIUnit\elementarycharge{\textit{e}}}
- 8 \DeclareSIUnit\electronmass{\textit{m}\textsubscript{e}}
- 9 \DeclareSIUnit\hartree{\textit{E}\textsubscript{h}}
- 10 \DeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
- 11 }% AtBeginDocument

Support the S and s column types:

```
12 \AtBeginDocument{
13 \HTMLnewcolumntype{S}[1][]{>{\begingroup\sisetup{#1}}c<{\endgroup}}
14 \HTMLnewcolumntype{s}[1][]{>{\begingroup\sisetup{#1}}c<{\endgroup}}
15 }</pre>
```

\@ensuredmath is not supported inside an \hbox, so it must temporarily be restored to its original. Similar for \mbox. svg math is created explicitly when necessary, using \LWR@subsingledollar.

```
16
17 \ExplSyntaxOn
18 %
```

Modified to use the print version of *\@ensuredmath* to avoid having a *lateximage* each time.

```
19 \AtBeginDocument{
20 \cs_set_protected:Npn \__siunitx_print_text:
22
      \LetLtxMacro\@ensuredmath\LWR@origensuredmath%
                                                                lwarp
23
      \tl_replace_all:Nnn \l__siunitx_print_arg_tl { - }
24
        { \textminus }
        _siunitx_print_text_aux:
25
      \tl_replace_all:Nnn \l__siunitx_print_arg_tl { \mp }
26
        { \ensuremath { \mp } }
27
      \tl_remove_all:Nn \l__siunitx_print_arg_tl { \mathord }
28
      \cs_set_eq:NN \PrintSubscript \__siunitx_print_text_sub:n
29
      \cs_set_eq:NN \PrintSuperscript \__siunitx_print_text_super:n
30
31
      \__siunitx_print_text_aux:NnN
                               \__siunitx_print_text_sub:n
32
       _ { math_subscript }
33
        _ { active }
                                \__siunitx_print_text_sub:n
34
        ^ { math_superscript } \__siunitx_print_text_super:n
        ^ { active }
35
                                \__siunitx_print_text_super:n
36
        \q_recursion_tail ? ?
37
        \q_recursion_stop
38
      \l__siunitx_print_arg_tl
39
   }
40 }
```

Modified to set set HTML \textcolor if not black:

```
41 \cs_new_protected:Npn \LWR@HTML@__siunitx_print_aux:
42
   {
43
      \text
44
              _siunitx_ensure_ltr:n
45
46
               \color@begingroup
47
48 %
49
               \__siunitx_print_color:
50
               \__siunitx_font_shape:
               \__siunitx_font_weight:
51
               \use:c
52
53
                   __siunitx_ \l__siunitx_print_type_tl _
54
                   text \l__siunitx_font_family_tl :
55
                 }
56
```

```
\bool_if:NTF \l__siunitx_font_math_mode_bool
57 %
58 %
59 %
                          \__siunitx_print_math:
60 %
                   }
61
                  {
                        \LWR@findcurrenttextcolor% lwarp
62
                        \ifdefstring{\LWR@tempcolor}{000000}% lwarp
63
                            {\__siunitx_print_text:}% lwarp
64
                            {% lwarp
65
                                \LWR@textcurrentcolor{% lwarp
66
67
                                     \__siunitx_print_text:
68
                                }% lwarp
69
                            }% lwarp
70
71
               \color@endgroup
72 %
             }
73
         }
74
    }
75
76 \LWR@formatted{__siunitx_print_aux:}
77
78 \cs_new_protected:Npn \LWR@HTML@__siunitx_set_math_fam:n #1 {
79
     \group_begin:
80 %
         \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
81 %
         \LetLtxMacro\mbox\LWR@print@mbox% lwarp
82 %
         \hbox_set:Nn \l__siunitx_tmp_box
83 %
84
           \ensuremath
85
             {
               \use:c { math #1 }
86
87
                 {
88
                    \int_const:cn { c__siunitx_math #1 _int } { \fam }
89
90
91 %
92
     \group_end:
93 }
94 \LWR@formatted{__siunitx_set_math_fam:n}
95
96 \cs_new_protected:Npn \LWR@HTML@__siunitx_combined_output:n #1 {
97 %
98
       \group_begin:% lwarp
     \bool_if:NTF \l__siunitx_number_parse_bool
99
100
      {
         \tl_clear:N \l__siunitx_number_out_tl
101
102
         \bool_set_false:N \l__siunitx_number_compound_bool
103
           __siunitx_number_output_parse:n {#1}
104
       }
105
      {
 For parse-numbers=false:
106
           \__siunitx_unit_output_pre_print:
           \begingroup%
                                                      lwarp
107
               \boolfalse{mathjax}%
108
109 %
           \__siunitx_print:nn { number } { \ensuremath {#1} }
110
               \LWR@subsingledollar%
                                             lwarp
                    {% alt text
111
                        \textbackslash( % space
112
                        \LWR@HTMLsanitizedetokenized{%
113
```

```
114
                            \detokenize{#1}%
                        } \textbackslash)%
115
                                                      lwarp
116
117
                    {siunitx}% addl hashing
118
                    {%
                        \_siunitx_print:nn { number } {%
119
                            \LWR@origensuredmath{#1}%
120
                        }%
121
                    }%
                                                      lwarp
122
           \endgroup%
                                                      lwarp
123
           \__siunitx_unit_output_print:
124
125
126
      \group_end:% lwarp
127 %
128 }
129 \LWR@formatted{__siunitx_combined_output:n}
 For parse-numbers=false:
130 \cs_new_protected:Npn \LWR@HTML@__siunitx_range_numbers_aux:n #1
131
132
       \bool_if:NTF \l__siunitx_number_parse_bool
133
         {
134
           \tl_clear:N \l__siunitx_number_out_tl
           \tl_clear:N \l__siunitx_number_out_saved_tl
135
136
           \bool_set_false:N \l__siunitx_number_compound_bool
137
           \__siunitx_number_output_parse:n {#1}
           \bool_if:NT \l__siunitx_number_compound_bool
138
             { \msg_error:nnx { siunitx } { multi-part-range } {#1} }
139
140
         }
141
           \__siunitx_unit_output_pre_print:
142
           \begingroup%
143
                            lwarp
               \boolfalse{mathjax}%
                                                              lwarp
144
145 %
                 _siunitx_print:nn { number } {#1}
146
                    \LWR@subsingledollar%
                                                              lwarp
147
                        {% alt text
148
                            \textbackslash( % space
149
                            \LWR@HTMLsanitizedetokenized{%
                                 \detokenize{#1}%
150
                            } \textbackslash)%
                                                              lwarp
151
                        }%
152
                        {siunitx}% addl hashing
153
154
                        {%
                            \__siunitx_print:nn { number } {%
155
156
                                \LWR@origensuredmath{#1}%
157
                            } %
                                                              lwarp
                        }%
158
                                                              lwarp
           \endgroup%
                                                              lwarp
159
160
           \__siunitx\_unit\_output\_print:
         }
161
162
163 \LWR@formatted{__siunitx_range_numbers_aux:n}
 For parse-numbers=false:
164\cs_new_protected:Npn \LWR@HTML@__siunitx_angle_print_direct_aux:nn #1#2 {
    \tl_if_empty:nF {#1}
165
166
         \tl_set:Nn \l__siunitx_unit_tl {#2}
167
```

```
168
           \begingroup%
                                                              lwarp
               \boolfalse{mathjax}%
169
                                                              lwarp
               \__siunitx_print:nn { number } {#1}
170 %
171
                   \LWR@subsingledollar{%
                                                              lwarp
                        \textbackslash( % space
172
                        \LWR@HTMLsanitizedetokenized{%
173
                            \detokenize{#1}%
174
                        } \textbackslash)%
                                                              lwarp
175
                   }%
176
                   {siunitx}%
177
                   {%
178
179
                        \__siunitx_print:nn { number } {
180
                            \LWR@origensuredmath{#1}%
181
                        }%
                                                              lwarp
182
                   }%
                                                              lwarp
183
           \endgroup%
                                                              lwarp
184
           _siunitx_unit_output_print:
       }
185
186 }
187 \LWR@formatted{__siunitx_angle_print_direct_aux:nn}
188 %
 For quotients, the fraction code is replaced by the symbol code:
189 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_output_quotient_fraction: {
     \bool_set_true:N \l__siunitx_number_compound_bool
     \__siunitx_number_output_quotient_aux_i:
192
     \tl_set_eq:NN \l__siunitx_number_out_tl
193
       \l__siunitx_number_numerator_tl
     \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
194
     \tl_put_right:NV \l__siunitx_number_out_tl
195
       \l__siunitx_number_denominator_tl
196
       _siunitx_number_output_single_aux:
197
198 }
199 \LWR@formatted{__siunitx_number_output_quotient_fraction:}
 For units, the fraction code is replaced by the symbol code:
200 \cs_new_protected:Npn \LWR@HTML@__siunitx_unit_format_fraction_fraction: {
     \__siunitx_unit_format_fraction_symbol_aux:
202
     \int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
203
204
         \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
205
          \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
206
          \verb|\tl_put_right:NV \l_siunitx_unit_denominator_tl \l_siunitx_bracket_close_tl| \\
207
208
           }
209
       }
     \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
210
     \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
211
212
     \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
213 }
214 \LWR@formatted{__siunitx_unit_format_fraction_fraction:}
215 \cs_new_protected:Npn \LWR@HTML@__siunitx_angle_print_astronomy_aux: {
216
    \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }
217
       \l__siunitx_tmpa_tl
       { \__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
```

219 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp

```
220 {% lateximage
    \hbox_set:Nn \l__siunitx_angle_marker_box
223
         \__siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
224
225
     \hbox_set:Nn \l__siunitx_angle_unit_box
226
         \__siunitx_print:nV { unit } \l__siunitx_unit_tl
227
         \skip_horizontal:n { -\scriptspace }
228
229
     \__siunitx_angle_print_astronomy_aux:n { marker }
230
     \__siunitx_angle_print_astronomy_aux:n { unit }
231
232
     \hbox_set:Nn \l__siunitx_angle_marker_box
233
234
         \box_use:N \l__siunitx_angle_marker_box
235
         \box_use:N \l__siunitx_angle_unit_box
      }
236
     \dim_compare:nNnTF
237
       { \l_siunitx_angle_marker_dim } > { \l_siunitx_angle_unit_dim }
238
       { \__siunitx_angle_print_astronomy_marker: }
239
      { \__siunitx_angle_print_astronomy_unit: }
240
241 }% lateximage
242 {% not a lateximage
         \__siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
         \__siunitx_print:nV { unit } \l__siunitx_unit_tl
244
245 }% not a lateximage
     \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
246
247
       \l__siunitx_tmpa_tl
       { \__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
248
249 }
250 \LWR@formatted{__siunitx_angle_print_astronomy_aux:}
251 \cs_new_protected:Npn \LWR@HTML@__siunitx_textsuperscript:n #1 {\textsuperscript{#1}}
252 \LWR@formatted{__siunitx_textsuperscript:n}
254 \cs_new_eq:NN \LWR@HTML@__siunitx_print_text_super:n \textsuperscript
255 \LWR@formatted{__siunitx_print_text_super:n}
257 \cs_new_eq:NN \LWR@HTML@__siunitx_print_text_sub:n \textsubscript
258 \LWR@formatted{__siunitx_print_text_sub:n}
 \LWR@origenduresmath is added here in case the user asks for \mathrm, etc. for
 output-exponent-marker.
259 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_format_final_exponent: {
     \prop_get:NnN \l__siunitx_number_out_prop { exponent }
260
261
       \l__siunitx_tmpa_tl
     \tl_if_empty:NTF \l__siunitx_output_exponent_tl
262
263
      {
         \tl_set:Nx \l__siunitx_tmpa_tl
264
          { ^ { \exp_not:V \l__siunitx_tmpa_tl } }
265
         \tl_put_left:NV \l__siunitx_tmpa_tl \l__siunitx_exponent_base_tl
266
       }
267
268
       {
         \tl_set:Nx \l__siunitx_tmpa_tl
269
270
271
             \LWR@origensuredmath{%
                                        lwarp
               \exp_not:V \l__siunitx_output_exponent_tl
             }%
273
                                        lwarp
```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```
282 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_format_final_combined: {
    \__siunitx_number_format_brackets:n { mantissa }
    \prop_get:NnN \l__siunitx_number_out_prop { mantissa-result }
285
       \l__siunitx_tmpa_tl
    \tl_if_empty:NT \l__siunitx_output_exponent_tl
286
287
         \tl_put_right:Nx \l__siunitx_tmpa_tl
288
289
           {
             \exp_not:N \LWR@origensuredmath%
                                                      lwarp
290
291
292
                 \bool_if:NTF \l__siunitx_tight_bool
293
                   { { \exp_not:V \l__siunitx_exponent_product_tl } }
294
                   { { } \exp_not:V \l__siunitx_exponent_product_tl { } }
295
           }
296
      }
297
     \prop_get:NnN \l__siunitx_number_out_prop { exponent-result }
298
       \l__siunitx_tmpb_tl
299
     \tl_put_right:NV \l__siunitx_tmpa_tl \l__siunitx_tmpb_tl
300
     \prop_put:NnV \l__siunitx_number_out_prop { result }
301
302
       \l__siunitx_tmpa_tl
     \prop_put:Nnn \l__siunitx_number_out_prop
303
       { result-bracket-exponent } { true }
304
305 }
306 \LWR@formatted{__siunitx_number_format_final_combined:}
```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```
307 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_output_parts_aux: {
     \bool_if:NTF \l__siunitx_multi_repeat_bool
308
309
         \prop_if_in:NnT \l__siunitx_number_out_prop { mantissa-result }
310
311
312
               \__siunitx_number_output_parts_aux:n { mantissa }
313
              \__siunitx_number_output_parts_aux:n { complex }
314
            }
         \prop_get:NnNT \l__siunitx_number_out_prop { exponent-result }
315
            \label{local_siunitx_tmpa_tl} \\ \label{local_siunitx_tmpa_tl} 
316
317
            {
              \prop_if_in:NnT \l__siunitx_number_out_prop { mantissa-result }
318
319
                   \tl_put_left:Nx \l__siunitx_tmpa_tl
320
321
                     {
                       \exp_not:N \LWR@origensuredmath
322
323
                            \bool_if:NTF \l__siunitx_tight_bool
324
                             { { \exp_not:V \l__siunitx_exponent_product_tl } }
325
```

```
326
                           { { } \exp_not:V \l__siunitx_exponent_product_tl { } }
327
328
329
                  \prop_put:NnV \l__siunitx_number_out_prop { exponent }
330
                    \l__siunitx_tmpa_tl
331
                }
                _siunitx_number_output_parts_print:n {    exponent }
332
           }
333
334
335
       { \__siunitx_number_output_single: }
336 }
337 \LWR@formatted{__siunitx_number_output_parts_aux:}
```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```
338 \cs_new_protected:Npn \LWR@HTML@__siunitx_unit_output_print: {
    \int_compare:nNnF { \l__siunitx_unit_prefix_int } = { 0 }
340
         \tl_set:Nx \l__siunitx_tmpa_tl
341
342
           {
             \bool_if:NTF \l__siunitx_tight_bool
343
344
               {
                  \exp_not:N \LWR@origensuredmath%
                    { { \exp_not:V \l__siunitx_exponent_product_tl } }
347
348
                  \exp_not:N \LWR@origensuredmath%
                                                          lwarp
349
                    { { } \exp_not:V \l__siunitx_exponent_product_tl { } }
350
               }
351
             \int_use:N \l__siunitx_unit_prefix_base_int
352
              { \int_use:N \l__siunitx_unit_prefix_int }
353
354
           _siunitx_print:nV {    number } \l__siunitx_tmpa_tl
355
356
357
     \tl_if_empty:NF \l__siunitx_unit_tl
358
359
            _siunitx_unit_output_number_sep:
360
          __siunitx_print:nV {    unit } \l__siunitx_unit_tl
361
362 }
363 \LWR@formatted{__siunitx_unit_output_print:}
```

 $\verb|\LWR@origensuredmath| is added here to avoid using an image for the exponent product.$

```
364 \cs_new_protected:Npn \LWR@HTML@__siunitx_range_exponent:
365
       \bool_if:NT \l__siunitx_process_fixed_bool
366
367
           \verb|\tl_set_eq:NN \tl_siunitx_tmpa_tl \tl_siunitx_exponent_product_tl|
368
           \bool_if:NT \l__siunitx_tight_bool
369
370
             {
371
               \tl_set:Nx \l__siunitx_tmpa_tl
                 { \exp_not:N \mathord \exp_not:o \l__siunitx_tmpa_tl }
372
373
374
           \tl_set:Nx \l__siunitx_tmpa_tl
375
             {
               \exp_not:N \LWR@origensuredmath {%
376
                                                          lwarp
                    { } \exp_not:o \l__siunitx_tmpa_tl { }
377
```

```
378
               10 \exp_not:N \PrintSuperscript
379
                 { \int_use:N \l__siunitx_process_fixed_int }
380
381
             }
           \__siunitx_print:nV { number } \l__siunitx_tmpa_tl
382
383
         }
384
    }
385 \LWR@formatted{__siunitx_range_exponent:}
 \LWR@origensuredmath is added here to avoid using an image for the exponent
 product.
386 \cs_new_protected:Npn \LWR@HTML@__siunitx_table_print_S_reserved_exponent_product:
387
       \tl_set_eq:NN \l__siunitx_tmpb_tl \l__siunitx_exponent_product_tl
388
       \bool_if:NT \l__siunitx_tight_bool
389
390
         {
           \tl_set:Nx \l__siunitx_tmpb_tl
391
392
             { \exp_not:N \mathord \exp_not:o \l__siunitx_tmpb_tl }
393
       \tl_set:Nx \l__siunitx_tmpa_tl
394
395
396
        \exp_not:N \LWR@origensuredmath { { } \exp_not:o \l__siunitx_tmpb_tl { } }
397
           \exp_not:o \l__siunitx_tmpa_tl
         }
398
399
    }
400 \LWR@formatted{__siunitx_table_print_S_reserved_exponent_product:}
 \LWR@origensuredmath is added here to avoid using an image for the output prod-
 uct.
401 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_output_product_aux: {
    \bool_set_true:N \l__siunitx_number_compound_bool
    \__siunitx_number_preprocess:V \l__siunitx_number_arg_tl
403
    \bool_if:NF \l__siunitx_error_bool
404
405
         \tl_if_empty:NTF \l__siunitx_number_multi_tl
406
407
           { \__siunitx_number_output_parse_aux: }
408
           { \__siunitx_number_output_quotient: }
         \tl_if_empty:NF \l__siunitx_number_next_tl
409
410
           {
             \bool_if:NTF \l__siunitx_tight_bool
411
412
               {
                 \__siunitx_print:nn { number }
413
                   { \LWR@origensuredmath { \l_siunitx_output_product_tl } }
414
415
               }
416
                  \__siunitx_print:nn { number }
               { \LWR@origensuredmath { { } \l_siunitx_output_product_tl { } } }
418
419
              __siunitx_number_output_parse:V \l__siunitx_number_next_tl
420
           }
421
       }
422
423 }
424 \LWR@formatted{__siunitx_number_output_product_aux:}
 Used to detect the math font.
425 \cs_set_protected:Npn \__siunitx_set_math_fam:n #1 {
```

```
426
     \group_begin:
       \hbox_set:Nn \l__siunitx_tmp_box
427
428
429
           \LWR@origensuredmath%
                                        lwarp
430
               \use:c { math #1 }
431
432
                   \int_const:cn { c__siunitx_math #1 _int } { \fam }
433
                 }
434
435
             }
436
         }
437
     \group_end:
438 }
 Force \text:
439 \cs_set_protected:Npn \__siunitx_range_numbers:nn #1#2
       \__siunitx_range_numbers_aux:n {#1}
441
       \text{\l__siunitx_range_phrase_tl}%
                                                 lwarp
442
       \__siunitx_range_numbers_aux:n {#2}
443
444
    }
 Force \text:
445 \cs_set_protected:Npn \__siunitx_range_unit:nnnn #1#2#3#4 {
    \__siunitx_unit_parse_options:nn {#1} {#2}
    \bool_if:NTF \l__siunitx_range_repeat_bool
       {
449
         \__siunitx_unit_in:nn {#1} {#2}
450
         \__siunitx_range_numbers_aux:n {#3}
451
         \text{\l__siunitx_range_phrase_tl}%
                                                     lwarp
452
         \__siunitx_range_numbers_aux:n {#4}
453
      }
454
         \bool_if:NT \l__siunitx_process_fixed_bool
455
           { \bool_set_true:N \l__siunitx_process_drop_exponent_bool }
456
         \bool_if:NT \l__siunitx_range_brackets_bool
457
458
           { \__siunitx_print:nV { number } \l__siunitx_bracket_open_tl }
         \__siunitx_range_numbers:nn {#3} {#4}
460
         \bool_if:NT \l__siunitx_range_brackets_bool
461
           { \__siunitx_print:nV { number } \l__siunitx_bracket_close_tl }
462
         \__siunitx_range_exponent:
463
         \__siunitx_unit_output_number_sep:
         \_siunitx_unit_output:nn {#1} {#2}
464
465
       }
466 }
467 \ExplSyntaxOff
468 \AtBeginDocument{
469 \sisetup{
      detect-mode=true,
      per-mode=symbol,
                            % fraction is not seen by pdftotext
472
       text-celsius = {\LWR@siunitx@textcelsius},
      text-degree = {\LWR@siunitx@textdegree},
473
       text-arcminute = {\LWR@siunitx@textprime} ,
474
       text-arcsecond = {\LWR@siunitx@textdblprime} ,
475
476 }
```

```
477 }
478 \LWR@origRequirePackage{lwarp-common-mathjax-siunitx}
```

Passing range-phrase to common-mathjax-siunitx does not seem to work with v2 using translator as it does with v3 using translations. The range-phrase therefore is set to an en-dash.

```
479 \AtBeginDocument{
480 \CustomizeMathJax{\def\LWRsiunitxrangephrase{\unicode{x2013}}}
```

File 458 lwarp-common-mathjax-siunitx.sty

Package common-mathjax-siunitx **\$567**

(Emulates or patches code by JOSEPH WRIGHT.)

common-mathjax-siunitx (Pkg) common-mathjax-siunitx adds MATHJAX for siunitx and siunitx-v2.

for HTML output: **MATHJAX** For MATHJAX.

The following runs much faster as separate \CusomizeMathJax calls instead of one single call.

```
1 \begin{warpMathJax}
2 \LWR@infoprocessingmathjax{siunitx}
3 \CustomizeMathJax{\newcommand{\tothe}[1]{^{#1}}}
4 \CustomizeMathJax{\newcommand{\raiseto}[2]{{#2}^{#1}}}
```

Used as an end marker when parsing values:

```
5 \CustomizeMathJax{\newcommand{\LWRsiunitxEND}{}}
```

```
[\langle options \rangle] \{\langle value \rangle\}
```

6 \CustomizeMathJax{\def\LWRsiunitxang#1;#2;#3;#4\LWRsiunitxEND{%

```
\ifblank{#1}{}\num{#1}\degree}%
```

- \ifblank{#2}{}\num{#2}^{\unicode{x2032}}}% \prime
- \ifblank{#3}{}\num{#3}^{\unicode{x2033}}}% \dblprime

10 }}

11 \CustomizeMathJax{\newcommand{\ang}[2][]{\LWRsiunitxang#2;;;\LWRsiunitxEND}}

 $[\langle options \rangle] \{\langle value \rangle\}$

\num handles optional powers (e, E, d, D), multiples (x), plus and minus, and period or comma decimal output.

To split the string, \def is used with parameter delimiters. When each of the following macros is used, extra delimiters are padded to the end of the arguments of each macro when used, and the final argument of each collects any extra unused delimiters.

The number is split by dimensions (x), then by powers (E, e, D, d), then by plus / minus (+-, \pm), then by plus and minus (+, -), then into pieces before and after the decimal point or decimal comma.

\ang

\num

Determine if the number is output with a decimal period or a decimal comma. The enclosing braces tell MathJax to not add extra space after the punctuation.

```
12 \ExplSyntaxOn
13 \AtBeginDocument{
14 \ifdefstring{\l_siunitx_output_decimal_tl}{{,}}
15 {\CustomizeMathJax{\def\LWRsiunitxdecimal{,}}}
16 {\CustomizeMathJax{\def\LWRsiunitxdecimal{.}}}
17 }
18 \ExplSyntaxOff
```

Any units which must be distributed across multiple dimensions:

```
19 \CustomizeMathJax{\def\LWRsiunitxdistribunit{}}
```

siunitx accepts either commas or periods as decimal points. \LWRsiunitxprintdecimal splits its input by periods then commas, parsing out before and after sections to print on either side of the decimal point.

\LWRsiunitxENDTWO is used only by \LWRsiunitxprintdecimalsubtwo, to avoid a parsing conflict with the more widely-used \LWRsiunitxEND.

The following splits by decimal commas:

```
20 \CustomizeMathJax{\newcommand{\LWRsiunitxENDTWO}{}}
21
22 \CustomizeMathJax{\def\LWRsiunitxprintdecimalsubtwo#1,#2,#3\LWRsiunitxENDTWO{%}
```

If nothing is ahead of the decimal comma, add a leading zero:

```
23 \ifblank{#1}{0}{\mathrm{#1}}%
```

If something is after the decimal comma, print the decimal and the fraction:

```
24 \ifblank{#2}%
25 {}%
26 {%
27 {\LWRsiunitxdecimal}%
28 \mathrm{#2}%
29 }%
30 }}
```

The following splits by decimal periods:

46

47 48

49

{%

{%

}% no plus

```
\LWRsiunitxprintdecimalsubtwo#1,,\LWRsiunitxENDTWO%
     \ifblank{#2}%
33
        {}%
34
35
        {%
36
            {\LWRsiunitxdecimal}%
37
            \LWRsiunitxprintdecimalsubtwo#2,,\LWRsiunitxENDTW0%
38
39 }}
41 \CustomizeMathJax{\newcommand{\LWRsiunitxprintdecimal}[1]{%
     \LWRsiunitxprintdecimalsub#1...\LWRsiunitxEND%
43 }}
The following splits by +
44 \CustomizeMathJax{\def\LWRsiunitxnumplus#1+#2+#3\LWRsiunitxEND{%
     \ifblank{#2}%
45
```

\LWRsiunitxprintdecimal{#1}%

```
\ifblank{#1}%
50
                    {\LWRsiunitxprintdecimal{#2}}% leading plus, ignore
51
                    {% a+b
52
                        \LWRsiunitxprintdecimal{#1}%
53
                        \unicode{x02B}% plus sign
54
                        \LWRsiunitxprintdecimal{#2}%
55
                    }%
56
           }%
57
       \LWRsiunitxdistribunit%
58
59 }}
 The following splits by -
60 \CustomizeMathJax{\def\LWRsiunitxnumminus#1-#2-#3\LWRsiunitxEND{%
       \ifblank{#2}%
62
           {\LWRsiunitxnumplus#1+++\LWRsiunitxEND}%
63
64
               \ifblank{#1}{}{\LWRsiunitxprintdecimal{#1}}%
65
               \unicode{x02212}% mathematical minus sign
66
               \LWRsiunitxprintdecimal{#2}%
               \LWRsiunitxdistribunit%
67
           }%
68
69 }}
 The following splits by \pm
\label{local-continuity} 70 \customizeMathJax{\def\LWRsiunitxnumpmmacro#1\pm#2\pm#3\LWRsiunitxEND{\%} }
       \ifblank{#2}%
71
           {\LWRsiunitxnumminus#1---\LWRsiunitxEND}%
72
           {%
73
74
               \LWRsiunitxprintdecimal{#1}%
               \unicode{x0B1}% \pm
75
               \LWRsiunitxprintdecimal{#2}%
76
77
               \LWRsiunitxdistribunit%
78
           }%
79 }}
 The following splits by +-
80 \CustomizeMathJax{\def\LWRsiunitxnumpm#1+-#2+-#3\LWRsiunitxEND{%
       \ifblank{#2}%
           {\LWRsiunitxnumpmmacro#1\pm\pm\LWRsiunitxEND}%
82
83
           {%
84
               \LWRsiunitxprintdecimal{#1}%
               \unicode{x0B1}% \pm
85
               \LWRsiunitxprintdecimal{#2}%
86
                \LWRsiunitxdistribunit%
87
           }%
88
89 }}
 Processes scientific notation. Special handling for a mantissa which is either empty
 or only a minus sign.
90 \CustomizeMathJax{\newcommand{\LWRsiunitxnumscientific}[2]{%
       \ifblank{#1}%
91
           {}%
92
93
           {%
               \ifstrequal{#1}{-}%
94
95
96
                    {\LWRsiunitxprintdecimal{#1}\times}%
97
       10^{\LWRsiunitxprintdecimal{#2}}%
98
       \LWRsiunitxdistribunit%
99
100 }}
```

```
The following splits by D
101 \CustomizeMathJax{\def\LWRsiunitxnumD#1D#2D#3\LWRsiunitxEND{%
                 \ifblank{#2}%
                           {\LWRsiunitxnumpm#1+-+-\LWRsiunitxEND}%
103
104
                           {\mathrm{\LWRsiunitxnumscientific{#1}{#2}}}%
105 }}
   The following splits by d
\label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
                 \ifblank{#2}%
108
                           {\LWRsiunitxnumD#1DDD\LWRsiunitxEND}%
109
                           {\mathrm{\LWRsiunitxnumscientific{#1}{#2}}}%
110 }}
   The following splits by E
111 \CustomizeMathJax{\def\LWRsiunitxnumE#1E#2E#3\LWRsiunitxEND{%
                 \ifblank{#2}%
                           {\LWRsiunitxnumd#1ddd\LWRsiunitxEND}%
113
                           {\mathrm{\LWRsiunitxnumscientific{#1}{#2}}}%
114
115 }}
   The following splits by e
116 \CustomizeMathJax{\def\LWRsiunitxnume#1e#2e#3\LWRsiunitxEND{%
                 \ifblank{#2}%
                           {\LWRsiunitxnumE#1EEE\LWRsiunitxEND}%
118
                           {\mathrm{\LWRsiunitxnumscientific{#1}{#2}}}%
119
120 }}
   The following splits by x
121 \CustomizeMathJax{\def\LWRsiunitxnumx#1x#2x#3x#4\LWRsiunitxEND{%
                 \ifblank{#2}%
                           {\LWRsiunitxnume#1eee\LWRsiunitxEND}%
124
                           {%
                                      \ifblank{#3}%
125
126
                                                {%
                                                           \LWRsiunitxnume#1eee\LWRsiunitxEND%
127
                                                           \times%
128
                                                           \LWRsiunitxnume#2eee\LWRsiunitxEND%
129
                                                }%
130
                                                {%
131
                                                           \LWRsiunitxnume#1eee\LWRsiunitxEND%
132
133
                                                          \LWRsiunitxnume#2eee\LWRsiunitxEND%
134
                                                          \times%
135
136
                                                           \LWRsiunitxnume#3eee\LWRsiunitxEND%
137
                                                }%
                           }%
138
139 }}
140 \CustomizeMathJax{\newcommand{\num}[2][]{%
141
                 \LWRsiunitxnumx#2xxxxx\LWRsiunitxEND%
142 }}
```

~ is converted to a thin space. Not able to convert period to thin space because the period might be in \raiseto, for example.

 ${\tt 143 \ CustomizeMathJax{\ newcommand{\si}[2][]{\%}} \\$

 $[\langle options \rangle] \{\langle unit \rangle\}$

\si

```
144
                                         \mathbf{\gsubstitute} \
                                 145 }}
\SI
                                    [\langle options \rangle] \{\langle value \rangle\} [\langle prefix \rangle] \{\langle unit \rangle\}
                                  \SI has a second optional arg, which is parsed using \ifnextchar.
                                 146 \CustomizeMathJax{\def\LWRsiunitxSIopt#1[#2]#3{%
                                 147
                                         \def\LWRsiunitxdistribunit{\,\si{#3}}%
                                 148
                                         {#2}\num{#1}%
                                         \def\LWRsiunitxdistribunit{}%
                                 149
                                 150 }}
                                 151
                                 152 \CustomizeMathJax{\newcommand{\LWRsiunitxSI}[2]{%
                                         \def\LWRsiunitxdistribunit{\,\si{#2}}%
                                 153
                                 154
                                         \text{num}\{\#1\}\%
                                         \def\LWRsiunitxdistribunit{}%
                                 155
                                 156 }}
                                 157 \CustomizeMathJax{\newcommand{\SI}[2][]{%
                                         \ifnextchar[%
                                              {\LWRsiunitxSIopt{#2}}%
                                 159
                                              {\LWRsiunitxSI{#2}}%
                                 160
                                 161 }}
                                    [\langle options \rangle] \{\langle list \rangle\}
\numlist
                                  \numlist should only be used in text mode. If used in MathJax, it is merely printed
                                  as text, so add space around the semicolons.
                                 162 \CustomizeMathJax{\newcommand{\numlist}[2][]{\text{#2}}}
                                    [\langle options \rangle] \{\langle value1 \rangle\} \{\langle value2 \rangle\}
\numrange
                                  \numrange should only be used in text mode. If used in MathJax math, an en-dash
                                  is used instead of the range-phrase.
                                 163 \CustomizeMathJax{\newcommand{\numrange}[3][]{%
                                 164

\begin{aligned} &\mu & \text{1} \ \text{LWRsiunitxrangephrase}  \\ &\mu & & \end{aligned}

                                 165 }}
\SIlist
                                    [\langle options \rangle] \{\langle list \rangle\}
                                  \SIlist and \SIrange should only be used in text mode. If used in MATHJAX, a
                                  simple emulation is provided.
                                 \label{list} $$166 \subset MathJax{\newcommand{SIlist}[3][]{\text{$0, si{\#3}}} $$
                                    [\langle options \rangle] \{\langle value1 \rangle\} \{\langle value2 \rangle\} \{\langle unit \rangle\}
\SIrange
                                 167 \CustomizeMathJax{\newcommand{\SIrange}[4][]{%
                                         \mbox{$\num{#2}\,\#4$ \LWRsiunitxrangephrase} \num{\#3}\,\#4\%
                                 168
                                 169 }}
\tablenum
                                    [\langle options \rangle] \{\langle value \rangle\}
                                 170 \CustomizeMathJax{\newcommand{\tablenum}[2][]{\mathrm{#2}}}
                                 171 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
                                 172 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
                                 173 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
```

```
174 \costomizeMathJax{\newcommand{\kilogram}{\mathrm{kg}}}
175 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
176 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
179 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
180 \CustomizeMathJax{\newcommand{\degreeCelsius}{\unicode{x2103}}}
181 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
184 \verb|\CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}|
185 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
186 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
188 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
189 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
190 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
191 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
192 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
194 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
195 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
196 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
197 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
198 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
199 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
200 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
201 \CustomizeMathJax{\newcommand{\day}{\mathrm{d}}}
203 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{ha}}}
204 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
205 \CustomizeMathJax{\newcommand{\litre}{\mathrm{l}}}
206 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
207 \CustomizeMathJax{\newcommand{\arcminute}{^\prime}}
208 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
209 \CustomizeMathJax{\newcommand{\arcsecond}{^{\prime\prime}}}
210 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
211 \CustomizeMathJax{\newcommand{\astronomicalunit}{au}}
212 \CustomizeMathJax{\newcommand{\atomicmassunit}{u}}
213 \CustomizeMathJax{\newcommand{\bohr}{\mathit{a}_0}}
214 \CustomizeMathJax{\newcommand{\clight}{\mathit{c}_0}}
215 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{D}_\mathrm{a}}}
 216 \continuous {\tt lectronmass}{\tt lathit{m}_{\tt mathrm{e}}} \} 
217 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}
218 \CustomizeMathJax{\newcommand{\elementarycharge}{\mathit{e}}}
219 \CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_{\mathrm{h}}}}
220 \CustomizeMathJax{\newcommand{\planckbar}{\mathit{\unicode{x210F}}}}
221 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x212B}}}}
222 \CustomizeMathJax{\let\LWRorigbar\bar}
223 \CustomizeMathJax{\newcommand{\bar}{\mathrm{bar}}}
224 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
{\tt 225 \customizeMathJax{\newcommand{\bel}{\mathrm{B}}}}
226 \CustomizeMathJax{\newcommand{\decibel}{\mathrm{dB}}}
227 \CustomizeMathJax{\newcommand{\knot}{\mathrm{kn}}}
228 \CustomizeMathJax{\newcommand{\mmHg}}}
229 \CustomizeMathJax{\newcommand{\nauticalmile}{\mathrm{M}}}
230 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
232 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
233 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
```

```
234 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
235 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
236 \CustomizeMathJax{\newcommand{\pico}{\mathbb{p}}}
237 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
238 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
239 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
240 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
241 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
242 \CustomizeMathJax{\newcommand{\deca}{\mathbb{}}}
243 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
244 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
245 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
246 \compared 
247 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
248 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
249 \CustomizeMathJax{\newcommand{\exa}{\mathbb{E}}}
250 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
251 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
253 \CustomizeMathJax{\newcommand{\percent}{\mathrm{\%}}}
255 \CustomizeMathJax{\newcommand{\meter}{\mathrm{m}}}
256 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
258 \converged \conv
259 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
260 \CustomizeMathJax{\newcommand{\of}[1]_{_{mathrm{#1}}}}
261 \CustomizeMathJax{\newcommand{\squared}{^2}}
\label{lem:command} $$262 \subset \align{ \newcommand \square}[1]_{\mathbf{41}^2} $$
263 \CustomizeMathJax{\newcommand{\cubed}{^3}}
264 \CustomizeMathJax{\newcommand{\cubic}[1]{\mathrm{\#1}^3}}
265 \CustomizeMathJax{\newcommand{\per}{\,\mathrm{/}}}
266 \CustomizeMathJax{\newcommand{\celsius}{\unicode{x2103}}}
268 \CustomizeMathJax{\newcommand{\fg}{\femto\gram}}
269 \CustomizeMathJax{\newcommand{\pg}{\pico\gram}}
270 \CustomizeMathJax{\newcommand{\ng}{\nano\gram}}
271 \CustomizeMathJax{\newcommand{\ug}{\micro\gram}}
272 \CustomizeMathJax{\newcommand{\mg}{\milli\gram}}
273 \CustomizeMathJax{\newcommand{\g}{\gram}}
274 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
276 \CustomizeMathJax{\newcommand{\amu}{\mathrm{u}}}
278 \CustomizeMathJax{\newcommand{\pm}{\pico\metre}}
279 \CustomizeMathJax{\newcommand{\nm}{\nano\metre}}
280 \CustomizeMathJax{\newcommand{\um}{\micro\metre}}
281 \CustomizeMathJax{\newcommand{\mm}{\milli\metre}}
282 \CustomizeMathJax{\newcommand{\cm}{\centi\metre}}
283 \CustomizeMathJax{\newcommand{\dm}{\deci\metre}}
284 \CustomizeMathJax{\newcommand{\m}{\metre}}
285 \CustomizeMathJax{\newcommand{\km}{\kilo\metre}}
287 \CustomizeMathJax{\newcommand{\as}{\atto\second}}
288 \CustomizeMathJax{\newcommand{\fs}{\femto\second}}
289 \CustomizeMathJax{\newcommand{\ps}{\pico\second}}
290 \CustomizeMathJax{\newcommand{\ns}{\nano\second}}
```

```
291 \CustomizeMathJax{\newcommand{\us}{\micro\second}}
292 \CustomizeMathJax{\newcommand{\ms}{\milli\second}}
293 \CustomizeMathJax{\newcommand{\s}{\second}}
295 \CustomizeMathJax{\newcommand{\fmol}{\femto\mol}}
296 \CustomizeMathJax{\newcommand{\pmol}{\pico\mol}}
297 \CustomizeMathJax{\newcommand{\nmol}{\nano\mol}}
298 \CustomizeMathJax{\newcommand{\umol}{\micro\mol}}
299 \CustomizeMathJax{\newcommand{\mmol}{\milli\mol}}
300 \CustomizeMathJax{\newcommand{\mol}{\mol}}
301 \CustomizeMathJax{\newcommand{\kmol}{\kilo\mol}}
303 \CustomizeMathJax{\newcommand{\pA}{\pico\ampere}}
304 \command{\nA}{\newcommand{\nA}}{\newcommand{\nA}}{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcomman
305 \CustomizeMathJax{\newcommand{\uA}{\micro\ampere}}
306 \CustomizeMathJax{\newcommand{\mA}{\milli\ampere}}
307 \CustomizeMathJax{\newcommand{\A}{\ampere}}
308 \CustomizeMathJax{\newcommand{\kA}{\kilo\ampere}}
{\tt 310 \ CustomizeMathJax{\newcommand{\ul}{\micro\litre}}}
311 \CustomizeMathJax{\newcommand{\ml}{\milli\litre}}
312 \CustomizeMathJax{\newcommand{\l}{\litre}}
313 \CustomizeMathJax{\newcommand{\hl}{\hecto\litre}}
314 \CustomizeMathJax{\newcommand{\uL}{\micro\liter}}
315 \CustomizeMathJax{\newcommand{\mL}{\milli\liter}}
316 \CustomizeMathJax{\newcommand{\L}{\liter}}
317 \CustomizeMathJax{\newcommand{\hL}{\hecto\liter}}
318 %
319 \CustomizeMathJax{\newcommand{\mHz}{\milli\hertz}}
320 \CustomizeMathJax{\newcommand{\Hz}{\hertz}}
321 \CustomizeMathJax{\newcommand{\kHz}{\kilo\hertz}}
322 \CustomizeMathJax{\newcommand{\MHz}{\mega\hertz}}
323 \CustomizeMathJax{\newcommand{\GHz}{\giga\hertz}}
324 \CustomizeMathJax{\newcommand{\THz}{\tera\hertz}}
326 \CustomizeMathJax{\newcommand{\mN}{\milli\newton}}
327 \CustomizeMathJax{\newcommand{\N}{\newton}}
328 \CustomizeMathJax{\newcommand{\kN}{\kilo\newton}}
329 \CustomizeMathJax{\newcommand{\MN}{\mega\newton}}
330 %
331 \CustomizeMathJax{\newcommand{\Pa}{\pascal}}
332 \CustomizeMathJax{\newcommand{\kPa}{\kilo\pascal}}
333 \CustomizeMathJax{\newcommand{\MPa}{\mega\pascal}}
334 \CustomizeMathJax{\newcommand{\GPa}{\giga\pascal}}
336 \CustomizeMathJax{\newcommand{\mohm}{\milli\ohm}}
337 \CustomizeMathJax{\newcommand{\kohm}{\kilo\ohm}}
338 \CustomizeMathJax{\newcommand{\Mohm}{\mega\ohm}}
340 \CustomizeMathJax{\newcommand{\pV}{\pico\volt}}
341 \CustomizeMathJax{\newcommand{\nV}{\nano\volt}}
342 \CustomizeMathJax{\newcommand{\uV}{\micro\volt}}
{\tt 343 \ CustomizeMathJax{\newcommand{\mV}{\milli\volt}}}
344 \CustomizeMathJax{\newcommand{\V}{\volt}}
345 \CustomizeMathJax{\newcommand{\kV}{\kilo\volt}}
347 \CustomizeMathJax{\newcommand{\W}{\watt}}
348 \CustomizeMathJax{\newcommand{\uW}{\micro\watt}}
349 \CustomizeMathJax{\newcommand{\mW}{\milli\watt}}
350 \CustomizeMathJax{\newcommand{\kW}{\kilo\watt}}
```

```
351 \CustomizeMathJax{\newcommand{\MW}{\mega\watt}}
352 \CustomizeMathJax{\newcommand{\GW}{\giga\watt}}
{\tt 354 \ CustomizeMathJax{\ newcommand{\ J}{\ joule}}}
355 \CustomizeMathJax{\newcommand{\uJ}{\micro\joule}}
356 \CustomizeMathJax{\newcommand{\mJ}{\milli\joule}}
357 \CustomizeMathJax{\newcommand{\kJ}{\kilo\joule}}
359 \CustomizeMathJax{\newcommand{\eV}{\electronvolt}}
360 \CustomizeMathJax{\newcommand{\meV}{\milli\electronvolt}}
361 \CustomizeMathJax{\newcommand{\keV}{\kilo\electronvolt}}
362 \CustomizeMathJax{\newcommand{\MeV}{\mega\electronvolt}}
363 \CustomizeMathJax{\newcommand{\GeV}{\giga\electronvolt}}
{\tt 364 \CustomizeMathJax{\newcommand{\TeV}{\tera\electronvolt}}}
366 \costomizeMathJax{\newcommand{\kWh}{\kilo\watt\hour}}
367 %
368 \CustomizeMathJax{\newcommand{\F}{\farad}}
{$\tt 369 \customizeMathJax{\newcommand{\fF}{\femto\farad}}}
370 \CustomizeMathJax{\newcommand{\pF}{\pico\farad}}
372 \converged WathJax{\newcommand{\K}{\mathrm{K}}}
374 \CustomizeMathJax{\newcommand{\dB}{\mathrm{dB}}}
375 %
376 \CustomizeMathJax{\newcommand{\kibi}{\mathrm{Ki}}}
377 \CustomizeMathJax{\newcommand{\mebi}{\mathrm{Mi}}}
378 \CustomizeMathJax{\newcommand{\gibi}{\mathrm{Gi}}}
379 \CustomizeMathJax{\newcommand{\tebi}{\mathrm{Ti}}}
{\tt 380 \ CustomizeMathJax{\ newcommand{\ pebi}{\ mathrm{Pi}}}}
381 \CustomizeMathJax{\newcommand{\exbi}{\mathrm{Ei}}}
382 \CustomizeMathJax{\newcommand{\zebi}{\mathrm{Zi}}}
383 \CustomizeMathJax{\newcommand{\yobi}{\mathrm{Yi}}}
384 \end{warpMathJax}
```

File 459 lwarp-skmath.sty

§ 568 Package skmath

(Emulates or patches code by Simon Sigurdhsson.)

skmath (Pkg) skmath is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{skmath}[2019/10/15]

Only defined if package option requested:

```
2 \begin{warpMathJax}
3 \ExplSyntaxOn
4 \bool_if:NT\g__skmath_define_common_sets_bool{
5 \CustomizeMathJax{\newcommand{\N}{\mathbb{N}}}
6 \CustomizeMathJax{\newcommand{\Z}{\mathbb{Z}}}
7 \CustomizeMathJax{\newcommand{\Q}{\mathbb{Q}}}
8 \CustomizeMathJax{\newcommand{\R}{\mathbb{R}}}
9 \CustomizeMathJax{\newcommand{\C}{\mathbb{C}}}
10 }
```

skmath is using l3keys, which does not seem to have an equivalent to \@ifpackagewith. To detect package options, comparisons with the following are made to see if various macros have been defined as follows:

```
11 \cs_gset_nopar:Npn\LWR__skmath_imaginary_unit:n#1{{#1}}
12 \cs_gset_nopar:Npn\LWR__skmath_natural_log_e:{{e}}
13 \cs_gset_nopar:Npn\LWR__skmath_integral_d:{{d}}
14 \cs_gset_nopar:Npn\LWR__skmath_total_derivative_d:{{d}}
If notation=iso, use upright, else italic:
15\cs_if_eq:NNTF \__skmath_imaginary_unit:n \LWR__skmath_imaginary_unit:n
16
      {
          \CustomizeMathJax{\newcommand{ii}{\mathit{i}}}
17
          \CustomizeMathJax{\newcommand{jj}{\mathit{j}}}
18
19
      }
20
21
          \CustomizeMathJax{\newcommand{ii}{\mathrm{i}}}
22
          \CustomizeMathJax{\newcommand{jj}{\mathrm{j}}}
      }
23
If notation=iso, use upright, else italic:
24\cs_if_eq:NNTF \__skmath_natural_log_e: \LWR__skmath_natural_log_e:
      { \CustomizeMathJax{\newcommand{\ee}{\mathbb{}}} }
```

skmath uses \DeclarePairedDelimiter from mathtools for \abs and \norm, and lwarp uses this to automatically define MathJax definitions for each.

If notation=english, use slanted, else upright:

{ $\CustomizeMathJax{\newcommand{\ee}{\mathbb{}}} }$

Used to parse comma and caret arguments for \pd and \td:

```
{\tt 30 \ CustomizeMathJax\{\ def\ LWRskmathEND\{\}\}}
```

Parse the arguments with up to four commas. Argument 6 contains any leftover commas.

```
31 \CustomizeMathJax{\def\LWRskmathpdstarsub#1#2,#3,#4,#5,#6\LWRskmathEND{
32  #1_{#2#3#4#5}%
33 }}
34
35 \CustomizeMathJax{\newcommand{\LWRskmathpdstar}[2]{%
36  \LWRskmathpdstarsub{#1}#2,,,,\LWRskmathEND%
37 }}
```

Parse the arguments with up to two carets. Argument 3 contains any leftover carets. \LWRskmathpdplus is used to only place a plus sign starting after the first term. \LWRskmathpdone is used to only place a 1 digit if a second or later term does not have a power.

```
38 \CustomizeMathJax{\def\LWRskmathpdnumerator#1^#2^#3\LWRskmathEND{%
39 \ifblank{#1}{}{
```

Parse the arguments with up to two carets. Argument 3 contains any leftover

```
43 \CustomizeMathJax{\def\LWRskmathpddenominator#1^#2^#3\LWRskmathEND{%
44 \ifblank{#1}{}{%
45 \ifblank{#2}%
46 {\partial{#1}}%
47 {\partial{#1}}^{#2}}%
48 }%
49 }}
```

Factored from \LWRskmathpdnostarsub, following:

The phrase ^{} appears to be required while parsing the carets. \LWRskmathpdplus is used to only place a plus sign starting after the first term. \LWRskmathpdone is used to only place a 1 digit if a second or later term does not have a power.

This may not be recursion-safe. (Is there really such as a thing as nested differentials?)

```
50 \CustomizeMathJax{\newcommand{\LWRskmathdonumerator}[5]{%
51
         \def\LWRskmathpdplus{}%
52
         53
54
         \def\LWRskmathpdplus{+}%
55
         \def\LWRskmathpdone{1}%
         56
         \verb|\LWRskmathpdnumerator#4^{}^{LWRskmathEND\%}|
57
         \verb|\LWRskmathpdnumerator#5^{}^{LWRskmathEND\%|}|
58
     }%
59
     {#1}%
60
61 }}
\label{lem:command} $$ \customizeMathJax{\newcommand{\LWRskmathdodenominator}[4]{\%} $$
     \LWRskmathpddenominator#1^{}^{}^{}\LWRskmathEND%
     \ifblank{#2}{}{\,}%
65
66
     \ifblank{#3}{}{\,}%
67
     \label{local-continuity} LWR skmathpddenominator \#3^{}^{}^{} LWR skmath END\%
68
     \ifblank{#4}{}{\,}%
69
70
     \LWRskmathpddenominator#4^{}^{}^{}\LWRskmathEND%
71 }}
```

Parse the arguments with up to four commas. Argument 6 contains any leftover commas.

```
72 \CustomizeMathJax{\def\LWRskmathpdnostarsub#1#2,#3,#4,#5,#6\LWRskmathEND{
73 \ifblank{#3}{\def\LWRskmathpdone{}}{\def\LWRskmathpdone{1}}
74 \frac%
75 {\LWRskmathdonumerator{#1}{#2}{#3}{#4}{#5}}%
76 {\LWRskmathdodenominator{#2}{#3}{#4}{#5}}%
77 }}
78
79 \CustomizeMathJax{\newcommand{\LWRskmathpdnostar}[2]{%
80 \LWRskmathpdnostarsub{#1}#2,,,,,\LWRskmathEND%
```

```
81 }}
82 \CustomizeMathJax{\newcommand{\pd}{\ifstar\LWRskmathpdstar\LWRskmathpdnostar}}
 If notation=english or legacy, use slanted, else upright:
{ \CustomizeMathJax{\newcommand{\LWRskmathtd}{\mathit{d}}} }
     86 \customizeMathJax{\def\LWRskmathtdsub#1#2^#3\LWRskmathEND{\%} }
88
        {\LWRskmathtd^{#3}{\#1}}
89
        {\LWRskmathtd{#2}^{#3}}
90 }}
92 \CustomizeMathJax{\newcommand{\td}[2]{%
     \LWRskmathtdsub{#1}#2^{}\LWRskmathEND%
93
94 }}
95 \CustomizeMathJax{\newcommand{\E}[1]{%
     \operatorname{E}\left[#1\right]%
97 }}
98 \CustomizeMathJax{\let\given\mid}
100 \CustomizeMathJax{\newcommand{\P}[1]{\%}}
     \verb|\operatorname{P}| %
     \left( \#1\right) 
102
103 }}
104 \CustomizeMathJax{\newcommand{\var}[1]{%
105 \operatorname{Var}\left(#1\right)%
106 }}
{\tt 108 \ CustomizeMathJax{\ newcommand{\ cov}[2]{\%}}}
\label{loss} $$ \operatorname{Cov}\left(\#1,\#2\right)\%$ 
110 }}
 Common code for \sin etc:
111 \CustomizeMathJax{\newcommand{\LWRskmathtrigtwo}[2][]{%
     \ifblank{#1}{}{^{#1}}%
113
     \left\{ \frac{\#2}{{\left( \frac{\#2\right)}}} \right\}
114 }}
115
116 \CustomizeMathJax{\newcommand{\LWRskmathtrig}[1]{%}}
     \operatorname{#1}%
117
     \LWRskmathtrigtwo%
118
119 }}
```

```
131 \CustomizeMathJax{\renewcommand{\sinh}{\LWRskmathtrig{sinh}}}
\label{local-cosh} $$132 \subset \mathcal {\LWRskmathtrig}(\cosh)} $$
133 \CustomizeMathJax{\renewcommand{\tanh}{\LWRskmathtrig{tanh}}}
  Common code for \ln and \log:
134 \CustomizeMathJax{\newcommand{\LWRskmathlogtwo}[2][]{%
               \ifblank{#1}{}{_{#1}}%
               \left\{ \frac{\#2}{{\left( \frac{\#2\right)}}} \right\}
136
137 }}
138
139 \CustomizeMathJax{\newcommand{\LWRskmathlog}[1]{%
               \operatorname{#1}%
140
               \LWRskmathlogtwo%
141
142 }}
\label{localize} $$143 \subset \mathcal{L}(n)_{LWRskmathlog_{ln}}$$
144 \costomizeMathJax{\renewcommand{\log}{\LWRskmathlog{log}}}
145 \CustomizeMathJax{\newcommand{\LWRskmathexpparens}[1]{%
               \operatorname{exp}%
              \ifblank{#1}{}{\left(#1\right)}%
147
148 }}
  See the skmath source for the original of the following:
\mathchoice
150
                       {\ee^{#1}}
151
                       {\LWRskmathexpparens{#1}}
152
                       {\LWRskmathexpparens{#1}}
153
154
                       {\LWRskmathexpparens{#1}}
155 }}
\label{localize} $$157 \subset MathJax{\operatorname{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox{\ensembox
   Common code for \min etc:
\label{localize} $$158 \subset \mathcal{L}(\CustomizeMathJax{\newcommand}\LWRskmathminstar}[2][]{\%}$
               \operatorname{\LWRskmathminname}%
159
              \ifblank{#1}{}{%
160
                        _{\mathchoice{\mathclap{#1}}{#1}{#1}{#1}}
161
162
              }%
               \ifblank{#2}{}{#2}%
163
164 }}
165 \CustomizeMathJax{\newcommand{\LWRskmathminnostar}[2][]{%
               \ifblank{#1}%
                       {\operatorname{\LWRskmathminname}}%
167
168
                       {%
                                \underset%
169
                                         {\mathchoice{\mathclap{#1}}{#1}{#1}{#1}}%
170
                                         {\operatorname{\LWRskmathminname}}%
171
                       }%
172
```

```
173
                \left\{ \frac{\#2}{\left( \frac{\#2\right)}{\%} \right.}
174 }}
   \LWRskmathminname seems to be recursion-safe since it is used immediately.
\label{local-continuity} 175 \customizeMathJax{\newcommand{\LWRskmathmin}[1]{\%}}
                \def\LWRskmathminname{#1}%
177
                \ifstar\LWRskmathminstar\LWRskmathminnostar%
178 }}
179 \CustomizeMathJax{\renewcommand{\min}{\LWRskmathmin{min}}}
180 \CustomizeMathJax{\renewcommand{\argmin}{\arg\LWRskmathmin{min}}}
181
184 \costomizeMathJax{\renewcommand{\sup}{\LWRskmathmin{sup}}}
186 \CustomizeMathJax{\let\bar\overline}
188 \CustomizeMathJax{\let\vec\boldsymbol}
   Remember the original definitions:
189 \CustomizeMathJax{\let\LWRskmathRe\Re}
190 \CustomizeMathJax{\let\LWRskmathIm\Im}
   Redefine depending on notation=iso:
191 \bool_if:NTF\g__skmath_iso_complex_parts_bool{
                \CustomizeMathJax{\renewcommand{\Re}[1]{%}
192
193
                          \LWRskmathRe%
                          \ifblank{#1}{}{\left(#1\right)}%
194
                 \CustomizeMathJax{\renewcommand{\Im}[1]{%
197
                          \LWRskmathIm%
198
                          \ifblank{#1}{}{\left(#1\right)}%
199
200 }{
                \label{lem:customizeMathJax{\renewcommand{\Re}[1]{%}} % The constraint of the cons
201
                          \operatorname{Re}%
202
                          \ifblank{#1}{}{#1}%
203
204
                }}
                 \CustomizeMathJax{\renewcommand{\Im}[1]{%
205
                          \operatorname{Im}%
206
207
                          \ifblank{#1}{}{#1}%
208
                }}
209 }
210
211 \ExplSyntaxOff
212 \end{warpMathJax}
```

File 460 lwarp-slantsc.sty

§ 569 Package slantsc

```
slantsc (Pkg) slantsc is emulated for HTML, and used as-is for print output.
for HTML output:
                   1 \LWR@ProvidesPackagePass{slantsc}[2012/01/01]
                   2 \newcommand*{\LWR@HTML@noscshape}{}
                   3 \LWR@formatted{noscshape}
                   5\FilenameNullify{%
                         \LetLtxMacro\noscshape\@empty%
                   7 }
          File 461 lwarp-slashed.sty
         Package slashed
§570
                   (Emulates or patches code by David Carlisle.)
                   slashed works as-s for HTML svg math. For MATHJAX, emulation is provided.
     slashed(Pkg)
for HTML output:
                   1 \LWR@ProvidesPackagePass{slashed}[1997/01/16]
                   2 \begin{warpMathJax}
                   3 \CustomizeMathJax{\newcommand{\slashed}[1]{\cancel{#1}}}
                   4\end{warpMathJax}
          File 462 lwarp-soul.sty
         Package SOUL
§ 571
                   (Emulates or patches code by Melchior FRANZ.)
        soul (Pkg) soul is emulated.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{soul}[2003/11/17]
                   2 \RequirePackage{xcolor}% for \convertcolorspec
                   Storage for the colors to use:
                   3 \newcommand*{\LWR@soululcolor}{}
                   5 \newcommand*{\LWR@soulstcolor}{}
                   7% \definecolor{LWR@soulhlcolordefault}{HTML}{F8E800}
                   8% \newcommand*{\LWR@soulhlcolor}{LWR@soulhlcolordefault}
                   9 \newcommand*{\LWR@soulhlcolor}{}
                     \{\langle text \rangle\}
                   Basic markup with css:
                   10 \newcommand{\so}[1]{%
                   11 \InlineClass(letter-spacing:.2ex){letterspacing}{#1}%
                   12 }
```

\so

```
\{\langle text \rangle\}
\caps
                               13 \newcommand{\caps}[1]{%
                                     \InlineClass%
                               14
                                          (font-variant:small-caps;letter-spacing:.1ex)%
                               15
                                          {capsspacing}{#1}%
                               16
                               17 }
\LWR@soulcolor
                                 \{\langle text \rangle\} \{\langle color \rangle\} \{\langle class \rangle\} \{\langle colorstyle \rangle\} \{\langle FormatWPstyle \rangle\}
                               Add colors if not empty:
                               18 \newcommand{\LWR@soulcolor}[5]{\%
                               19 \ifcsempty{#2}%
                               20 {%
                                      \InlineClass(#5){#3}{#1}%
                               21
                               22 }%
                               23 {%
                                      \convertcolorspec{named}{\@nameuse{#2}}{HTML}\LWR@tempcolor%
                               25
                                      \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}%
                               26 }%
                               27 }
                               28 \rightarrow \{1\}[1]
                               {\tt 29 \LWR@soulcolor{\#1}{LWR@soululcolor}{\{uline\}\{text-decoration-color\}\%}}
                                     {text-decoration:underline; text-decoration-skip: auto;}%
                               30
                              31 }
                               33 \newcommand{\st}[1]{
                               {\tt 34 LWR@soulcolor\{\#1\}\{LWR@soulstcolor\}\{sout\}\{text-decoration-color\}\%}
                                     {text-decoration:line-through}%
                              35
                               36 }
                              37
                               38 \newcommand{\hl}[1]{
                               {\tt 39 \LWR@soulcolor\{\#1\}\{LWR@soulhlcolor\}\{highlight\}\{background-color\}\%}
                                     {background:\LWR@origpound{}F8E800}
                               41 }
                               Nullified:
                               42 \newcommand*{\soulaccent}[1]{}
                               43 \newcommand*{\soulregister}[2]{}
                               44 \newcommand{\sloppyword}[1]{#1}
                               45 \newcommand*{\sodef}[5]{\DeclareRobustCommand*#1[1]{\so{##1}}}
                               46 \newcommand*{\resetso}{}
                               47 \newcommand*{\capsdef}[5]{}
                               48 \newcommand*{\capsreset}{}
                               49 \newcommand*{\capssave}[1]{}
                               50 \newcommand*{\capsselect}[1]{}
                               51 \newcommand*{\setul}[2]{}
                               52 \newcommand*{\resetul}{}
                               53 \newcommand*{\setuldepth}[1]{}
                               54 \newcommand*{\setuloverlap}[1]{}
                               55 \newcommand*{\<}{}
                               Set colors:
                               56 \newcommand {\LWR@soululcolor} {\{1\}} \\
                               \label{lem:command} $$ \operatorname{\sc}_{1}{\operatorname{\sc}_{1}}{\operatorname{\sc}_{1}} $$
```

```
58 \newcommand*{\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}

Long versions of the user-level macros:
59 \let\textso\so
60 \let\textul\ul
61 \let\texthl\hl
62 \let\textcaps\caps
```

File 463 lwarp-soulpos.sty

```
§ 572 Package soulpos
```

(Emulates or patches code by Javier Bezos.)

soulpos (*Pkg*) soulpos is emulated.

```
for HTML output: 1 \RequirePackage{soul}
2 \RequirePackage{soulutf8}
3 \LWR@ProvidesPackageDrop{soulpos}[2012/02/25]

4 \NewDocumentCommand{\ulposdef}{m o m}{}
5
6 \newdimen\ulwidth
```

7
8 \newcommand\ifulstarttype[1]{%
9 \expandafter\@secondoftwo%
10 }

12 \newcommand\ifulendtype[1]{%
13 \expandafter\@secondoftwo%
14 }

15
16 \newcommand{\ulstarttype}{0}
17 \newcommand{\ulendtype}{0}
18 \newcommand\ulpostolerance{0}%

File 464 lwarp-soulutf8.sty

```
§ 573 Package soulutf8
```

soulutf8 (Pkg) soulutf8 is emulated.

lwarp's HTML output naturally supports UTF-8 encoding.

for HTML output: 1 \LWR@ProvidesPackageDrop{soulutf8}[2016/05/16]
2 \RequirePackage{soul}

File 465 lwarp-splitbib.sty

§574 Package **splitbib**

(Emulates or patches code by Nicolas Markey.)

splitbib (*Pkg*) splitbib is patched for use by lwarp.

```
for HTML output:
                  1 \LWR@ProvidesPackagePass{splitbib}[2005/12/22]
                  2 \def\NMSB@stylebox#1#2{%
                  3\begin{BlockClass}[text-align:center; border: 1px solid black]{splitbibbox}
                        \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
                  5 \end{BlockClass}
                  6 }
                  8 \def\NMSB@stylebar#1#2{%
                  9 \begin{BlockClass}[%
                       text-align:center ;
                       border-top: 1px solid black ;
                 11
                       border-bottom: 1px solid black ;
                  13 ]{splitbibbar}
                        \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
                  15 \end{BlockClass}
                 16 }
                 17
                 18 \def\NMSB@styledash#1#2{%
                 19 \begin{BlockClass}[%
                       text-align:center ;
                 21]{splitbibdash}
                       \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{---~#1#2~---}}
                 23 \end{BlockClass}
                 26 \def\NMSB@stylenone#1#2{%
                        \par
                 28 }
                 30 \def\NMSB@stylesimple#1#2{%
                 32 \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
                 33\par
                 34 }
```

File 466 lwarp-splitidx.sty

§ 575 Package splitidx

(Emulates or patches code by MARKUS KOHM.)

splitidx (Pkg) splitidx is patched for use by lwarp.

If the latexmk option is selected for lwarp, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.

When using \AtWriteToIndex or \AtNextWriteToIndex, the user must not refer to \thepage during HTML output, as the concept of a page number is meaningless. Instead, do

```
\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}
```

where the \index -like action occurs, and then refer to $\arabic\{LWR@autoindex\}$ instead of \thepage where the reference should occur.

See section 699.17 in the lwarp-patch-memoir package for the \@@wrspindexhyp macro as an example.

for HTML output:

```
1 \LWR@ProvidesPackagePass{splitidx}[2016/02/18]
```

```
2 \VerifyCommand[lwarp][splitidx]{\newindex}{84695DF9965D5007036BA0B4023C59B5}
3
4 \catcode'\_=12%
5 \xpatchcmd{\newindex}
6     {\jobname-#2.idx}
7     {\jobname-#2_html.idx}
8     {}
9     {\LWR@patcherror{splitidx}{@newindex}}
10 \catcode'\_=8%
```

Patched to use lwarp's automatic indexing counter instead of \thepage:

```
11 \VerifyCommand[lwarp][splitidx]{\@wrsindex}{6E1A6193E20ABD0DFD6A1FC3F35113A6}
 13 \renewcommand*{\@wrsindex}[2][]{%
                             \ifx\relax#1\relax
 14
                                              \if@splitidx
 15
                                                             \@wrsindex[idx]{#2}%
  16
  17
                                               \else
  18
                                                            \def\@tempa{#2}%
                                                             \if@verbindex\@onelevel@sanitize\@tempa\fi
 19
                                                             \@wrindex{\@tempa}%
20
                                           \fi
21
                             \else
22
                                              \def\@tempa{#2}%
23
                                              \csname index@#1@hook\endcsname
24
 25 %
                                                            \expandafter\ifx\csname @@wrsindex\endcsname\relax
                                              \addtocounter{LWR@autoindex}{1}%
26
 27 %
                                                                             \end{align*} $$ \end{align*}
 28
                                              \end{arabic} $$ \end{arabic} \end{arabic} \end{arabic} $$ \e
 29 %
                                                                             \def\@tempb{\@@wrsindex{#1}}%
 30 %
                                                                              \expandafter\@tempb\@tempa||\\%
31 %
 32 %
```

The label is assigned after the file write to avoid conflict with cleveref.

```
33 \label{LWRindex-\arabic{LWR@autoindex}}% lwarp
34 \endgroup
35 \@esphack
36 \fi
37}
```

lwarp defines sectioning commands with xparse, so the below patches are done as temporary redefinitions instead of being \let.

Not using \VerifyCommand here since the patches are not likely to be affected by changes in the original.

```
38 \xpatchcmd{\printsubindex}
39 {\let\section\subsection}
```

```
40
                        {\renewcommand*{\section}{\subsection}}
                  41
                  42
                        {\LWR@patcherror{splitidx}{printsubindex-section}}
                  43
                  44 \xpatchcmd{\printsubindex}
                        {\let\chapter\section}
                        {\renewcommand*{\chapter}{\section}}
                  46
                  47
                        {\LWR@patcherror{splitidx}{printsubindex-chapter}}
                  48
                  49
                  50 \xpatchcmd{\printsubindex}
                        {\let\@makechapterhead\section}
                  52
                        {\def\@makechapterhead{\section}}
                  53
                        {\LWR@patcherror{splitidx}{printsubindex-chapter}}
                  54
         File 467 lwarp-srcltx.sty
         Package srcltx
§ 576
     srcltx (Pkg) srcltx is ignored.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{srcltx}[2006/11/12]
                   2\newif\ifSRCOK \SRCOKfalse
                   3 \newcommand*\srcIncludeHook[1]{}
                   4 \newcommand*\srcInputHook[1]{}
                   5 \newcommand*\MainFile{}
                   6 \def\MainFile{\jobname.tex}
                   7 \newcommand*\CurrentInput{}
                   8 \gdef\CurrentInput{\MainFile}
                   9 \newcommand\Input{}
                  10 \let\Input\input
         File 468 lwarp-srctex.sty
         Package Srctex
§ 577
     srctex (Pkg) srctex is ignored.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]
                   2 \LWR@origRequirePackage{lwarp-srcltx}
         File 469 lwarp-stabular.sty
         Package stabular
§ 578
                   (Emulates or patches code by Sigitas Tolušis.)
   stabular (Pkg) stabular is emulated.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{stabular}[2014/03/20]
```

File 470 lwarp-stackengine.sty

§ 579 Package stackengine

($\it Emulates~or~patches~code~by~Steven~B.~Segletes.$)

stackengine (*Pkg*) stackengine is patched for use by lwarp.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \times \mathbb{R}^2 \\ \textbf{providesPackagePass{stackengine}[2017/02/13]} \\ \end{tabular}$

Not using \VerifyCommand here because these patches appear to be fairly transparent to changes in the original

The original version is neccessary for the patched \@stack and \stackanchor, where nesting lateximages does not work:

2 \LetLtxMacro\LWR@orig@stackengine\stackengine

```
3 \renewcommand*{\stackengine}[8]{%
4 \ifstrequal{#4}{0}%
5 {\begin{\lateximage}[\ImageAltText]}%
6 {\begin{\lateximage}[\ImageAltText][][vertical-align:top]}%
7 \LWR@orig@stackengine{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
8 \end{\lateximage}%
9 }
```

\@stack uses a lateximage with a vertical alignment:

```
\LWR@orig@@stack{#1}{#2}{#3}{#4}%
20
      \end{lateximage}%
21
22 }
The lapping macros are disabled for HTML:
23 \newcommand*\LWR@HTML@@stacklap[4]{#3}
24 \LWR@formatted{@stacklap}
\stackanchor is patched for two instances of \stackengine. A lateximage with
vertical alignment is used.
25\xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
      {\LWR@patcherror{stackengine}{stackanchor patch 1}}
27
29 \xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
31
      {\LWR@patcherror{stackengine}{stackanchor patch 2}}
32
33 \xpretocmd{\stackanchor}
      {\begin{lateximage}[\ImageAltText][][vertical-align:middle]}
34
35
      {}
36
      {\LWR@patcherror{stackengine}{stackanchor pre}}
37
38 \xapptocmd{\stackanchor}{\end{lateximage}}
39
      {}
40
      {\LWR@patcherror{stackengine}{stackanchor app}}
\Centerstack is simply placed inside a lateximage with a vertical alignment:
41 \xpretocmd{\Centerstack}
      {\tt \{egin{lateximage}[\ImageAltText][][vertical-align:middle]\}}
43
      {}
      {\LWR@patcherror{stackengine}{Centerstack pre}}
44
45
46 \xapptocmd{\Centerstack}{\end{lateximage}}
47
      {\LWR@patcherror{stackengine}{Centerstack app}}
48
\savestack reverts to print mode while saving the box, then places it inside a
lateximage when used:
49 \VerifyCommand[lwarp][stackengine]{\savestack}{4B06A7F9D3F0B829FE293FB452D43430}
50
51 \renewcommand*\savestack[2]{%
52
    \xdef\sv@name{\stack@macro@name{#1}}%
53
    \@ifundefined{\sv@name content}{%
     54
55
     }{}%
      \begingroup%
56
                     lwarp
57
      \LWR@restoreorigformatting%
                                     lwarp
    \RenewDocumentEnvironment{lateximage}{s o s o o d()}{}{}% lwarp: inside group
58
    \expandafter\LWR@gsavebox\csname\sv@name content\endcsname{#2}%
59
    \expandafter\gdef\expandafter#1\expandafter{%
60
61
          \expandafter\begin\expandafter{lateximage\expandafter}%
                                                                     lwarp
62
          \expandafter\usebox\expandafter%
          {\csname\sv@name content\endcsname}%
63
```

\expandafter\end\expandafter{lateximage\expandafter}%

64

```
65 }%66 \endgroup% lwarp67 }
```

File 471 lwarp-stackrel.sty

§580 Package stackrel

(Emulates or patches code by Heiko Oberdiek.)

stackrel (Pkg) stackrel is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1

```
1 \LWR@ProvidesPackagePass{stackrel}[2016/05/16]
```

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\renewcommand{\stackrel}[3][]{%
4  \mathrel{\mathop{#3}\limits_{#1}^{#2}}%
5 }}
6
7 \CustomizeMathJax{\newcommand{\stackbin}[3][]{%
8  \mathbin{\mathop{#3}\limits_{#1}^{#2}}%
9 }}
10 \end{warpMathJax}
```

File 472 lwarp-statex2.sty

§ 581 Package **statex2**

(Emulates or patches code by Rodney A Sparapani.)

statex2 (Pkg) statex2 is patched for use by lwarp, and emulated for MATHJAX.

As of this version, option autobold does not appear to work for PDF output.

⚠ For MathJax, the tilde character ~ does not create \sim. Use \sim directly.

⚠ Because MathJax has limited conditional processing:

- \wrap only creates square braces, no matter what its optional arguments.
- \P, \pCau, \pN, and \pU do not handle special cases.
- \(\)\and To have \and work if using \maketitle, place the following after the start of the document:

```
\newcommand*{\and}{%
    \relax\ifmmode%
    \expandafter\;\mb{\mathrm{and}}\;%
    \else%
    \expandafter\STATEXand%
    \fi%
}
```

for HTML output:

59 }}

```
1 \LWR@ProvidesPackagePass{statex2}[2011/09/14]
2 \newcommand*{\LWR@HTML@Alpha}[1][]{%
     \textbf{\textcolor{ForestGreen}{\textsf{\#1}}}\%
5 }
6 \LWR@formatted{Alpha}
8 \newcommand*{\LWR@HTML@List}[1]{%
     \textbf{\textcolor{Dandelion}{\textsf{L}\textsubscript{\textit{#1}}}}%
10 }
11 \LWR@formatted{List}
13 \newcommand*{\LWR@HTML@Snd}[1][]{%
     \textbf{\textcolor{Dandelion}{\textsf{#1}}}%
16 }
17 \LWR@formatted{Snd}
19 \begin{warpMathJax}
20 \LWR@infoprocessingmathjax{statex2}
{\tt 22 \CustomizeMathJax{\newcommand{\cpi}{\boldsymbol{\pi}}}}
 23 \costomizeMathJax{\newcommand{\c}[1]{\boldsymbol{\mathrm{#1}}}} \\
24 \CustomizeMathJax{\newcommand{\sfsl}[1]{\mathsf#1}}%
                                                    not slanted
26 \if@manualbold
27 \CustomizeMathJax{\newcommand{\mb}[1]{#1}}
29 \CustomizeMathJax{\newcommand{\mb}[1]{\boldsymbol{#1}}}
30\fi
{\tt 32 \customizeMathJax{\newcommand{\diag}{\mb{\mathrm{diag}}}}}
33 \CustomizeMathJax{\newcommand{\blockdiag}{\mb{\mathrm{blockdiag}}}}
{\tt 34 \customizeMathJax{\newcommand{\erf}{\mb{\mathrm{erf}}}}}
\label{logit} $$\customizeMathJax{\newcommand{\logit}{\mb{\mathrm{logit}}}}$
36 \CustomizeMathJax{\newcommand{\trace}{\mb{\mathrm{trace}}}}
38 \CustomizeMathJax{\newcommand{\chisq}{{\mb{\chi^2}}}}
39 \customizeMathJax{newcommand{\deriv}[2]{\mb{\frac{\d{}}}}\wrap{\mb{#2}}}}
\label{lem:lem:lem:decomposition} $$40 \subset \mathcal{d}}{\d{#2}}\\ \wrap{\mb{#1}}} $$
41 \contine{e}^{1}{\mathbf e}^{1}}
43 \CustomizeMathJax{\newcommand{\ha}{{\mb{\frac{\alpha}{2}}}}}
44 \CustomizeMathJax{\newcommand{\I}[2][]{%}}
45
     46 }}
47 \CustomizeMathJax{\newcommand{\IBeta}[2]{%
     48
49 }}
50 \contine{f}{\;\mb{\mathrm{if}}};}
51 \CustomizeMathJax{\newcommand{\im}{\mb{\mathrm{i}}}}
52 \CustomizeMathJax{\newcommand{\ol}{\overline}}
53 \CustomizeMathJax{\newcommand{\ow}{\;\mb{\mathrm{otherwise}}\;}}
54 \CustomizeMathJax{\newcommand{\pderiv}[2]{%
     \label{eq:linear_label} $$ \ \frac{\hat #1}}\wrap{\mb{#2}}% $$
\label{lem:command} $$ \customizeMathJax{\newcommand{\pderivf}[2]{%} } $$
     \label{eq:linear_label} $$ \  \  \#2}}\
```

```
\label{lem:command} $$60 \customizeMathJax{\newcommand{\sd}{\mb{\sigma}}}$
  61 \CustomizeMathJax{\newcommand{\ul}{\underline}}
  \label{local-prop} $$62 \subset \mathcal{V}_2[]_{\mathbb{T}} \mathbb{T}_{\mathbb{T}} \operatorname{local-prop}_{\mathbb{T}} \mathbb{T}_{\mathbb{T}} \mathbb
   63 \customizeMathJax{\newcommand{\vs}{\;\mb{\mathrm{vs.}}\;}} 
  64 \CustomizeMathJax{\newcommand{\where}{\;\mb{\mathrm{where}}\;}}
  65 \CustomizeMathJax{\newcommand{\wrap}[2][]{\left[ #2 \right]}}%
                                                                                                                                                                                                                                                                                                         only []
  66 \CustomizeMathJax{\newcommand{\LWRwrapparen}[1]{\left( #1 \right)}}% lwarp
  68% \CustomizeMathJax{\renewcommand{~}{\mb{\sim}}}% doesn't work,
  69% replace <space>~<space> with <space>\sim<space>
  \label{lem:continuous} % To the continuous continuous
   72 \CustomizeMathJax{\newcommand{\ind}{\;\stackrel{\mb{\mathrm{ind}}}{\sim}\;}}
   73 \CustomizeMathJax{\newcommand{\indpr}{%
                           \;\stackrel{\mb{\mathrm{ind}}}{\stackrel{\mb{\mathrm{prior}}}{\sim}}\;
  75 }}
  77 \customizeMathJax{\newcommand{\prior}{\;\stackrel{\mb{\mathrm{prior}}}{\stackrel}} } $$
  79 \CustomizeMathJax{\let\STATEXGamma=\Gamma}
  80 \customize MathJax{\renewcommand{\Gamma}[1][]{\mb{\STATEXGamma}\LWRwrapparen{\mb{\#1}}}}
  82 \CustomizeMathJax{\renewcommand{\and}{\;\mb{\mathrm{and}}\;}}
  84 \CustomizeMathJax{\newcommand{\H}_{\mathbb{H}}}}
  86 \costomizeMathJax{\newcommand{\P}[2][]{\mb{\mathrm{P}}_{\mb{\mathrm{P}}}}\
  87 %
  88 \CustomizeMathJax{\newcommand{\|}{\mb{\mid}}}
  90 \CustomizeMathJax{\newcommand{\B}[1]{\mb{\mathrm{B}}\LWRwrapparen{\mb{#1}}}}
  91 \c betaBin}\LWRwrapparen{\mb{#1}}} 
  92 \CustomizeMathJax{\newcommand{\Bin}[2]{\mb{\mathrm{Bin}}\LWRwrapparen{\mb{#1,\ #2}}}}
  93 \CustomizeMathJax{\newcommand{\Dir}[1]{\mb{\mathrm{Dirichlet}}\LWRwrapparen{\mb{#1}}}}
  94 \CustomizeMathJax{\newcommand{\HG}[3]{%
                            \mb{\mathrm{Hypergeometric}}\LWRwrapparen{\mb{#1,\ #2,\ #3}}%
  97 \CustomizeMathJax{\newcommand{\M}[2]{%
                            \mb{\mathrm{Multinomial}}\LWRwrapparen{\mathrm{1, 42}}%
  99 }}
\label{local-prop} $$100 \subset \mathbb{NB}[2]{\bf \mathbb{NB}[2]}{\bf \mathbb{NB}[2]}{
\label{local-poisson} $$101 \subset \mathcal Poi}[1]{\mathbf Poisson}}\LWRw rapparen{\mb{#1}}}$
102 \CustomizeMathJax{\let\Poisson=\Poi}
104 \CustomizeMathJax{\newcommand{\pBB}[4][x]{%
                            \mb{\frac{\Gamma[#2+1]\Gamma[#3+#1]\Gamma[#2+#4-#1]\Gamma[#3+#4]}%
                           {\Gamma_{+1}\Gamma[\#1+1]\Gamma[\#2-\#1+1]\Gamma[\#4]}\%
                            I[#1]{\{0, 1, ., #2\}}, \text{ where } 4>0 \ n=1, 2, ...}
107
108 }}
109 \CustomizeMathJax{\newcommand{\pBin}[3][x]{%
                           110
                            111
112 }}
113 \CustomizeMathJax{\newcommand{\pPoi}[2][x]{%
                            114
115 }}
\label{local_local_local} $$117 \subset \mathbb{T}_{\mathbb{S}^{\times}}\LWRw\-apparen_{mb_{\#1, \#2}}} $$
118 \CustomizeMathJax{\let\Cauchy=\Cau}
119 \CustomizeMathJax{\newcommand{\Chi}[2][]{%
```

```
\left( \mathbb{41} \right)\
120
121 }}
122 \CustomizeMathJax{\let\Chisq=\Chi}
124 \CustomizeMathJax{\let\Beta=\Bet}
\label{local-property} $$126 \subset M_{F}[2]{\mathbb{F}}_{LWRwrapparen_{mb_{\#1, \ \#2}}}$$
\label{localize} $$127 \subset \mathbb{S}_{\infty}^2 \mathbb{S}_{2}^{\mathbb R}^{\mathbb R}^{
\label{local-prop} $$128 \subset \mathcal (-2}}\LWRwrapparen{\mb{#1}}} $$128 \subset \mathcal (-2)} LWRwrapparen{\mb{#1}}} $$
129 \CustomizeMathJax{\newcommand{\IG}[2]{%
                     130
131 }}
132 \CustomizeMathJax{\newcommand{\IW}[2]{%
                     135 \CustomizeMathJax{\newcommand{\Log}[2]{%}}
136 \mb{\mathrm{Logistic}}\LWRwrapparen{\mb{\#1,\ \#2}}%
137 }}
138 \CustomizeMathJax{\newcommand{\LogN}[2]{\%}}
                     \mb{\mathrm{Log}!-\!N}}\LWRwrapparen{\mathrm{1, 42}}%
139
140 }}
141 \CustomizeMathJax{\newcommand{\N}[3][]{%
                     \mb{\mathbb{N}}_{\mathbb{N}}_{\mathbb{N}}\
143 }}
144 \customizeMathJax{\newcommand{\Par}[2]{\mb{\mathrm{Pareto}}\LWRwrapparen{\mb{#1, \ #2}}}}
145 \CustomizeMathJax{\let\Pareto=\Par}
\label{locality} $$146 \subset \mathcal{T}^2}\LWRwrapparen_{mb{\#1, \#2}}} $$
148 \customizeMathJax{\newcommand{\W}[2]{\mb{\mathrm{Wishart}}}\LWRwrapparen{\mb{#1, \ #2}}}}
149
150 \converged \hdf{t}_1{\mb{\mathbf{t}}\LWRwrapparen{\mathbf{t}}}}
151
152 \CustomizeMathJax{\newcommand{\pBet}[3][x]{%
                     \IBeta{#2}{#3}%
                     #1^{#2-1}\LWRwrapparen{1-#1}^{#3-1}\I[#1]{0,\ 1}, \where #2>0 \and #3>0%
154
155 }}
156 \colone{1} CustomizeMathJax{\newcommand{\pCau}[3][x]{%}
                       \left( \frac{42}{\pi^2}, \frac{43}{0}, 1 \right) \left( \frac{1}{\sqrt{1}} \right) 
                {\frac{1}{\#3 \cdot 1}{\#3 \cdot 1}}, \wrap{\LWRwrapparen{x-#2}/#3}^2\right}, \where #3>0}
159 }}% no special case for 0,1
{\tt 160 \ CustomizeMathJax{\newcommand{\pChi}[2][x]{\%}}}
                     \frac{2^{-#2/2}}{\Gamma[#2/2]}#1^{#2/2-1}\e{-#1/2}%
                     I[#1]{0, \inf y}, \text{ where } #2>0%
163 }}
164 \CustomizeMathJax{\newcommand{\pExp}[2][x]{%
                     \frac{1}{#2}\e{-#1/#2}\I[#1]{0,\infty},%
                     \where #2>0%
167 }}
168 \CustomizeMathJax{\newcommand{\pGam}[3][x]{%
                     \frac{\#3^{\#2}}{\Gamma^{\#2}} + 1^{\#2-1}\e{-\#3\#1}\%
                     I[#1]{0,\infty}, \where #2>0 \and #3>0%
170
171 }}
172 \CustomizeMathJax{\newcommand{\pN}[3][x]{%
173 %
                            \ifthenelse{\equal{#2, #3}{0, 1}}%
                           {\frac{1}{\sqrt{2\cpi}}\e{-#1^2/2}}%
                    {\frac{1}{\sqrt{2 \cdot 43}}}e{-LWRwrapparen{#1-#2}^2/2 \cdot #3}}%
176 }}% no test for 0,1, must add \cdot
177 \colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{\colongraph{
                     \frac{#3}{#2\LWRwrapparen{1+#1/#2}^{#3+1}}\I[#1]{0,\infty},%
                     \where #2>0 \and #3>0%
179
```

```
180 }}
181 \CustomizeMathJax{\newcommand{\pU}[3][x]{%
182 %
       \left\{ \frac{\#2, \#3}{0, 1} \right\} \left\{ \left[ \#1 \right] \left\{ 0, 1 \right\} \right\}
      {\frac{1}{\#3-\#2}}I[\#1]{\#2,\ \#3}, \ \ \#2<\#3}%
184 }}% no special case for 0,1
185
186 \CustomizeMathJax{\newcommand{\=}[1]{\bar{#1}}}
187 \CustomizeMathJax{\let\^\widehat}
188 \CustomizeMathJax{\let\~\widetilde}
190 \CustomizeMathJax{\newcommand{\b}[1]{\bar{#1}}}
191 \CustomizeMathJax{\newcommand{\c}[1]{\mb{\mathrm{#1}}}}
193 \CustomizeMathJax{\newcommand{\.}{\mb{\ldots}}}
194 \end{warpMathJax}
```

File 473 lwarp-statistics.sty

Package Statistics § 582

(Emulates or patches code by Julien Rivaud.)

statistics (*Pkg*) statistics is patched for use by lwarp.

\color The statistics documentation examples include the use of the \color macro. Use \textcolor instead.

math The statistics package uses math arrays, but the HTML version uses text tabulars to allow text copy/paste. If math is required, use \ensuremath or \(and \) as needed.

Pre/postline is ignored, and \hline is used instead. Each table will have an \hline above and below as a frame.

for HTML output:

1 \LWR@ProvidesPackagePass{statistics}[2019/09/29]

2 \ExplSyntaxOn

To use text tabular instead of math array. This allows text copy/paste of the results.

In the following, all changes for the Lwarp package are labelled "lwarp".

Redefined using the lwarp version of &:

```
3 \VerifyCommand[lwarp][statistics]{\__statistics_table_make:nn}
      {DC8BA2460EA83AE75FA0C0F00E775B5E}
6 \StartDefiningTabulars%
                              lwarp, no other changes below
7 \cs_set_protected_nopar:Nn \__statistics_table_make:nn {
      \int_compare:nT
8
              { 0 < \l_statistics_table_maxcols_int
10
                  = \l__statistics_nbvals_int } {
11
          \__statistics_table_end:
          \tl_use:N \l__statistics_table_sep_tl
12
          \__statistics_table_start:
13
      }
14
```

```
15
      \int_incr:N \l__statistics_nbvals_int
      \int_incr:N \l__statistics_currange_int
16
      \fp_add:Nn \l__statistics_curtotal_fp { #2 }
17
18
      \__statistics_set_if_shown:N \l_tmpa_bool
19
      \tl_set:Nx \l_tmpa_tl {
          \exp_not:n { & \tl_set:Nn \currentcolumn } {
20
              \int_use:N \l__statistics_currange_int
21
22
          }
23
      \bool_if:NTF \l_tmpa_bool {
24
25
          \tl_put_right:Nn \l_tmpa_tl
26
              {\__statistics_table_shown_format:n}
27
      }{
28
          \tl_put_right:Nn \l_tmpa_tl
29
              {\__statistics_table_hidden_format:n}
30
      \seq_put_right:Nn \l__statistics_store_values_seq { #1 }
31
      \bool_if:NT \l__statistics_table_values_bool {
32
          \tl_put_right:Nx \l__statistics_table_values_tl {
33
              \exp_not:V \l_tmpa_tl {
34
35
                   \exp_not:n {
36
                       \__statistics_table_values_format:n { #1 }
37
38
              }
39
          }
40
41
      \seq_put_right:Nx \l__statistics_store_counts_seq { \fp_eval:n {#2} }
42
      \bool_if:NT \l__statistics_table_counts_bool {
          \tl_put_right:Nx \l__statistics_table_counts_tl {
43
              \exp_not:V \l_tmpa_tl {
44
                   \exp_not:n {
45
                       \__statistics_table_counts_format:n {
46
                           { \__statistics_table_allcounts_format:n { #2 } }
47
48
49
                   }
50
              }
51
          }
52
      \bool_if:NT \l__statistics_table_icc_bool {
53
          \tl_put_right:Nx \l__statistics_table_icc_tl {
54
              \exp_not:V \l_tmpa_tl {
55
                   \exp_not:n { \__statistics_table_icc_format:n }
56
57
58
                       \exp_not:n{ \__statistics_table_allcounts_format:n }
                           { \fp_use:N \l__statistics_curtotal_fp }
59
60
61
              }
62
          }
63
      \bool_if:NT \l__statistics_table_dcc_bool {
64
          \tl_put_right:Nx \l__statistics_table_dcc_tl {
65
              \exp_not:V \l_tmpa_tl {
66
67
                   \exp_not:n { \__statistics_table_dcc_format:n }
68
                   {
                       \exp_not:n{ \__statistics_table_allcounts_format:n }
69
70
                       {
71
                           \fp_eval:n {
72
                               \l__statistics_total_fp
                                   - \l__statistics_curtotal_fp
73
                                   + #2
74
```

```
75
                            }
                        }
76
77
                   }
78
               }
79
           }
80
       \fp_set:Nn \l__statistics_table_curICF_fp {
81
           round(\l_statistics\_curtotal\_fp
82
                    / \l__statistics_total_fp,
83
                 \l__statistics_table_round_int)
84
85
86
       \bool_if:NT \l__statistics_table_frequencies_bool {
87
           \tl_put_right:Nx \l__statistics_table_frequencies_tl {
88
               \exp_not:V \l_tmpa_tl {
89
                    \exp_not:n { \__statistics_table_frequencies_format:n }
90
                        \exp_not:n{ \__statistics_table_allfreqs_format:n }
91
92
                            \fp_eval:n {
93
                                \l__statistics_table_curICF_fp
94
                                     - \l__statistics_table_prevICF_fp
95
                            }
96
97
                        }
98
                    }
99
               }
100
           }
101
       \bool_if:NT \l__statistics_table_icf_bool {
102
           \tl_put_right:Nx \l__statistics_table_icf_tl {
103
               \exp_not:V \l_tmpa_tl {
104
                    \exp_not:n { \__statistics_table_icf_format:n }
105
106
                    {
                        \exp_not:n{ \__statistics_table_allfreqs_format:n }
107
108
                            { \fp_to_decimal:N \l__statistics_table_curICF_fp }
109
110
               }
111
           }
112
       \bool_if:NT \l__statistics_table_dcf_bool {
113
           \tl_put_right:Nx \l__statistics_table_dcf_tl {
114
               \exp_not:V \l_tmpa_tl {
115
                    \exp_not:n { \__statistics_table_dcf_format:n }
116
117
                        \exp_not:n{ \__statistics_table_allfreqs_format:n }
118
119
                        {
120
                            \fp_eval:n {
121
                                1 - \l_statistics_table_prevICF_fp
122
                            }
123
                        }
                   }
124
               }
125
126
           }
127
       \fp_set_eq:NN
128
129
           \l_statistics_table_prevICF_fp
           \l__statistics_table_curICF_fp
130
131 }
132 \StopDefiningTabulars% lwarp
```

Redefined using tabular. Also, preline and postline do not work correctly with lwarp, which looks for certain tokens to detect \hlines, so \hline is used instead.

```
133 \VerifyCommand[lwarp][statistics]{\__statistics_table_end:}
       {B2F9FC5A36B44E6E06A8D9807FCBAA6D}
134
135
136 \cs_set_protected_nopar:Nn \__statistics_table_end: {
       \tl_set:Nx \l__statistics_table_preamble_tl {
138 %
             \exp_not:n { \begin{array}[ }
139
           \exp_not:n {\begin{tabular}[ }%
                                                  lwarp
140
               \exp_not:V \l__statistics_table_valign_tl
           \exp_not:n { ] }
141
                   { \exp_not:V \l__statistics_table_headcoltype_tl
142
                      \prg_replicate:nn { \l__statistics_nbvals_int }
143
                        { \exp_not:V \l__statistics_table_coltype_tl } }
144
145
146
       \seq_clear:N \l__statistics_table_contents_seq
      \clist_map_inline:nn { values, counts, icc, dcc, frequencies, icf, dcf } {
148
           \bool_if:cT { l__statistics_table_##1_bool } {
149
               \seq_put_right:Nv
150
                       \l__statistics_table_contents_seq
                       { l__statistics_table_##1_tl }
151
           }
152
       }
153
154 %
       \tl_use:N \l__statistics_table_preamble_tl
155
           \hline%
                         lwarp
156
             \l__statistics_table_preline_tl
157 %
158
           \seq_use:Nn
                   \l__statistics_table_contents_seq
159
160
                   { \l_statistics_table_newline_tl }
161
162 %
                _statistics_table_postline_tl
163
           \hline%
                         lwarp
         \end{array}$
164 %
       \end{tabular}%
165
                            lwarp
166 }
```

With lwarp, \ensuremath creates an svG image, but its alt tag does not contain the text of the contents for copy/paste, since these expressions are usually not simple text. For the statistics package, copy/paste is restored by using text instead of math output.

For the leftmost column. Redefined to use text output:

```
167 \VerifyCommand[lwarp][statistics]{\__statistics_table_start:}
168
       {624FAC0783057B481861D9F02764F6C5}
169
170 \cs_set_protected_nopar:Nn \__statistics_table_start: {
       \int_zero:N \l__statistics_nbvals_int
171
       \clist_pop:NNT \l__statistics_table_maxcols_clist \l_tmpa_tl {
172
           \int_set:Nn \l__statistics_table_maxcols_int { \l_tmpa_tl }
173
174
      \clist_map_inline:nn { values, counts, frequencies, icc, icf, dcc, dcf } {
175
           \tl_set:cx { l__statistics_table_##1_tl } {
176
                 \exp_not:N \ensuremath {
177 %
178
                   \exp_not:N \hbox {
                       \exp_not:c { l__statistics_table_##1_name_tl }
179
180
                 }
181 %
```

```
182
           }
       }
183
184 }
 For the first row. Redefined to use text output:
185 \VerifyCommand[lwarp][statistics]{\__statistics_IN:w}
       {DD1B22587CFB4DEDBEE4D8E9A1E0CCAF}
188 \RenewDocumentCommand \__statistics_IN:w { m u{;} u{;} m } {
         \ensuremath{ \left#1 \num{#2} \mathbin{;} \num{#3} \right#4 }
190
       #1 #2 ; #3 #4%
191 }
192
193 \__statistics_setup:nn { table } {
         values/format = \ensuremath{#1},
194 %
       values/format = {#1},%
195
                                    lwarp
196 }
 Added \ExplSyntaxOn/Off to avoid errors. (In once instance, a double subscript
 error appeared.)
197 \VerifyCommand[lwarp][statistics]{\StatsGraph}
       {998267D2E90514DBDFD5544FB69AD6C8}
200 \RenewDocumentCommand \StatsGraph { +0{} +m +0{} } {
201
       \group_begin:
       \int_gincr:N \g__statistics_graph_last_int
202
       \tl_set:Nx \l_tmpa_tl {
203
           \exp_not:n { g__statistics_graph_xstep_ }
204
           \int_use:N \g__statistics_graph_last_int
205
206
           \exp_not:n { _tl }
207
208
       \tl_if_exist:cTF { \l_tmpa_tl } {
209
           \fp_gset:Nn \g__statistics_graph_xstep_fp
210
               { \tl_use:c {\l_tmpa_tl} }
211
       }{
           \fp_gset:Nn \g__statistics_graph_xstep_fp { \c_one_int }
212
213
       }
       \__statistics_setup:nn { graph } { #1, #3 }
214
       \tl_if_single:nTF { #2 } {
215
           \cs_if_exist:NF #2 { #2 }
216
217
           \tl_set_eq:NN \l__statistics_data_tl #2
218
       }{
219
           \tl_set:Nn \l__statistics_data_tl { #2 }
220
221
       \fp_zero:N \l__statistics_graph_maxheight_fp
222
       \fp_set:Nn \l__statistics_graph_minvalue_fp {inf}
223
       \fp_set:Nn \l__statistics_graph_maxvalue_fp {-inf}
       \fp_zero:N \l__statistics_total_fp
224
       \int_zero:N \l__statistics_nbvals_int
225
       \bool_set_true:N \l__statistics_graph_allranges_bool
226
227
       \keyval_parse:NNV
228
               \__statistics_graph_prepare:n
               \__statistics_graph_prepare:nn
               \l__statistics_data_tl
230
231
       \tl_clear:N \l__statistics_graph_tikzdata_tl
       \tl_clear:N \l__statistics_graph_tikzinfo_tl
232
       \int_zero:N \l__statistics_currange_int
233
```

\bool_if:NTF \l__statistics_graph_allranges_bool {

234

```
\bool_if:NTF \l__statistics_graph_cumulative_bool {
235
   \ExplSyntax0n%
                         lwarp
236
                \__statistics_graph_dopicture_cumulative:
238
    \ExplSyntaxOff%
                         lwarp
239
           }{
    \ExplSyntaxOn%
240
                         lwarp
                \verb|\__statistics_graph_dopicture_hist:|
241
    \verb|\ExplSyntax0ff||
                         lwarp
242
243
           }
244
       }{
    \ExplSyntaxOn%
                       lwarp
245
246
           \__statistics_graph_dopicture_comb:
247
    \ExplSyntaxOff%
                         lwarp
248
       \iow_now:Nx \@auxout {
249
250
           \exp_not:n {
                \ExplSyntax0n
251
                \tl_gset:cn
252
           }
253
254
           {
                \exp_not:n {g__statistics_graph_xstep_}
255
                \int_use:N \g__statistics_graph_last_int
256
                \exp_not:n {_tl}
257
258
           }
259
260
                \fp_to_decimal:N \g__statistics_graph_xstep_fp
261
           }
262
            \exp_not:n {
                \ExplSyntaxOff
263
264
           }
265
266
       \group_end:
267 }
269 \ExplSyntaxOff
```

File 474 lwarp-statmath.sty

§ 583 Package **statmath**

(Emulates or patches code by Sebastian Ankargren.)

statmath (*Pkg*) statmath is used as-is for svg math, and is emulated for MATHJAX.

```
for HTML output: 1 \LWR@ProvidesPackagePass{statmath}[2018/03/08]
```

```
13 \CustomizeMathJax{\newcommand{\bfA}{\abcbf A}}
14 \CustomizeMathJax{\newcommand{\bfB}{\abcbf B}}
15 \CustomizeMathJax{\newcommand{\bfC}{\abcbf C}}
16 \CustomizeMathJax{\newcommand{\bfD}{\abcbf D}}
17 \CustomizeMathJax{\newcommand{\bfE}{\abcbf E}}
18 \CustomizeMathJax{\newcommand{\bfF}{\abcbf F}}
19 \CustomizeMathJax{\newcommand{\bfG}{\abcbf G}}
20 \CustomizeMathJax{\newcommand{\bfH}{\abcbf H}}
{\tt 21 \CustomizeMathJax{\newcommand{\bfI}{\abcbf I}}}
22 \CustomizeMathJax{\newcommand{\bfJ}{\abcbf J}}
23 \CustomizeMathJax{\newcommand{\bfK}{\abcbf K}}
24 \CustomizeMathJax{\newcommand{\bfL}{\abcbf L}}
25 \CustomizeMathJax{\newcommand{\bfM}{\abcbf M}}
26 \CustomizeMathJax{\newcommand{\bfN}{\abcbf N}}
27 \CustomizeMathJax{\newcommand{\bf0}{\abcbf 0}}
28 \CustomizeMathJax{\newcommand{\bfP}{\abcbf P}}
29 \CustomizeMathJax{\newcommand{\bfQ}{\abcbf Q}}
30 \CustomizeMathJax{\newcommand{\bfR}{\abcbf R}}
31 \CustomizeMathJax{\newcommand{\bfS}{\abcbf S}}
32 \compared T}{\compared T}{\compared T}
33 \CustomizeMathJax{\newcommand{\bfU}{\abcbf U}}
34 \CustomizeMathJax{\newcommand{\bfV}{\abcbf V}}
35 \CustomizeMathJax{\newcommand{\bfW}{\abcbf W}}
36 \CustomizeMathJax{\newcommand{\bfX}{\abcbf X}}
37 \CustomizeMathJax{\newcommand{\bfY}{\abcbf Y}}
38 \CustomizeMathJax{\newcommand{\bfZ}{\abcbf Z}}
39 \CustomizeMathJax{\newcommand{\bfa}{\abcbf a}}
40 \CustomizeMathJax{\newcommand{\bfb}{\abcbf b}}
41 \CustomizeMathJax{\newcommand{\bfc}{\abcbf c}}
42 \CustomizeMathJax{\newcommand{\bfd}{\abcbf d}}
43 \CustomizeMathJax{\newcommand{\bfe}{\abcbf e}}
44 \CustomizeMathJax{\newcommand{\bff}{\abcbf f}}
45 \CustomizeMathJax{\newcommand{\bfg}{\abcbf g}}
46 \CustomizeMathJax{\newcommand{\bfh}{\abcbf h}}
47 \CustomizeMathJax{\newcommand{\bfi}{\abcbf i}}
48 \CustomizeMathJax{\newcommand{\bfj}{\abcbf j}}
49 \command{\bfk}{\abcbf k}
50 \CustomizeMathJax{\newcommand{\bfl}{\abcbf l}}
51 \CustomizeMathJax{\newcommand{\bfm}{\abcbf m}}
52 \CustomizeMathJax{\newcommand{\bfn}{\abcbf n}}
53 \CustomizeMathJax{\newcommand{\bfo}{\abcbf o}}
54 \CustomizeMathJax{\newcommand{\bfp}{\abcbf p}}
55 \CustomizeMathJax{\newcommand{\bfq}{\abcbf q}}
56 \CustomizeMathJax{\newcommand{\bfr}{\abcbf r}}
57 \CustomizeMathJax{\newcommand{\bfs}{\abcbf s}}
58 \CustomizeMathJax{\newcommand{\bft}{\abcbf t}}
59 \CustomizeMathJax{\newcommand{\bfu}{\abcbf u}}
60 \CustomizeMathJax{\newcommand{\bfv}{\abcbf v}}
61 \CustomizeMathJax{\newcommand{\bfw}{\abcbf w}}
62 \CustomizeMathJax{\newcommand{\bfx}{\abcbf x}}
63 \CustomizeMathJax{\newcommand{\bfy}{\abcbf y}}
64 \CustomizeMathJax{\newcommand{\bfz}{\abcbf z}}
66 \LWR@mathjax@addgreek@l@bfit{bf}{}% Greek lowercase bold face italic
67\LWR@mathjax@addgreek@u@bfup*{bf}{}% Greek uppercase bold face upright, cap macros.
69 \CustomizeMathJax{\newcommand{\bfzero}{\greekbf 0}}
71 \CustomizeMathJax{\DeclareMathOperator{\cov}{Cov}}
72 \CustomizeMathJax{\DeclareMathOperator{\E}{E}}
```

```
73 \CustomizeMathJax{\DeclareMathOperator{\V}{V}}
74 \CustomizeMathJax{\newcommand{\inas}{\overset{a.s.}{\to}}}
75 \CustomizeMathJax{\newcommand{\indist}{\overset{d}{\to}}}
76 \CustomizeMathJax{\newcommand{\inprob}{\overset{p}{\to}}}
77 \CustomizeMathJax{\DeclareMathOperator{\plim}{plim}}
78 \CustomizeMathJax{\DeclareMathOperator{\tr}{tr}}
79 \CustomizeMathJax{\DeclareMathOperator{\vc}{vec}}
80 \CustomizeMathJax{\DeclareMathOperator{\vc}{vec}}}
81 \CustomizeMathJax{\DeclareMathOperator{\vc}{vec}}}
81 \CustomizeMathJax{\DeclareMathOperator{\vch}{vech}}}
82 \CustomizeMathJax{\DeclareMathOperator{\diag}{diag}}}
83 \CustomizeMathJax{\DeclareMathOperator{\argmin}{arg\,min}}}
84 \CustomizeMathJax{\DeclareMathOperator{\argmin}{arg\,min}}}
85 \end{\warpMathJax}
```

File 475 lwarp-steinmetz.sty

```
§ 584 Package steinmetz
```

(Emulates or patches code by Enrico Gregorio.)

steinmetz (Pkg) steinmetz is patched for use by lwarp. Emulation is provided for MATHJAX

```
for HTML output: 1 \LWR@ProvidesPackagePass{steinmetz}[2009/06/14]
```

```
2 \renewcommand{\phase}[2][]{%
3   \begin{lateximage}*[steinmetz\{\detokenize{#2}\\}]
4   \ensuremath{\underline{/#2}\}
5   \end{lateximage}
6 }
7
8 \begin{warpMathJax}
9 \CustomizeMathJax{\newcommand{\phase}[2][]{\underline{/#2}}}
10 \end{warpMathJax}
```

File 476 lwarp-stfloats.sty

```
§ 585 Package stfloats
```

stfloats (Pkg) stfloats is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{stfloats}[2017/03/27]

stfloats may have been preloaded by a ltj* class.

The following are provided in case they have not yet been defined:

```
2 \providecommand*{\fnbelowfloat}{}
3 \providecommand*{\fnunderfloat}{}
4 \providecommand*{\setbaselinefloat}{}
5 \providecommand*{\setbaselinefixed}{}
```

Nullified for HTML:

```
6 \renewcommand*{\fnbelowfloat}{}
                  7\renewcommand*{\fnunderfloat}{}
                  8\renewcommand*{\setbaselinefloat}{}
                  9\renewcommand*{\setbaselinefixed}{}
         File 477 lwarp-struktex.sty
        Package struktex
                  (Emulates or patches code by Jobst Hoffmann.)
   struktex(Pkg)
                  struktex is patched for use by lwarp.
for HTML output:
                  1 \LWR@ProvidesPackagePass{struktex}
                  2\BeforeBeginEnvironment{struktogramm}{%
                        \begin{lateximage}[-struktex-~\PackageDiagramAltText]%
                  4 }
                  5 \AfterEndEnvironment{struktogramm}{\end{lateximage}}
                  7 \newenvironment{LWR@HTML@centernss}{\begin{center}}{\end{center}}
                  8 \LWR@formattedenv{centernss}
                  10 \newcommand{\LWR@HTML@CenterNssFile}[1]{%
                 11
                        \begin{center}
                  12
                        \input{#1.nss}
                        \end{center}
                  13
                 14 }
                  15 \LWR@formatted{CenterNssFile}
```

17 \newcommand{\LWR@HTML@centernssfile}{\LWR@HTML@CenterNssFile}

File 478 lwarp-subcaption.sty

Package subcaption **§ 587**

\$586

(Emulates or patches code by AXEL SOMMERFELDT.)

subcaption (Pkg)subcaption is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{subcaption}[2018/05/01]

18 \LWR@formatted{centernssfile}

Tells lwarp to ignore minipage widths inside a subfigure or subtable. In print mode the minipages are used to place the items next to each other. In HTML they are placed side-by-side automatically.

```
2 \xpretocmd{\subcaption@iiminipage}
     {\minipagefullwidth}
4
     {\LWR@patcherror{subcaption}{subcaption@iiminipage}}
```

Likewise for a \subcaptionbox:

§ 588

horizontal spacing

for HTML output:

23

24

\sf@top=\sf@nearskip

\sf@bottom=\sf@farskip

\sf@@subfloat

```
6 \xpretocmd{\subcaptionbox}
                         {\minipagefullwidth}
                         {\LWR@patcherror{subcaption}{subcaptionbox}}
         File 479 lwarp-subfig.sty
         Package subfig
                   (Emulates or patches code by STEVEN DOUGLAS COCHRAN.)
     subfig (Pkg) subfig is supported and patched by lwarp.
table numbering To have correct sub table numbers:
                        \usepackage{caption}
                        \captionsetup[table]{position=top}
  lof/lotdepth
                   At present, the package options for lofdepth and lotdepth are not working. These
                   counters must be set separately after the package has been loaded.
                   In the document source, use \hfill and \hspace* between subfigures to spread
                   them apart horizontally. The use of other forms of whitespace may cause para-
                   graph tags to be generated, resulting in subfigures appearing on the following lines
                   instead of all on a single line.
                   Accept all options for lwarp-subfig:
                   1 \LWR@ProvidesPackagePass{subfig}[2005/06/28]
                    \{\langle 1 \ type \rangle\} \ [\langle 2 \ lof \ entry \rangle] \ [\langle 3 \ caption \rangle] \ \{\langle 4 \ contents \rangle\}
                   The outer minipage allows side-by-side subfloats with \hfill between.
                   2 \VerifyCommand[lwarp][subfig]{\sf@@esubfloat}{B29FEC2418FD15B9E58ACF593B81BA93}
                   4 \long\def\sf@@subfloat#1[#2][#3]#4{%
                   5 \begin{minipage}{\linewidth}% lwarp
                   6 \IfValueTF{#2}{%
                         \LWR@setlatestname{#2}%
                   8 }{%
                         \IfValueTF{#3}{%
                             \LWR@setlatestname{#3}%
                   10
                         }{}%
                   11
                   12 }%
                   13 \LWR@stoppars% lwarp
                         \@ifundefined{FBsc@max}{}%
                   14
                             {\FB@readaux{\let\FBsuboheight\relax}}%
                  15
                         \@tempcnta=\@ne
                   16
                         \if@minipage
                  17
                           \@tempcnta=\z@
                  18
                   19
                         \else\ifdim \lastskip=\z@ \else
                           \@tempcnta=\tw@
                  20
                         \fi\fi
                  21
                  22
                         \ifmaincaptiontop
```

```
25
      \else
26
        \sf@top=\sf@farskip
27
        \sf@bottom=\sf@nearskip
      \fi
28
29
      \leavevmode
30 %
        \setbox\@tempboxa \hbox{#4}%
31 %
        \@tempdima=\wd\@tempboxa
32 %
        \@ifundefined{FBsc@max}{}%
             {\global\advance\Xhsize-\wd\@tempboxa
33 %
              \dimen@=\ht\@tempboxa
34 %
              \advance\dimen@\dp\@tempboxa
35 %
              \ifdim\dimen@>\FBso@max
36 %
                \global\FBso@max\dimen@
37 %
38 %
              \fi}%
Do not use boxes, which interfere with lateximages:
39 %
         \vtop%
      \bgroup
40
41 %
           \vbox%
42
         \bgroup
           \ifcase\@tempcnta
43
44
             \@minipagefalse
45
           \or
46 %
               \vskip\sf@top
47
           \or
             \ifdim \lastskip=\z@ \else
48
                 \@tempskipb\sf@top\relax\@xaddvskip
49 %
             \fi
50
           \fi
51
           \sf@ifpositiontop{%
52
53
            \ifx \@empty#3\relax \else
54
               \sf@subcaption{#1}{#2}{#3}%
55 %
                 \vskip\sf@capskip
56~\%
                 \vskip\sf@captopadj
             \fi\egroup
57
               \hrule width0pt height0pt depth0pt
58 %
               \LWR@startpars% lwarp
59
       \box\@tempboxa
60 %
               #4
61
               \LWR@stoppars% lwarp
62
63
          }{%
           \LWR@startpars% lwarp
64
           \@ifundefined{FBsc@max}%
65
66
               {
67~\%
         \box\@tempboxa
68
                   #4
               }%
69
               {\ifx\FBsuboheight\relax
70
                    \box\@tempboxa
71 %
                   #4
72
                \else
73
                    \vbox to \FBsuboheight{\FBafil\box\@tempboxa\FBbfil}%
74\%
                   #4
75
76
                \fi}%
           \LWR@stoppars% lwarp
77
78
             \egroup
             \ifx \@empty#3\relax \else
79
                 \vskip\sf@capskip
80 %
```

\hrule width0pt height0pt depth0pt

81 %

```
82
                                                                                     \sf@subcaption{#1}{#2}{#3}%
                                                                    \fi
   83
                                                              }%
    84
   85 %
                                                               \vskip\sf@bottom
    86
                                       \egroup
                                       \@ifundefined{FBsc@max}{}%
   87
                                                              {\addtocounter{FRobj}{-1}%
   88
                                                                     \ifnum\c@FRobj=0\else
    89
                                                                               \subfloatrowsep
    90
                                                                    \fi}%
   91
                                       \ifmaincaptiontop\else
   92
   93
                                                   \global\advance\@nameuse{c@\@captype}\m@ne
   94
   95 \end{minipage}% lwarp
   96 \LWR@startpars% lwarp
                       \endgroup\ignorespaces%
   98 }%
               \{\langle 1 \ type \rangle\} \{\langle 2 \ lof \ entry \rangle\} \{\langle 3 \ caption \rangle\}
   99 \VerifyCommand[lwarp][subfig]{\sf@subcaption}{63123F93BADE8F3BBC127012A832A4C4}
101 \long\def\sf@subcaption#1#2#3{%
102 \LWR@stoppars% lwarp
                           \ifx \relax#2\relax \else
103
104
                                       \bgroup
105
                                                   \let\label=\@gobble
106
                                                   \let\protect=\string
107
                                                   \def\@subcaplabel{%
                                                              \caption@lstfmt{\ensure{p@#1}}{\ensure{the#1}}}\%
108
                                                  109
110
                                       \egroup
                           \fi
111
                            \bgroup
112
                                       \ifx \relax#3\relax
113
                                                  \let\captionlabelsep=\relax
114
115
116\,\%
                                                   \setbox0\vbox{%
117 %
                                                                    \he \ensuremath{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mb}\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow}\mbelow{\mbelow{\mbelow{\mbelow}\mbelow{\mbelow}\mbelow{\mbelow{\mbelow}\mbelow{\mbelow{\mbelow}\mbelow{\mbelow}\mbelow}\mbelow}\mbelow}\mbelow}\mbelow}
118 %
119 % %
                                                                                           \hss
                                                                                     \parbox[t]{\theta}\end{ma}
120 % %
121 %
                                                                                     \caption@make
122 %
                                                                                                             {\ensuremath{\mbox{\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\mbox{$\m
123 %
                                                                                                             {\tt \{\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbox{$0$}}\ensuremath{\mbo
124 %
                                                                                                             {#3}
125 % %
126 % %
                                                                                                       \hss
127~\%
128~\%
                                       \@ifundefined{FBsc@max}%
129
130 %
                                                                          {\box0}%
131
                                             \protect\ \parbox[t]{\the\@tempdima}{%
132 %
133 \LWR@traceinfo{sfsubcap B1}%
                                                                                                                                                                                                         lwarp
                                                                                     \LWR@figcaption%
                                                                                                                                                                                                         lwarp
134
                                                                                     \caption@make
135
                                                                                                             {\@nameuse{sub\@captype name}}%
136
                                                                                                             {\@nameuse{thesub\@captype}}%
137
                                                                                                             {\LWR@isolate{#3}}%
```

\sf@subcaption

```
\endLWR@figcaption%
                                                                                                                          lwarp
139
140 \LWR@traceinfo{sfsubcap B2}%
                                                                                                                          lwarp
141~\%
                                 }%
142
                                 {\dimen@\ht0%
143
                                     \advance\dimen@\dp0%
144
                                    \ifdim\dimen@>\FBsc@max
145
                                           \global\FBsc@max\dimen@
146
                                     \fi
147
                                     \FB@readaux{\let\FBsubcheight\relax}%
148
149
                                    \ifx\FBsubcheight\relax
150
                                           \def\next{}
151 %
                            \parbox[t]{\the\@tempdima}
                                             }%
153
                                     \else
                                           \def\next{}
154
                            \parbox[t][\FBsubcheight][t]{\the\@tempdima}
155 %
                                             }%
156
                                    \fi
157
158 %
                                           \vbox{%
                                                 \he \ensuremath{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mb}\mbelow{\mbelow{\mbelow{\mbelow{\mbelow{\mbelow}\mbelow{\mbelow{\mbelow}\mbelow{\mbelow}\mbelow{\mbelow}\mbelow}\mbelow{\mbelow}\mbelow{\mbelow}\mbelow}\mbelow{\mbelow}\mbelow}\mbelow{\mbelow}\mbelow}\mbelow}\mbelow}\mbelow}\mbelow}\mbelow}\mbelow}\mbelow}
159 %
160
161 %
                                                        \hspace{$\hspace}
                                                        \next{%
163 \LWR@traceinfo{sfsubcap C1}% lwarp
164
                                                        \caption@make
165
                                                                    {\@nameuse{sub\@captype name}}%
                                                                    {\@nameuse{thesub\@captype}}%
166
                                                                    {#3}
167
168 \LWR@traceinfo{sfsubcap C1}% lwarp
169 %
                       }%
170 %
                                                        \hss
171
172 %
173 %
                                              }
                                 }%
174
175
             \egroup
176 \LWR@startpars% lwarp
177 }
        Patches for \sf@sub@label:
178 \xpretocmd{\subfloat@label}
                    {\LWR@ensuredoingapar}
179
180
                    {}
                     {\LWR@patcherror{subfig}{subfloat@label}}
181
    Patches for \subref.
        \{\langle label \rangle\}
    The unstarred version uses a \ref link whose printed text comes from the
     sub@<label>:
182 \renewcommand{\sf@subref}[1]{%
                     \LWR@subnewref{#1}{sub@#1}%
183
184 }
        \{\langle label \rangle\}
```

\subfloat@label

\sf@subref

\sf@@subref

The starred version uses the printed sub@<label> which is stored as if it were a

```
page number:
                         Defining new subfloats. The l@sub<type> for each is redefined.
                            [\langle keys/values \rangle] \{\langle float name \rangle\}
\@newsubfloat
                         186 \LetLtxMacro\LWR@orig@newsubfloat\@newsubfloat
                         188 \def\@newsubfloat[#1]#2{%
                         189 \LWR@orig@newsubfloat[#1]{#2}%
                         191 }
                           Pre-defined for figures and tables:
                            \{\langle text \rangle\} \{\langle pagenum \rangle\}
\l@subfigure
                         192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}
                            \{\langle text \rangle\} \{\langle pagenum \rangle\}
\l@subtable
                         \label{loss} $$193 \simeq {\frac{2}{\text{subtable}[2]}} \
                  File 480 lwarp-subfigure.sty
                 Package subfigure
        § 589
           subfigure (Pkg) subfigure is emulated by subfig.
         for HTML output:
                           1 \LWR@ProvidesPackageDrop{subfigure}[2002/03/15]
                           2 \RequirePackage{subfig}
                           3 \LetLtxMacro\subfigure\subfloat
                           4 \LetLtxMacro\subtable\subfloat
                           5 \LetLtxMacro\Subref\subref
                           6 \@ifundefined{figuretopcaptrue}{\newif\iffiguretopcap}{}
                           7 \newif\ifsubfiguretopcap
                           8 \newif\ifsubcaphang
                           9 \newif\ifsubcapcenter
                          10 \newif\ifsubcapcenterlast
                          11 \newif\ifsubcapnooneline
                          12 \newif\ifsubcapraggedright
                          13 \newskip\subfigtopskip
                          14 \newskip\subfigcapskip
                          15 \newdimen\subfigcaptopadj
                          16 \newskip\subfigbottomskip
```

17 \newdimen\subfigcapmargin
18 \newskip\subfiglabelskip
19 \newcommand*{\subcapsize}{}
20 \newcommand*{\subcaplabelfont}{}
21 \newcommand*{\subcapfont}{}

File 481 lwarp-subsupscripts.sty

§ 590 Package subsupscripts

(Emulates or patches code by RICCARDO BRESCIANI.)

subsupscripts (Pkg) subsupscripts is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{subsupscripts}[2009/10/27]

The larger skips are used here.

```
2\begin{warpMathJax}
3 \CustomizeMathJax{%
   \newcommand{\fourscriptsC}[7]{%
     {}^{#2}_{#3}\hspace{#6}#1\hspace{#7}{}^{#4}_{#5}%
5
6
   }
7 }
8 \CustomizeMathJax{%
   \newcommand{\lrsubscriptsC}[5]{%
10
     \fourscriptsC{#1}{}{#2}{}{#3}{#4}{#5}%
11
12 }
13 \CustomizeMathJax{%
   14
     fourscriptsC{#1}{#2}{}{#3}{}{#4}{#5}%
15
16
17 }
18 \CustomizeMathJax{%
   \newcommand{\fourscripts}[5]{%
20
     fourscriptsC{#1}{#2}{#3}{#4}{#5}{0ex}{0ex}
21
22 }
23 \CustomizeMathJax{%
   25 }
26 \CustomizeMathJax{%
   27
28 }
29 \CustomizeMathJax{%
   31 }
32 \CustomizeMathJax{%
33
   34 }
35 \CustomizeMathJax{%
   36
37 }
38 \CustomizeMathJax{%
   39
40 }
41 \CustomizeMathJax{%
   42
43 }
44 \CustomizeMathJax{%
```

```
46 }
47 \end{warpMathJax}
```

File 482 lwarp-supertabular.sty

§591 Package supertabular

(Emulates or patches code by Johannes Braams, Theo Jurriens.)

supertabular (Pkg) supertabular is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{supertabular}[2004/02/20]

Misplaced alignment tab character &

Misplaced alignment For \tablefirsthead, etc., enclose them as follows:

\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars

See section 8.10.1.

<u>lateximage</u> supertabular and xtab are not supported inside a lateximage.

```
2 \newcommand{\LWRST@firsthead}{}
4 \newcommand{\tablefirsthead}[1]{%
     6 }
8 \newcommand{\tablehead}[1]{}
9 \newcommand{\tabletail}[1]{}
10
11 \newcommand{\LWRST@lasttail}{}
13 \newcommand{\tablelasttail}[1]{%
     15 }
16 \newcommand{\tablecaption}[2][]{%
     \long\gdef\LWRST@caption{%
17
         \ifblank{#1}%
18
             {\caption{#2}}%
19
             {\caption[#1]{#2}}%
20
21
     }%
22 }
24 \let\topcaption\tablecaption
25 \let\bottomcaption\tablecaption
26 \newcommand*{\LWRST@caption}{}
28 \newcommand*{\shrinkheight}[1]{}
30 \NewDocumentEnvironment{supertabular}{s o m}
31 {%
```

```
32 \LWR@traceinfo{supertabular}%
33 \begin{table}%
34 \LWRST@caption%
35 \begin{tabular}{#3}%
36 \TabularMacro\ifdefvoid{\LWRST@firsthead}%
37 {\LWR@getmynexttoken}%
38 {\expandafter\LWR@getmynexttoken\LWRST@firsthead}%
39 }%
40 {%
41 \ifdefvoid{\LWRST@lasttail}%
42 { }%
43 {%
44 \TabularMacro\ResumeTabular%
45 \LWRST@lasttail%
46 }%
47 \end{tabular}%
48 \end{table}%
49 \gdef\LWRST@caption{}%
50 \LWR@traceinfo{supertabular done}%
51 }
52
53 \NewDocumentEnvironment{mpsupertabular}{s o m}
54 {\minipage{\linewidth}\supertabular{#3}}
55 {\endsupertabular\endminipage}
```

File 483 lwarp-svg.sty

```
§ 592 Package SVg
```

(Emulates or patches code by Philip Ilten, Falk Hanisch.)

svg(Pkg) svg is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{svg}[2020/10/23]
```

```
2 \xpretocmd{\includesvg}%
      {\begin{lateximage}}%
      {}%
      {\LWR@patcherror{svg}{includesvg}}
7 \xapptocmd{\includesvg}%
      {\end{lateximage}}%
8
9
      {\LWR@patcherror{svg}{includesvg}}
10
11
12 \xpretocmd{\includeinkscape}%
      {\begin{lateximage}}%
13
14
      {}%
      {\LWR@patcherror{svg}{includeinkscape}}
17 \xapptocmd{\includeinkscape}%
      {\end{lateximage}}%
18
19
20
      {\LWR@patcherror{svg}{includeinkscape}}
```

File 484 lwarp-swfigure.sty

Package swfigure § 593 (Emulates or patches code by Claudio Beccari.) swfigure (Pkg) swfigure is emulated. for HTML output: 1 \LWR@ProvidesPackageDrop{swfigure}[2020-11-10] 2 \NewDocumentEnvironment{DFimage}% $3 \{0\{SW\} m 0\{\#4\} m o D()\{0.8\} D <> \{0\} D||\{0.25\} D!!\{\}\}\%$ 4 {% 5 \begin{figure} 6 \centering \includegraphics{#2} \caption[#3]{#4} 8 \IfValueT{#5}{\label{#5}}

File 485 lwarp-sympytex.sty

\end{figure}

§ 594 Package sympytex

10

11 }% 12 { }%

(Emulates or patches code by Tim Molteno.)

sympytex (*Pkg*) sympytex is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{sympytex}[2014/05/16]
```

```
{\tt 2 \ \ \ } \\ {\tt 2 \ \ \ \ } \\ {\tt EndPreamble} \\ \{
4 \AtBeginEnvironment{sympyblock}{%
        \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5
             {}%
6
             {%
8
                   \LWR@forcenewpage%
                   \verb|\LWR@atbeginverbatim{verbatim}||%
9
             }%
10
11 }
12
{\tt 13 \ After End Environment \{ sympyblock \} \{ \% }
        \label{locality} $$ \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% $$
14
             {}%
15
16
             {%
17
                   \LWR@afterendverbatim%
18
             }%
19 }
20
21 }
```

File 486 lwarp-syntonly.sty

§ 595 Package **syntonly**

(Emulates or patches code by Frank Mittelbach, Rainer Schöpf.)

syntonly (Pkg) syntonly is ignored.

for HTML output: Discard all options for lwarp-syntonly:

1 \LWR@ProvidesPackageDrop{syntonly}[2017/06/30]

2 \newif\ifsyntax@
3 \syntax@false

4

5 \newcommand*{\syntaxonly}{}

6

7\@onlypreamble\syntaxonly

8 \def\nopages@{}

File 487 lwarp-tabfigures.sty

§ 596 Package tabfigures

tabfigures (Pkg) tabfigures is ignored.

 $\textbf{for HTML output:} \qquad 1 \texttt{\LWR@ProvidesPackageDrop\{tabfigures\}[2012/01/24]}$

File 488 lwarp-tablefootnote.sty

§ 597 Package tablefootnote

tablefootnote (Pkg) tablefootnote is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{tablefootnote}[2014/01/26]

This works because in HTML tables are no longer floats.

2 \LetLtxMacro\tablefootnote\footnote

File 489 lwarp-tabls.sty

§ 598 Package tabls

(Emulates or patches code by Donald Arseneau.)

```
tabls (Pkg) tabls is emulated. \LWR@hline is used to handle the optional argument when tabls
                   is loaded.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{tabls}
                   2 \newdimen\tablinesep
                   3 \newdimen\arraylinesep
                   4 \newdimen\extrarulesep
                  lwarp-tabularx.sty
          File 490
         Package tabularx
§ 599
                   (Emulates or patches code by David Carlisle.)
   tabularx (Pkg) tabularx is emulated by lwarp.
                   Discard all options for lwarp-tabularx:
for HTML output:
                   1 \LWR@ProvidesPackageDrop{tabularx}[2016/02/03]
                   2 \RequirePackage{array}
                   \tabularxcolumn is ignored. All X columns will be p for now. The width is ignored.
                   3 \def\tabularxcolumn#1{p{#1}}
                   4 \newcolumntype{X}{p{1in}}
                   5 \DeclareDocumentEnvironment{tabularx}{m o m}
                         {\tabular{#3}}
                         {\endtabular}
                   9 \DeclareDocumentEnvironment{tabularx*}{m o m}
                         {\tabular{#3}}
                   10
                         {\endtabular}
                  11
          File 491 lwarp-tabulary.sty
         Package tabulary
§ 600
                   (Emulates or patches code by David Carlisle.)
   tabulary (Pkg)
                   tabulary is emulated by lwarp.
                   Discard all options for lwarp-tabulary.
for HTML output:
                   Column types L, C, R, and J are emulated by lwarp core code.
                   1 \LWR@ProvidesPackageDrop{tabulary}[2014/06/11]
                   2 \RequirePackage{array}
                   3 \NewDocumentEnvironment{tabulary}{m o m}
                   4 {\tabular{#3}}
```

5 {\endtabular}

```
6
7 \NewDocumentEnvironment{tabulary*}{m o m}
8 {\tabular{#3}}
9 {\endtabular}

10 \newcolumntype{L}{l}
11 \newcolumntype{C}{c}
12 \newcolumntype{R}{r}
13 \newcolumntype{J}{l}

14 \newdimen\tymin
15 \newdimen\tymax
16 \def\tyformat{}
```

File 492 lwarp-tagpdf.sty

§601 Package tagpdf

tagpdf (Pkg) tagpdf adds alt text, for images only. (HTML only has alternate text for images.)

The overall strategy is that tagpdf is deactivated, and slightly patched to process alt tags. Also see tagpdf-base, tagpdf-mc-code-generic, and tagpdf-mc-code-lua, following tagpdf.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf}[2022-08-24]

```
2 \ExplSyntaxOn
4\keys_define:nn { __tag / struct }
   {
5
6
      alt .code:n
                         = % Alt property
        {
8 %
           \str_set_convert:Noon
              \l__tag_tmpa_str
9 %
              { #1 }
10 %
              { default }
11 %
              { utf16/hex }
12 %
13 %
            \__tag_prop_gput:cnx
               \{ \ g\_tag\_struct\_int\_eval:n \ \{\c@g\_tag\_struct\_abs\_int\}\_prop \ \} 
14 %
15 %
              { Alt }
16 %
              { <\l_tag_tmpa_str> }
17
           \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
                                                                         lwarp
18
        },
19
    }
20
21 \ExplSyntaxOff
```

The package is deactivated on load, and also each time \tagpdfsetup is used.

22 \LWR@tagpdf@deactivate

File 493 lwarp-tagpdf-base.sty

§ 602 Package tagpdf-base

(Emulates or patches code by Ulrike Fischer.)

tagpdf-base (*Pkg*) tagpdf-base is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf-base}[2022-08-24]

```
2 \ExplSyntaxOn
4 \newcommand*{\LWR@tagpdf@deactivate}{
      \ensuremath{\verb||} \textbf{keys\_set:nn { $\_$tag / setup } } \{
          activate-space = false ,
6
          activate-mc = false ,
8
          activate-tree = false ,
          activate-struct = false
9
10
      }
11 }
13 \RenewDocumentCommand \tagpdfsetup { m }{
      \keys_set:nn { __tag / setup } { #1 }
14
      \LWR@tagpdf@deactivate
15
16 }
17
18 \RenewDocumentCommand \tagmcbegin { m }
19
       \tag_mc_begin:n {#1}
20 %
21
      22
23
24 \RenewDocumentCommand \tagmcend { }
25
       \text{tag_mc_end}:
26 %
      \ThisAltText{}%
27
                            lwarp
28
29
30 \RenewDocumentCommand \tagmcuse { m }
       \tag_mc_use:n {#1}
33
34
{\tt 35\,\ensuremath{\,\backslash\,}} RenewDocumentCommand \tagstructbegin { m }
36
      \keys_set:nn { __tag / struct} { #1 }%
37
                                                      lwarp
       \tag_struct_begin:n {#1}
38 %
39
40
41 \RenewDocumentCommand \tagstructend { }
42 {
43 %
      \tag_struct_end:
44
    \ThisAltText{}%
                            lwarp
45
    }
46
47 \RenewDocumentCommand \tagstructuse { m }
```

```
48 {
49 % \tag_struct_use:n {#1}
50 }
51
52 \ExplSyntaxOff
```

File 494 lwarp-tagpdf-mc-code-generic.sty

§ 603 Package tagpdf-mc-code-generic

(Emulates or patches code by Ulrike Fischer.)

tagpdf-mc-code-generic (Pkg) tagpdf-mc-code-generic is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf-mc-code-generic}[2022-08-24]

```
2 \ExplSyntaxOn
4% From tagpdf-mc-code-generic.sty:
5\keys_define:nn { __tag / mc }
                       = % Alt property
      alt .code:n
8
           \str_set_convert:Noon
9 %
             \l__tag_tmpa_str
10 %
11 %
             { #1 }
             { default }
12 %
13 %
             { utf16/hex }
14 %
           \tl_put_right:Nn \l__tag_mc_key_properties_tl { /Alt~< }</pre>
15 %
          \tl_put_right:No \l__tag_mc_key_properties_tl { \l__tag_tmpa_str>~ }
16
          \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
17
        },
18
   }
19
20 \ExplSyntaxOff
```

File 495 lwarp-tagpdf-mc-code-lua.sty

§ 604 Package tagpdf-mc-code-lua

(Emulates or patches code by Ulrike Fischer.)

tagpdf-mc-code-lua (Pkg) tagpdf-mc-code-lua is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf-mc-code-lua}[2022-08-24]

```
2 \ExplSyntaxOn
3
4 \keys_define:nn { __tag / mc }
5     {
6       alt .code:n = % Alt property
7      {
8%       \str_set_convert:Noon
9%      \l__tag_tmpa_str
```

```
10 %
              { #1 }
11 %
              { default }
12 %
              { utf16/hex }
13 %
           \tl_put_right:Nn \l__tag_mc_key_properties_tl { /Alt~< }</pre>
14 %
           \tl_put_right:No \l__tag_mc_key_properties_tl { \l__tag_tmpa_str>~ }
15 %
           \lua_now:e
16 %
                ltx.__tag.func.store_mc_data
17 %
18 %
                  (
               \__tag_get_mc_abs_cnt:,"alt","/Alt~<\str_use:N \l__tag_tmpa_str>"
19 %
20 %
                  )
21 %
              }
           \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
                                                                        lwarp
23
        },
    }
24
25
26 \ExplSyntaxOff
```

File 496 lwarp-tascmac.sty

§ 605 Package tascmac

tascmac (Pkg) tascmac is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{tascmac}[2018/03/09]

```
2 \newenvironment*{boxnote}
3
          \BlockClass[
4
              padding: .5ex ;
5
              border: 1px solid black;
6
7
              border-top: 1px dashed black;
          ]{boxnote}
8
9
      }
      {\endBlockClass}
10
11
12 \newenvironment*{screen}[1][]
13
      {
          \BlockClass[
14
15
              padding: .5ex ;
              border: 1px solid gray;
16
              border-radius: 8pt
17
          ]{boxnote}
18
19
20
      {\endBlockClass}
21
22 \newenvironment*{itembox}[2][]
23
          \BlockClass[
24
              padding: .5ex ;
25
               border: 1px solid gray ;
26
              border-radius: 8pt
27
          ]{boxnote}
28
          \InlineClass{itemboxtitle}{#2}\par
29
30
      {\endBlockClass}
31
```

```
33 \newenvironment*{shadebox}
35
          \BlockClass[
              padding: .5ex ;
36
37
              border: 1px solid black;
              box-shadow: 3px 3px \#808080;
38
          ]{boxnote}
39
      }
40
      {\endBlockClass}
41
42
43 \newcommand*{\mask}[2]{%
      \InlineClass[background: lightgray]{mask}{#1}%
45 }
47 \newcommand*{\maskbox}[5]{%
      \InlineClass[background: lightgray]{mask}{#5}%
49 }
50
51 \newcommand*{\Maskbox}[6]{%
      \InlineClass[
          background: lightgray ;
53
          border: #5 solid black
54
      ]{mask}{#6}%
55
56 }
58 \newcommand*{\keytop}[2][]{%
      \InlineClass[%
          padding: .2ex;
60
          border: 1px solid black;
61
          border-radius: .7ex ;
62
63
      ]{keytop}{#2}%
64 }
66 \def\yen{\HTMLunicode{00A5}}
68 \def\return{\HTMLunicode{23CE}}
70 \def\Return{\HTMLunicode{23CE}}
72 \def\ascii{ASCII Corporation}
74 \def\Ascii{ASCII Corporation}
76 \def\ASCII{ASCII Corporation}
```

File 497 lwarp-tcolorbox.sty

§ 606 Package tcolorbox

(Emulates or patches code by Thomas F. Sturm.)

tcolorbox (*Pkg*) tcolorbox is patched for use by lwarp.

See section 8.3.8 for limitations.

for HTML output: 1 \LWR@ProvidesPackagePass{tcolorbox}[2023/06/19]

```
2 \newbool{LWR@havetcblower}
3 \boolfalse{LWR@havetcblower}
Colors are supported via HTML styles:
4 \newcommand{\LWR@tcolorbox@findcolors}{%
      \verb|\convertcolorspec{named}{tcbcolback}{HTML}\\ \verb|\LWR@tcbcolback||
      \convertcolorspec{named}{tcbcolframe}{HTML}\LWR@tcbcolframe
6
      \iftcb@titlefilled%
7
          \convertcolorspec{named}{tcbcolbacktitle}{HTML}\LWR@tcbcolbacktitle
8
9
      \else
          \convertcolorspec{named}{tcbcolframe}{HTML}\LWR@tcbcolbacktitle
10
      \fi
11
      \convertcolorspec{named}{tcbcoltitle}{HTML}\LWR@tcbcoltitle
12
      \convertcolorspec{named}{tcbcolupper}{HTML}\LWR@tcbcolupper
13
      \convertcolorspec{named}{tcbcollower}{HTML}\LWR@tcbcollower
14
15 }
16
17 \newcommand*{\LWR@tcolorbox@titlecolorstyles}{%
      border-top: 1px solid \LWR@origpound\LWR@tcbcolframe ;
18
      border-bottom: 1px solid \LWR@origpound\LWR@tcbcolframe ;
19
      background: \LWR@origpound\LWR@tcbcolbacktitle ;
20
21
      color: \LWR@origpound\LWR@tcbcoltitle ;
22 }
The title is placed inside its own <div> of class tcolorboxtitle.
23 \newcommand*{\LWR@showtitle@}[1]{%
      \begin{BlockClass}[
25
          \LWR@tcolorbox@titlecolorstyles
26
      ]{tcolorboxtitle}
                         \cmdKV@LWRtcolorbox@title\par
27 %
      \kvtcb@before@title#1\kvtcb@after@title
28
      \end{BlockClass}
29
30 }
If no title, a non-breakable space is used to take some vertical space.
31 \newcommand*{\LWR@showtitle}[1]{%
      \iftcb@titlevisible
33
      \LWR@showtitle@{#1}
      \else
34
      \LWR@showtitle@{~}
35
      \fi
36
37 }
38
39 \newcommand*{\LWR@tcolorbox@dophantom}{%
        \sbox\tcb@phantombox{\kvtcb@phantom}%
```

41 %

42 %

43 %

44 %

45

46 47 } \iftcb@hasPhantom%

\let\kvtcb@phantom\@empty%

\fi%

\kvtcb@phantom

\box\tcb@phantombox%

\tcb@hasPhantomfalse%

The tcolorbox is placed inside an external <div> of class #1, which is tcolorbox or tcolorbox inlineminipage. The upper and lower parts are placed into their own internal <div>s of class tcolorboxupper and tcolorboxlower.

```
48 \newcommand*{\LWR@tcolorboxstart}[1]{
      \LWR@tcolorbox@findcolors
      \begin{BlockClass}[
50
          border: 1px solid \LWR@origpound\LWR@tcbcolframe ;
51
          background: \LWR@origpound\LWR@tcbcolback ;
52
53
      \LWR@tcolorbox@dophantom%
54
55
      \ifdefvoid{\kvtcb@title}
56
          {}
57
          {
              \LWR@showtitle{\kvtcb@title}
58
59
          }
      \begin{BlockClass}[
60
          color: \LWR@origpound\LWR@tcbcolupper ;
61
      ]{tcolorboxupper}
62
63 }
Floats enclose the tcolorbox.
64 \newcommand*{\LWR@tcolorbox@dostartfloat}{%
65
      \ifx\kvtcb@float\@empty%
            \tcb@set@normal@unbroken@beforeafter%
66\%
67
      \else%
68 %
            \edef\tcb@before@unbroken{%
69 %
                \noexpand\tcb@float@env@begin{tcbfloat}[\kvtcb@float]%
                 \noexpand\kvtcb@everyfloat%
70 %
            }%
71 %
            \let\tcb@after@unbroken=\tcb@float@env@end%
72 %
          \tcb@float@env@begin{tcbfloat}[\kvtcb@float]
73
          \noexpand\kvtcb@everyfloat
74
      \fi%
75
76 }
78 \newcommand*{\LWR@tcolorbox@doendfloat}{%
      \ifx\kvtcb@float\@empty%
80
      \else%
          \tcb@float@env@end%
81
82
```

Footnotes are handled via the main footnote mechanism, and pending notes are printed before and after each tcolorbox. Footnote numbering will not match the print output.

Not using \VerifyCommand here because tcolorbox changes meaning.

83 }

```
84 \renewenvironment{tcolorbox}[1][]
85
      {
          \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
86
87
          {
              \PackageError{lwarp}
88
89
                  {%
                Lwarp cannot process a tcolorbox inside a lateximage\MessageBreak
90
91
                       or SVG math.\MessageBreak
                       Enter 'H' for possible solutions%
92
```

```
93
                    }
                    {%
94
                        Use \protect\tcbox, \protect\tcboxmath, or
95
96
                        \protect\tcbhighmath\space instead.\MessageBreak%
97
                        (Inside math, you probably want to use these anyhow.)%
98
           }{\relax}
99
           \LWR@printpendingfootnotes
100
           \tcb@layer@inc
101
           \tcb@apply@box@options{#1}
102
           \LWR@tcolorbox@dostartfloat%
103
104~\%
             \tcbset{title=,#1}
105
           \boolfalse{LWR@havetcblower}
106
           \LWR@tcolorboxstart{tcolorbox}
107
           \tcb@insert@before@upper%
108
109
           \ifbool{LWR@havetcblower}{%
110
               \tcb@insert@after@lower%
111
           }{%
112
               \tcb@insert@after@upper%
113
           }%
114
           \end{BlockClass}
115
           \LWR@printpendingfootnotes
116
117
           \tcb@layer@dec
118
           \end{BlockClass}
119
           \LWR@tcolorbox@doendfloat%
120
       }
```

For the lower part, the upper part is finished then the lower is started.

\tcblower is \let to \tcb@error@nolower globally, which gives an error in print mode, but is redefined here for HTML.

```
121 \newcommand{\LWR@HTML@tcb@error@nolower}{%
      \tcb@insert@after@upper%
123
       \end{BlockClass}
124
       \begin{BlockClass}[%
           border-top: 1px dashed \LWR@origpound\LWR@tcbcolframe ;
125
           color: \LWR@origpound\LWR@tcbcollower ;
126
       ]{tcolorboxlower}
127
       \tcb@insert@before@lower%
128
129 }
130 \LWR@formatted{tcb@error@nolower}
```

Starred and unstarred \tcbline are simple \hrules.

```
131 \AtBeginDocument{
132 \ifdef{\tcbline}{
       \newcommand*{\LWR@sub@tcbline}{%
133
            \begin{BlockClass}{hrule}
134
135
            \end{BlockClass}
136
       \newcommand{\LWR@HTML@tcbline}{\@ifstar\LWR@sub@tcbline\LWR@sub@tcbline}
137
       \LWR@formatted{tcbline}
138
139 }{}
140 }
141
142 \newcommand{\LWR@HTML@tcbox}[2][]{
       \verb|\LWR@printpendingfootnotes||
143
```

```
\LWR@tcolorbox@dostartfloat%
144
      \begingroup
145
      \tcb@layer@inc
146
147
      \tcb@apply@box@options{#1}
148~\%
        \tcbset{title=,#1}
      \boolfalse{LWR@havetcblower}
149
      \LWR@tcolorboxstart{tcolorbox inlineminipage}
150
      \tcb@insert@before@upper%
151
152
      \ifbool{LWR@havetcblower}{%
153
          \tcb@insert@after@lower%
154
155
      }{%
156
           \tcb@insert@after@upper%
      }%
158
      \end{BlockClass}
      \LWR@printpendingfootnotes
159
      \end{BlockClass}
160
      \tcb@layer@dec%
161
      \endgroup%
162
      \LWR@tcolorbox@dostartfloat%
163
      \global\booltrue{LWR@minipagethispar}%
164
165 }
166 \LWR@formatted{tcbox}
168 \appto\LWR@restoreMathJaxformatting{%
169
      \renewcommand{\tcbox}[2][]{#2}%
170 }
 Patches for the subtitle, which is placed inside a <div> of class tcolorboxsubtitle.
171 \xpatchcmd{\tcbsubtitle}
      {\begingroup}
173
      174
      {\LWR@patcherror{tcolorbox}{tcbsubtitle}}
175
176
177 \xpatchcmd{\tcbsubtitle}
      {\endgroup}
178
179
      {\end{BlockClass}\endgroup}
180
      {}
      {\LWR@patcherror{tcolorbox}{tcbsubtitleB}}
 \tcboxfit is the same as \tcbox.
182 \AtBeginDocument{
183
      \ifdef{\tcboxfit}{%
           \let\LWR@HTML@tcboxfit\tcbox%
184
185
           \LWR@formatted{tcboxfit}
186
      }{}
187 }
 \tcbtitle is patched to support the text font.
188 \VerifyCommand[lwarp][tcolorbox]{\tcbtitle}{8C821A2BDC95C579A4FA340365D9A5CB}
190 \LetLtxMacro\LWR@HTML@tcbtitle\tcbtitle
191 \xpatchcmd{\LWR@HTML@tcbtitle}
      {\tcb@insert@before@title\tcbtitletext}
     {\tt \{\tcb@insert@before@title\LWR@textcurrentfont\{\LWR@textcurrentcolor\{\tcbtitletext\}\}\}}
193
      {}
194
```

```
195 {\LWR@patcherror{tcolorbox}{LWR@HTML@tcbtitle}}
196 \LWR@formatted{tcbtitle}
List-of:
```

Theorem limitations. An error is printed if the document uses math, ams equation, etc. \tcboxmath and \tcbhighmath are ignored for HTML.

```
198 \AtBeginDocument{
199 \pgfkeysifdefined{/tcb/libload/theorems}{
200
       \def\LWR@HTML@tcb@hack@amsmath{%
201
202
           \PackageError{lwarp}
203
               {%
                 tcolorbox ''math'', ''ams equation'', and related\MessageBreak
204
                   are not supported.\MessageBreak
205
                   \protect\tcboxmath\space and
206
                   \protect\tcbhighmath\space are emulated.\MessageBreak
207
                   Enter 'H' for possible solutions%
208
209
               }
210
               {%
211
                 Remove tcolorbox math-related options, and instead\MessageBreak
212
                   use the usual math environments inside each tcolorbox.%
213
214
       \LWR@formatted{tcb@hack@amsmath}
215
216
217
       % Cause an error if using math:
       \tcbset{%
218
219
          math upper/.style={before upper*=\tcb@hack@amsmath,after upper*=$},%
220
          math lower/.style={before lower*=\tcb@hack@amsmath,after lower*=$},%
221
       }
222
       \appto\LWR@restoreorigformatting{%
223
       \tcbset{%
224
           math upper/.style={before upper*=$\displaystyle,after upper*=$},%
225
           math lower/.style={before lower*=$\displaystyle,after lower*=$},%
226
227
       }%
228
       }
       \newcommand{\LWR@HTML@tcboxmath}[2][]{#2}
       \LWR@formatted{tcboxmath}
232
       \newcommand{\LWR@HTML@tcbhighmath}[2][]{#2}
233
       \LWR@formatted{tcbhighmath}
234
       \appto\LWR@restoreMathJaxformatting{%
           \renewcommand{\tcboxmath}[2][]{#2}%
235
           \renewcommand{\tcbhighmath}[2][]{#2}%
236
237
       }
238 }{}% theorems loaded
239 }% AtBeginDocument
 For MATHJAX:
```

```
240 \CustomizeMathJax{\newcommand{\tcbset}[1]{}}
241 \CustomizeMathJax{\newcommand{\tcbsetforeverylayer}[1]{}}
242 \CustomizeMathJax{\newcommand{\tcbox}[2][]{\boxed{\text{#2}}}}
243 \CustomizeMathJax{\newcommand{\tcboxfit}[2][]{\boxed{#2}}}
```

```
244 \CustomizeMathJax{\newcommand{\tcblower}{}}
245 \CustomizeMathJax{\newcommand{\tcbline}{}}
246 \CustomizeMathJax{\newcommand{\tcbtitle}{}}
247 \CustomizeMathJax{\newcommand{\tcbsubtitle[2][]{\mathrm{#2}}}}
248 \CustomizeMathJax{\newcommand{\tcbxmath}[2][]{\boxed{#2}}}
249 \CustomizeMathJax{\newcommand{\tcbhighmath}[2][]{\boxed{#2}}}
```

File 498 lwarp-tensor.sty

§ 607 Package tensor

(Emulates or patches code by Philip G. Ratcliffe.)

tensor (Pkg) tensor is used as-is for svg math, and is emulated for MATHJAX.

spacing Compressed spacing and left justification are not possible with MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{tensor}[2004/12/20]

For MathJax. Special handling is required to parse the superscript and subscript arguments.

When a superscript or subscript is seen, it is processed and then the remainder is processesed recursively.

```
 2 \left( warpMathJax \right) $$ \customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\customizeMathJax{\cus
```

If not a superscript nor a subscript, processing stops.

 $\verb| 5 \customizeMathJax{\newcommand{\LWR} tensorindices three not sup}{}| |$

Check ahead for a superscript or a subscript.

```
6 \CustomizeMathJax{\newcommand{\LWRtensorindicesthreenotsub}{
7  \ifnextchar ^ \LWRtensorindicesthreesup \LWRtensorindicesthreenotsup
8 }}
9
10 \CustomizeMathJax{\newcommand{\LWRtensorindicesthree}{
11  \ifnextchar _ \LWRtensorindicesthreesub \LWRtensorindicesthreenotsub
12 }}
```

Ignore star.

```
13 \CustomizeMathJax{\newcommand{\LWRtensorindicestwo}{
14 \ifstar\LWRtensorindicesthree\LWRtensorindicesthree
15 }}
```

Remove the outer brace of the argument.

16 \CustomizeMathJax{\newcommand{\indices}[1]{\LWRtensorindicestwo#1}}

Attempting to use \vphantom here does not work:

17 \CustomizeMathJax{\newcommand{\LWRtensortwo}[3][]{{}\indices{#1}{#2}\indices{#3}}}

Ignore star.

18 \CustomizeMathJax{\newcommand{\tensor}{\ifstar\LWRtensortwo\LWRtensortwo}}

In text mode, \nuclide is converted to an svg image.

```
19 \CustomizeMathJax{%
      \newcommand{\LWRnuclidetwo}[2][]{%
20
21
               \vphantom{\mathrm{#2}}%
22
               {}^{\LWRtensornucleonnumber}_{#1}%
23
               \mathbf{42}%
24
          }%
25
      }%
26
27 }
28 \CustomizeMathJax{%
      \newcommand{\nuclide}[1][]{%
29
           \def\LWRtensornucleonnumber{#1}%
30
31
           \LWRnuclidetwo%
32
      }%
33 }
34 \end{warpMathJax}
```

File 499 lwarp-termcal.sty

§ 608 Package termcal

(Emulates or patches code by BILL MITCHELL.)

termcal (Pkg) termcal is patched for use by lwarp.

for HTML output:

 ${\tt 1 \backslash LWR@ProvidesPackagePass\{termcal\}\%\ questionable\ date\ in\ the\ .sty\ file}$

Nullify the @ because everything is being done in a token list.

Remove the hbox:

```
7 \mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb
```

Change each of two ampersands to call the lwarp tabular version:

```
14 \xpatchcmd{\calday}
15 {&}
```

```
16 {\LWR@tabularampersand}
17 {}
18 {\LWR@patcherror{termcal}{calday}}
19
20 \xpatchcmd{\calday}
21 {&}
22 {\LWR@tabularampersand}
23 {}
24 {\LWR@patcherror{termcal}{calday B}}
```

File 500 lwarp-textarea.sty

§ 609 Package **textarea**

(Emulates or patches code by Alexander I. Rozhenko.)

textarea (Pkg) textarea is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{textarea}[2005/12/26]

2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand*\RestoreTextArea{}
5 \newcommand*\ExpandTextArea[1][*]{}
6 \let\NCC@restoretextarea\@empty

File 501 lwarp-textcomp.sty

§ 610 Package textcomp

(Emulates or patches code by Frank Mittelbach, Robin Fairbairns, Werner Lemberg.)

textcomp (*Pkg*) textcomp is patched for use by lwarp.

For MathJax, the MathJax packge is used.

§ 610.1 Limitations

Some textcomp symbols do not have Unicode equivalents, and thus are not supported.

Many textcomp symbols are not supported by many system/browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

§ 610.2 Package loading

for HTML output: 1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]

§ 610.3 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.

\AtBeginDocument improves support for LuaLATEX and XELATEX.

§ 610.3.1 pdfIAT_EX symbols

```
2 \AtBeginDocument{
3\ifPDFTeX% pdflatex or dvi latex
4 \newcommand*{\LWR@HTML@textdegree}{\HTMLentity{deg}}
5 \newcommand*{\LWR@HTML@textcelsius}{\HTMLunicode{2103}}
6 \newcommand*{\LWR@HTML@textohm}{\HTMLunicode{2126}}
7 \newcommand*{\LWR@HTML@textmu}{\HTMLunicode{00B5}}
8 \newcommand*{\LWR@HTML@textlquill}{\HTMLunicode{2045}}
9 \newcommand*{\LWR@HTML@textrquill}{\HTMLunicode{2046}}
10 \newcommand*{\LWR@HTML@textcircledP}{\HTMLunicode{2117}}
11 \newcommand*{\LWR@HTML@texttwelveudash}{\HTMLunicode{2014}}% emdash
12 \newcommand*{\LWR@HTML@textthreequartersemdash}{\HTMLunicode{2014}}% emdash
13 \newcommand*{\LWR@HTML@textmho}{\HTMLunicode{2127}}
14 \newcommand*{\LWR@HTML@textnaira}{\HTMLunicode{20A6}}
15 \newcommand*{\LWR@HTML@textpeso}{\HTMLunicode{20B1}}
16 \newcommand*{\LWR@HTML@textrecipe}{\HTMLunicode{211E}}
17 \newcommand*{\LWR@HTML@textinterrobang}{\HTMLunicode{203D}}
18 \newcommand*{\LWR@HTML@textinterrobangdown}{\HTMLunicode{2E18}}
19 \newcommand*{\LWR@HTML@textperthousand}{\HTMLunicode{2030}}
20 \newcommand*{\LWR@HTML@textpertenthousand}{\HTMLunicode{2031}}
21 \newcommand*{\LWR@HTML@textbaht}{\HTMLunicode{0E3F}}
22 \newcommand*{\LWR@HTML@textdiscount}{\%}
23 \newcommand*{\LWR@HTML@textservicemark}{\HTMLunicode{2120}}
24 \else
```

§ 610.3.2 XTLATEX and LualATEX symbols

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

```
25 \newcommand*{\LWR@HTML@textdegree}{°}
26 \newcommand*{\LWR@HTML@textcelsius}{°C}
27 \newcommand*{\LWR@HTML@textohm}{\Omega}
28 \newcommand*{\LWR@HTML@textmu}{μ}
29 \newcommand*{\LWR@HTML@textlquill}{{}}
30 \newcommand*{\LWR@HTML@textrquill}{}}
31 \newcommand*{\LWR@HTML@textcircledP}{\(\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\r
32 \mbox{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\commandm}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\command}{\com
33 \newcommand*{\LWR@HTML@textthreequartersemdash}{-}% emdash
34 \newcommand*{\LWR@HTML@textmho}{\"\"}
36 \newcommand*{\LWR@HTML@textpeso}{P}
37 \newcommand*{\LWR@HTML@textrecipe}{R}
38 \newcommand*{\LWR@HTML@textinterrobang}{?}
39 \newcommand*{\LWR@HTML@textinterrobangdown}{i}
40 \newcommand*{\LWR@HTML@textperthousand}{}
```

```
41 \newcommand*{\LWR@HTML@textpertenthousand}{\\|
42 \newcommand*{\LWR@HTML@textbaht}{\\B}}
43 \newcommand*{\LWR@HTML@textdiscount}{\%}
44 \newcommand*{\LWR@HTML@textservicemark}{5M}
45\fi
46
47 \LWR@formatted{textdegree}
48 \LWR@formatted{textcelsius}
49 \LWR@formatted{textohm}
50 \LWR@formatted{textmu}
51 \LWR@formatted{textlquill}
52 \LWR@formatted{textrquill}
53 \LWR@formatted{textcircledP}
54 \LWR@formatted{texttwelveudash}
55 \LWR@formatted{textthreequartersemdash}
56 \LWR@formatted{textmho}
57 \LWR@formatted{textnaira}
58 \LWR@formatted{textpeso}
59 \LWR@formatted{textrecipe}
60 \LWR@formatted{textinterrobang}
61 \LWR@formatted{textinterrobangdown}
62 \LWR@formatted{textperthousand}
63 \LWR@formatted{textpertenthousand}
64 \LWR@formatted{textbaht}
65 \LWR@formatted{textdiscount}
66 \LWR@formatted{textservicemark}
```

§ 610.4 HTML diacritics

For HTML, Unicode diacritical marks are used:

```
67 \newcommand*{\LWR@HTML@capitalcedilla}[1]{#1\HTMLunicode{0327}}
68 \newcommand*{\LWR@HTML@capitalogonek}[1]{#1\HTMLunicode{0328}}
69 \newcommand*{\LWR@HTML@capitalgrave}[1]{#1\HTMLunicode{0300}}
70 \newcommand*{\LWR@HTML@capitalcircumflex}[1]{#1\HTMLunicode{0301}}
71 \newcommand*{\LWR@HTML@capitalcircumflex}[1]{#1\HTMLunicode{0302}}
72 \newcommand*{\LWR@HTML@capitaltilde}[1]{#1\HTMLunicode{0303}}
73 \newcommand*{\LWR@HTML@capitaldieresis}[1]{#1\HTMLunicode{0308}}
74 \newcommand*{\LWR@HTML@capitaldieresis}[1]{#1\HTMLunicode{308}}
75 \newcommand*{\LWR@HTML@capitalring}[1]{#1\HTMLunicode{30A}}
76 \newcommand*{\LWR@HTML@capitalcaron}[1]{#1\HTMLunicode{30C}}
77 \newcommand*{\LWR@HTML@capitalbreve}[1]{#1\HTMLunicode{306}}
78 \newcommand*{\LWR@HTML@capitalmacron}[1]{#1\HTMLunicode{304}}
79 \newcommand*{\LWR@HTML@capitaldotaccent}[1]{#1\HTMLunicode{307}}
```

\textcircled becomes a span with a rounded border. \providecommand is used to avoid conflict with xunicode.

```
80 \providecommand*{\LWR@HTML@textcircled}[1]{%
81  \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
82 }
83
84 \LWR@formatted{capitalcedilla}
85 \LWR@formatted{capitalogonek}
86 \LWR@formatted{capitalgrave}
87 \LWR@formatted{capitalacute}
88 \LWR@formatted{capitalcircumflex}
89 \LWR@formatted{capitaltilde}
90 \LWR@formatted{capitaldieresis}
91 \LWR@formatted{capitalhungarumlaut}
```

```
92 \LWR@formatted{capitalring}
93 \LWR@formatted{capitalcaron}
94 \LWR@formatted{capitalbreve}
95 \LWR@formatted{capitalmacron}
96 \LWR@formatted{capitaldotaccent}
97
98 \LWR@formatted{textcircled}
```

Nullify textcomp macros when generating filenames:

```
99 \FilenameNullify{%
100
      \renewcommand*{\textdegree}{}%
101
       \renewcommand*{\textcelsius}{}%
       \renewcommand*{\textohm}{}%
102
       \renewcommand*{\textmu}{}%
103
       \renewcommand*{\textlquill}{}%
104
       \renewcommand*{\textrquill}{}%
105
106
       \renewcommand*{\textcircledP}{}%
107
       \renewcommand*{\texttwelveudash}{}%
       \renewcommand*{\textthreequartersemdash}{}%
108
       \renewcommand*{\textmho}{}%
109
       \renewcommand*{\textnaira}{}%
110
       \renewcommand*{\textpeso}{}%
111
112
       \renewcommand*{\textrecipe}{}%
113
       \renewcommand*{\textinterrobang}{}%
114
       \renewcommand*{\textinterrobangdown}{}%
115
       \renewcommand*{\textperthousand}{}%
116
       \renewcommand*{\textpertenthousand}{}%
       \renewcommand*{\textbaht}{}%
117
       \renewcommand*{\textdiscount}{}%
118
       \renewcommand*{\textservicemark}{}%
119
       \renewcommand*{\textcircled}[1]{#1}%
120
      \renewcommand*{\capitalcedilla}[1]{#1}%
121
      \renewcommand*{\capitalogonek}[1]{#1}%
122
123
       \renewcommand*{\capitalgrave}[1]{#1}%
       \renewcommand*{\capitalacute}[1]{#1}%
124
      \renewcommand*{\capitalcircumflex}[1]{#1}%
125
      \renewcommand*{\capitaltilde}[1]{#1}%
126
127
      \renewcommand*{\capitaldieresis}[1]{#1}%
128
       \renewcommand*{\capitalhungarumlaut}[1]{#1}%
129
       \renewcommand*{\capitalring}[1]{#1}%
130
       \renewcommand*{\capitalcaron}[1]{#1}%
       \renewcommand*{\capitalbreve}[1]{#1}%
131
       \renewcommand*{\capitalmacron}[1]{#1}%
132
133
       \renewcommand*{\capitaldotaccent}[1]{#1}%
134 }% FilenameNullify
136 }% AtBeginDocument
```

For MATHJAX:

137 \CustomizeMathJax{\require{textcomp}}

File 502 lwarp-textfit.sty

§611 Package textfit

textfit (Pkg) textfit is emulated.

Text is placed into a of class textfit. Sizes are approximated, and also limited by browser min/max font-size settings.

for HTML output: 1 \LWR@ProvidesPackageDrop{textfit}[1994/04/15]

```
2 \newsavebox{\LWR@textfitbox}
3
4 \newcommand*{\LWR@textfitscale}[2]{%
5\setlength{\LWR@templengthone}{#1}%
6 \setlength{\LWR@templengthone}{%
      1em*\ratio{\LWR@templengthone}{\LWR@templengthtwo}%
8 }%
9 \\ In line Class [font-size: \LWR@printlength {\LWR@templengthone}] {textfit} {\#2} \% 
10 }
11
12 \newcommand*{\scaletowidth}[2]{%
13 \sbox{\LWR@textfitbox}{#2}%
\label{locality} $$14 \settowidth{\LWR@templengthtwo}_{\usebox{\LWR@textfitbox}}\%$$
15 \LWR@textfitscale{#1}{#2}%
16 }
17
18 \newcommand*{\scaletoheight}[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }
```

File 503 lwarp-textpos.sty

§ 612 Package **textpos**

(Emulates or patches code by Norman Gray.)

textpos (Pkg) textpos is emulated.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{textpos}[2020/09/26]
```

```
2 \NewDocumentEnvironment{textblock}{m o r()}{}{}
3 \NewDocumentEnvironment{textblock*}{m o r()}{}{}
4 \newcommand*{\TPGrid}[3][]{}
5 \def\TPShowGrid{\@ifstar{\@TPShowGrid}{\@TPShowGrid}}
6 \def\@TPShowGrid#1#2{}
7 \NewDocumentCommand{\TPMargin}{s o}{}
8 \newcommand*{\textblockcolour}[1]{}
9 \newcommand*{\textblockrulecolour}[1]{}
10 \newcommand*{\textblockcolor}[1]{}
11 \newcommand*{\textblockrulecolor}[1]{}
```

```
12 \newcommand*{\tekstblokkulur}[1]{}
13 \newcommand*{\tekstblokrulekulur}[1]{}
14 \newlength{\TPHorizModule}
15 \newlength{\TPVertModule}
16 \newlength{\TPboxrulesize}
17 \newcommand{\textblocklabel}[1]{}
18 \newcommand*{\showtextsize}{}
19 \newcommand{\textblockorigin}[2]{}
20 \newcommand*{\TPoptions}[1]{}
21 \newcommand*{\TPReferencePosition}[1]{}
```

File 504 lwarp-theorem.sty

§613 Package theorem

(Emulates or patches code by Frank Mittelbach.)

theorem (*Pkg*) theorem is patched for use by lwarp.

Table 21: Theorem package — css styling of theorems and proofs

Theorem: <div> of class theorembody<theoremstyle>

Theorem Header: of class theoremheader

where <theoremstyle> is plain, break, etc.

for HTML output:

1 \LWR@ProvidesPackagePass{theorem}[2023/07/05]

§ 613.1 Remembering the theorem style

Storage for the style being used for new theorems:

2 \newcommand{\LWR@newtheoremstyle}{plain}

Patched to remember the style being used for new theorems:

```
{\tt 3 VerifyCommand[lwarp][theorem]{} \{b805673118A2EA934449A9B7D25A5D33\}}
5 \gdef\theoremstyle#1{%
     \@ifundefined{th@#1}{\@warning
            {Unknown theoremstyle '#1'. Using 'plain'}%
            \theorem@style{plain}%
8
             \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
9
            }%
10
       {%
11
            \theorem@style{#1}%
12
            \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
13
        }%
14
15
        \begingroup
          \csname th@\the\theorem@style \endcsname
16
        \endgroup}
17
```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```
18 \VerifyCommand[lwarp][theorem]{\@xnthm}{D6164703589C684059381DB798F89158}
20 \gdef\@xnthm#1#2[#3]{%
    \expandafter\@ifdefinable\csname #1\endcsname
22
     \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
23
     \@definecounter{#1}\@newctr{#1}[#3]%
24
     \expandafter\xdef\csname the#1\endcsname
25
       {\expandafter \noexpand \csname the#3\endcsname
26
        \@thmcountersep \@thmcounter{#1}}%
27
     28
29
     \expandafter \@tempa \expandafter{%
30
       \csname th@\the \theorem@style
31
             \expandafter \endcsname \the \theorem@bodyfont
      \@thm{#1}{#2}}%
     \global \expandafter \let \csname end#1\endcsname \@endtheorem
33
    \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
34
35
37 \VerifyCommand[lwarp][theorem]{\@ynthm}{C5A12EBEFDBCD5C5628C65B16A01DFB4}
38
39 \gdef\@ynthm#1#2{%
     \expandafter\@ifdefinable\csname #1\endcsname
40
41
     \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
42
43
     \@definecounter{#1}%
     \expandafter\xdef\csname the#1\endcsname{\@thmcounter{#1}}%
44
45
     \def\ensuremath{\def}{\#1}}\
46
      \expandafter{\csname th@\the \theorem@style \expandafter
      47
     \global \expandafter \let \csname end#1\endcsname \@endtheorem
48
    \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
49
50
51
52 \VerifyCommand[lwarp][theorem]{\@othm}{93B7CCDCEFDF36BEEF31477D6D390AC3}
54 \gdef\@othm#1[#2]#3{%
   \expandafter\ifx\csname c@#2\endcsname\relax
56
    \@nocounterr{#2}%
   \else
57
    \expandafter\@ifdefinable\csname #1\endcsname
58
59
     \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
60
     \expandafter \xdef \csname the#1\endcsname
61
      {\expandafter \noexpand \csname the#2\endcsname}%
62
     \ensuremath{\def}{\#1}}\ensuremath{\def}{\#1}}
63
      \expandafter{\csname th@\the \theorem@style \expandafter
64
65
      \endcsname \the\theorem@bodyfont \@thm{#2}{#3}}%
     \global \expandafter \let \csname end#1\endcsname \@endtheorem
66
    67
68
     }%
   \fi}
69
```

§ 613.2 css patches

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader.

```
70 \gdef\th@plain{%
    71
           \item[
72
               \InlineClass\{theoremheader\}\{\#1\ \#2\}
73
74
      }%
75
76 \def\@opargbegintheorem##1##2##3{%
77
      \item[
           \InlineClass\{theoremheader\}\{\#1\ \#2\ (\#3)\}
78
79
      ]
80
      }
81 }
82
83 \gdef\th@break{%
    \item[
85
86
           \InlineClass{theoremheader}{##1\ ##2}\newline%
87
      }%
88
89 \def\@opargbegintheorem##1##2##3{%
           \label{lem:lineClass} $$ \prod_{m=1}^{\#1} \#2\ (\#3)} \rightarrow \
91
      ]
92
      }
93
94 }
95
96 \gdef\th@marginbreak{%
97
    \def\@begintheorem##1##2{
98
      \item[
           \InlineClass{theoremheader}{##2 \qquad ##1}\newline
99
100
      ]
101
      }%
102 \def\@opargbegintheorem##1##2##3{%
      \item[
103
           \InlineClass{theoremheader}{##2 \qquad ##1\ %
104
           (##3)}\newline
105
106
      ]
107
      }
108 }
109
110 \gdef\th@changebreak{%
    \def\@begintheorem##1##2{
111
112
      \item[
           \InlineClass{theoremheader}{\#2\ \#\#1}\newline
113
      ٦
114
      }%
115
116 \def\@opargbegintheorem##1##2##3{%
      \item[
117
           \InlineClass{theoremheader}{ ##2\ ##1\ %
118
```

```
(##3)}\newline
119
120
      ]
121
      }
122 }
123
124 \gdef\th@change{%
    \def\@begintheorem##1##2{
125
      \item[
126
          \InlineClass{theoremheader}{##2\ ##1}
127
128
      ]
129
      }%
130 \def\@opargbegintheorem##1##2##3{%
131
      \item[
          \InlineClass\{theoremheader\}\{\#2\ \#\#1\ (\#\#3)\}
133
      ]
134
      }
135 }
136
137 \gdef\th@margin{%
    \def\@begintheorem##1##2{
138
139
      \item[
           \InlineClass{theoremheader}{##2 \qquad ##1}
140
141
142
      }%
143 \def\@opargbegintheorem##1##2##3{%
      \item[
               145
      ]
146
147
      }
148 }
 Patched for css:
149 \VerifyCommand[lwarp][theorem]{\@thm}{4632915C52ABB4DB5D462AA58A80BAF2}
151 \gdef\@thm#1#2{\refstepcounter{#1}%
152 \LWR@forcenewpage% lwarp
153
      \LWR@printpendingfootnotes%
                                                     lwarp
      \BlockClass{theorembody\LWR@thisthmstyle}% lwarp
154
155
     \@topsep \theorempreskipamount
                                                   % used by first \item
156
     \@topsepadd \theorempostskipamount
                                                   % used by \@endparenv
157
     \@ifnextchar [%
158
     {\@ythm{#1}{#2}}%
159
     {\@begintheorem{#2}{\csname the#1\endcsname}\ignorespaces}}
160
162 \gdef\@endtheorem{%
163 \endtrivlist
      \LWR@printpendingfootnotes%
164
                                                     lwarp
165 \endBlockClass
166 }
```

File 505 lwarp-thinsp.sty

§ 614 Package thinsp

thinsp (*Pkg*) thinsp is emulated.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{thinsp}[2016/10/02]

2 \AtBeginDocument{
3 \let\thinthinspace\relax% defined by some packages
4 \newcommand*{\thinthinspace}{\thinspace}

5 }

6
7 \newcommand*{\stretchthinspace}{\thinspace}
8 \newcommand*{\stretchthinthinspace}{\thinthinspace}

9 \newcommand*{\stretchthinthinspace}{\negthinspace}
```

File 506 lwarp-thm-listof.sty

§ 615 Package thm-listof

(Emulates or patches code by Ulrich M. Schwarz, Yukai Chou.)

thm-listof (*Pkg*) thm-listof is part of thmtools, and is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{thm-listof}[2019/12/22]

For font control, see the generated HTML and use css per amsthm or ntheorem.

Other thm-* package may be loaded by thm-list of.

```
2 \IfPackageAtLeastTF{thm-listof}{2020/08/01}{% v0.72
\def\thmtlo@newentry{%
   5
6 }
7}{% earlier than v0.72
    \xpatchcmd{\listoftheorems}
      {%
9
         \@xa\protected@edef\csname l@\thmt@envname\endcsname{%
10
            \@nx\@dottedtocline{1}{1.5em}{\@nx\thmt@listnumwidth}%
11
         }%
12
      }
13
14
      15
16
      }
17
      {\LWR@patcherror{thm-listof}{listoftheorems}}
18
19
    \xpatchcmd{\thmt@mklistcmd}
20
21
      {%
         \@xa\protected@edef\csname l@\thmt@envname\endcsname{%
```

```
23
       }%
24
    }
26
    {%
    27
28
    }
    {}
29
    {\LWR@patcherror{thm-listof}{thmt@mklistcmd}}
30
31 }
```

File 507 lwarp-thm-restate.sty

§616 Package thm-restate

(Emulates or patches code by Ulrich M. Schwarz.)

thm-restate (Pkg) thm-restate is part of thmtools, and is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{thm-restate}[2020/08/01]
```

File 508 lwarp-thmbox.sty

§617 Package thmbox

(Emulates or patches code by Emmanuel Beffara.)

thmbox (*Pkg*) thmbox is emulated for use by lwarp.

```
\begin{tabular}{ll} \textbf{for HTML output:} & 1 \land \texttt{LWR@ProvidesPackagePass\{thmbox\}[2005/04/24]} \\ \end{tabular}
```

```
2\renewenvironment{thmbox}[2][]%
3
          \begin{BlockClass}{thmbox}
4
          \begin{BlockClass}{thmboxtitle}
5
6
7
          \end{BlockClass}
8
      {\end{BlockClass}}
10
11 \renewenvironment{proof}[1][]
12
          \begin{BlockClass}{thmboxproof}%
13
          \InlineClass{thmboxproofname}{\proofname\ #1\unskip\,:}
14
     }
15
16
     {%
17
          \qquad\HTMLunicode{220E}
```

```
\end{BlockClass}
18
      }
19
21 \renewenvironment{example}[1][\examplename]%
22
          \begin{BlockClass}{thmboxexample}%
23
          \InlineClass{thmboxexamplename}{#1\,:}
24
25
      {\end{BlockClass}}
26
27
28\renewenvironment{leftbar}[1][]%
      {\begin{BlockClass}{thmboxleftbar}}
      {\end{BlockClass}}
```

File 509 lwarp-thmtools.sty

§ 618 Package thmtools

(Emulates or patches code by Ulrich M. Schwarz.)

thmtools (Pkg) thmtools is patched for use by lwarp.

Also see thm-listof and thm-restate.

for HTML output: 1 \LWR@ProvidesPackagePass{thmtools}[2020/08/01]

The following patches either thm-amsthm or thm-ntheorem.

```
2 \def\thmt@headstyle@margin{%
3  \InlineClass{amsthmnnumbertheorem}{\NUMBER}
4  \
5  \InlineClass{amsthmnametheorem}{\NAME}
6  \InlineClass{amsthmnotetheorem}{\NOTE}
7 }
8
9 \let\thmt@headstyle@swapnumber\thmt@headstyle@margin
```

File 510 lwarp-threadcol.sty

§ 619 Package threadcol

threadcol (Pkg) threadcol is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

 ${\tt 2 \ lemmand \{ \ setthreadname \} [1] \{ \} }$

File 511 lwarp-threeparttable.sty

§ 620 Package threeparttable

(Emulates or patches code by Donald Arseneau.)

threeparttable (*Pkg*) threeparttable is emulated.

Table note are contained in

Table note are contained inside a css <div> of class thotes. If enumitem is used, the note item labels are also individually highlighted with an additional css of class thoteitemheader, otherwise they are plain text.

for HTML output: 1 \LWR@ProvidesPackageDrop{threeparttable}[2003/06/13]

```
threeparttable
                                  [\langle alignment \rangle]
                                2 \newenvironment*{threeparttable}[1][b]
                                       {\def\@captype{table}}
                                  [\langle options \rangle]
 tablenotes
                                5 \newenvironment*{tablenotes}[1][]
                                7 \LWR@forcenewpage
                                8 \BlockClass{tnotes}%
                                9 \description%
                                10 }
                                11 {%
                                12 \enddescription%
                                13 \endBlockClass%
                                14 }
                                  \{\langle text \rangle\}
\tnote
                                15 \newcommand{\tnote}[1]{\LWR@htmlspan{sup}{#1}}
                                  [\langle alignment \rangle]
  measuredfigure
                                16 \newenvironment*{measuredfigure}[1][t]
                                       {\def\@captype{figure}}
```

File 512 lwarp-threeparttablex.sty

§ 621 Package threeparttablex

threeparttablex (*Pkg*) threeparttablex is patched for use by lwarp.

threeparttablex is used with longtable and booktabs as follows:

```
\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{
                        % not used in HTML
                       % or \endfirsthead
  [ . . . ] \endhead
  [ . . . ] \endfoot
  \bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warpHTMLonly{
               % HTML last footer
  \bottomrule
  \UseMinipageWidths
                         % optional
  \insertTableNotes
  \endlastfoot
}
\end{longtable}
```

table width

The table notes are created using a \multicolumn. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, lwarp guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use \UseMinipageWidths before \insertTableNotes. The width is then specified, and in many cases the result is an improvement in overall table layout.

for HTML output:

 ${\tt 1 LWR@ProvidesPackagePass\{threeparttablex\}[2013/07/23]}$

The width is guessed depending on the number of columns, then limited to a min/max.

```
2\renewcommand\insertTableNotes{%
     \setlength{\LWR@templengthone}{.375in*\value{LWR@tabletotalLaTeXcols}}%
     \setlength{\LWR@templengthone}{\minof{\textwidth}{\LWR@templengthone}}%
     \multicolumn{\value{LWR@tabletotalLaTeXcols}}{c}{%
7
       \parbox{\LWR@templengthone}{%
8
        \begin{tablenotes}[\TPTL@optarg]%
          \TPTL@font%
9
          \TPTL@body%
10
        \end{tablenotes}%
11
12
       }%
13
  }%
14 }
15 \providecommand{\TPTL@tnotex}{}
16 \renewcommand{\TPTL@tnotex}[2]{\tnote{\nameref{#2}}}
```

File 513 lwarp-thumb.sty

```
§ 622 Package thumb
```

thumb (Pkg) thumb is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{thumb}[1997/12/24]

```
3 \newlength{\thumbheight}
4 \newlength{\thumbwidth}
```

File 514 lwarp-thumbs.sty

Package thumbs § 623

> thumbs (Pkg)thumbs is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{thumbs}[2014/03/09]

- 2 \newcommand{\addthumb}[4]{}
- 3 \newcommand{\addtitlethumb}[5]{}
- 4 \newcommand{\stopthumb}{}
- 5 \newcommand{\continuethumb}{}
- 6 \newcommand{\thumbsoverview}[1]{}
- 7 \newcommand{\thumbsoverviewback}[1]{}
- 8 \newcommand{\thumbsoverviewverso}[1]{}
- 9 \newcommand{\thumbsoverviewdouble}[1]{}
- 10 \newcommand{\thumbnewcolumn}{}
- 11 \newcommand{\addthumbsoverviewtocontents}[2]{}
- 12 \newcommand{\thumbsnophantom}{}

File 515 lwarp-tikz.sty

Package tikz **§**624

(Emulates or patches code by Till Tantau.)

tikz(Pkg) tikz is supported.

matrices

displaymath and If using display math with tikzpicture or \tikz, along with matrices with the & character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of & in the tikz expression must be replaced with \&.

Accept all options for lwarp-tikz:

1 \LWR@ProvidesPackagePass{tikz}[2015/08/07]

catcodes

lwarp changes the catcode of \$ for its own use. The TikZ babel library temporarily changes catcodes back to normal for TikZ's use. tikz v3.0.0 introduced the babel library which handles catcode changes. For older versions, lwarp must change \$'s catcode itself.

Also see:

```
https://tex.stackexchange.com/questions/16199/
     test-if-a-package-or-package-option-is-loaded
```

2 \newbool{LWR@tikzbabel}

Env pgfpicture

§ 625

tikz-imagelabels (Pkg)

for HTML output:

```
4 \IfPackageAtLeastTF{tikz}{2013/12/20}% Test for Tikz version v3.0.0
         5 {\usetikzlibrary{babel}\booltrue{LWR@tikzbabel}}
         6 {\boolfalse{LWR@tikzbabel}}
           The \pgfpicture environment is enclosed inside a \lateximage. Enclose the
         low-level \pgfpicture in a lateximage. This is also used by the higher-level \tikz
         and tikzpicture.
         7\preto\pgfpicture{%
               \begin{lateximage}[-tikz-~\PackageDiagramAltText]%
         9
               \ifbool{LWR@tikzbabel}% Test for Tikz version v3.0.0
         10
         11
               {\catcode'\$=3}% dollar sign is math shift
         12 }
         14 \appto\endpgfpicture{\end{lateximage}}
         TikZ is placed inside an svG image, so use the original meanings of the following:
         15 \LetLtxMacro\pgfutil@minipage\LWR@print@minipage
         16 \let\pgfutil@endminipage\endLWR@print@minipage
         18 \let\pgfutil@raggedleft\LWR@print@raggedleft
         19 \let\pgfutil@raggedright\LWR@print@raggedright
         20 \def\pgfutil@font@tiny{\LWR@print@tiny}
         21 \def\pgfutil@font@scriptsize{\LWR@print@scriptsize}
         22 \def\pgfutil@font@footnotesize{\LWR@print@footnotesize}
         23 \def\pgfutil@font@small{\LWR@print@small}
         24 \def\pgfutil@font@normalsize{\LWR@print@normalsize}
         25 \def\pgfutil@font@large{\LWR@print@large}
         26 \def\pgfutil@font@Large{\LWR@print@Large}
         27 \def\pgfutil@font@huge{\LWR@print@huge}
         28 \def\pgfutil@font@Huge{\LWR@print@Huge}
         30 \def\pgfutil@font@itshape{\LWR@print@itshape}
         31 \def\pgfutil@font@bfseries{\LWR@print@bfseries}
         33 \def\pgfutil@font@normalfont{\LWR@print@normalfont}
File 516 lwarp-tikz-imagelabels.sty
Package tikz-imagelabels
         (Emulates or patches code by Tobias Plüss.)
         tikz-imagelabels is patched for use by lwarp.
          1 \LWR@ProvidesPackagePass{tikz-imagelabels}[2019/06/27]
         2\BeforeBeginEnvironment{annotationimage}{%
               \begin{lateximage}[-tikz-imagelabels-~\PackageDiagramAltText]%
         4 }
```

6 \AfterEndEnvironment{annotationimage}{\end{lateximage}}

File 517 lwarp-titleps.sty

§ 626 Package titleps

(Emulates or patches code by Javier Bezos.)

titleps (Pkg) titleps is loaded and used by lwarp during HTML output. All user options and

macros are ignored and disabled.

Discard all options for lwarp-titleps:

for HTML output: 1 \LWR@ProvidesPackageDrop{titleps}[2016/03/15]

\pagestyle and \thispagestyle are already disabled in the lwarp code.

 $\label{eq:commands} $$ \ensuremath{\mbox{\mbox{\sim}}} {\ensuremath{\mbox{\sim}}} {\ensuremath{\$

 ${\tt 2 \ NewDocumentCommand{\ newpagestyle}\{m \ o \ m\}\{\}}$

 ${\tt 3 \ NewDocumentCommand{\ \ \ } \{m \ o \ m\}{\tt \{}\}}$

 $\verb| 4 \end{sethead} \{ o o o m m m \} \{ \}$

5 \NewDocumentCommand{\setfoot}{o o o m m m}{}

\settitlemarks * $\{\langle names \rangle\}$

\headrule

7 \newcommand*{\headrule}{}

\footrule

8 \newcommand*{\footrule}{}

\setheadrule $\{\langle \mathit{length} \rangle\}$

9 \newcommand*{\setheadrule}[1]{}

\setfootrule $\{\langle \mathit{length} \rangle\}$

10 \newcommand*{\setfootrule}[1]{}

\makeheadrule

```
11 \newcommand*{\makeheadrule}{}
\makefootrule
                                      12 \newcommand*{\makefootrule}{}
                                        \{\langle code \rangle\}
\setmarkboth
                                      13 \newcommand{\setmarkboth}[1]{}
\widenhead
                                      14 \NewDocumentCommand{\widenhead}{s o o m m}{}
\bottitlemarks
                                      15 \newcommand*{\bottitlemarks}{}
\toptitlemarks
                                      16 \newcommand*{\toptitlemarks}{}
\firsttitlemarks
                                      17 \newcommand*{\firsttitlemarks}{}
\nexttitlemarks
                                      18 \newcommand*{\nexttoptitlemarks}{}
\outertitlemarks
                                      19 \newcommand*{\outertitlemarks}{}
\innertitlemarks
                                      20 \newcommand*{\innertitlemarks}{}
\newtitlemark
                                        * \{\langle name \rangle\}
                                      21 \NewDocumentCommand{\newtitlemark}{s m}{}
                                        * \{\langle section \rangle\} \{\langle text \rangle\}
\pretitlemark
                                      22 \MewDocumentCommand{\pretitlemark}{s m m}{}
\ifsamemark
                                        \{\langle group \rangle\} \{\langle command \rangle\} \{\langle true \rangle\} \{\langle false \rangle\}
                                      23 \newcommand{\ifsamemark}[4]{}
                                        * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] \{\langle . \rangle\} \{\langle . \rangle\} \{\langle extra \rangle\} [\langle which \rangle]
\setfloathead
                                      24 \NewDocumentCommand{\setfloathead}{s o o o m m m m m}{}
                                        * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] \{\langle . \rangle\} \{\langle . \rangle\} \{\langle extra \rangle\} [\langle which \rangle]
\setfloatfoot
```

```
25 \MewDocumentCommand{\setfloatfoot}{s o o o m m m m m}{}
\nextfloathead
                                       * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] \{\langle . \rangle\} \{\langle . \rangle\} \{\langle extra \rangle\} [\langle which \rangle]
                                     26 \NewDocumentCommand{\nextfloathead}{s o o o m m m m m}{}
                                       * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] \{\langle . \rangle\} \{\langle . \rangle\} \{\langle extra \rangle\} [\langle which \rangle]
\nextfloatfoot
                                     27 \MewDocumentCommand{\nextfloatfoot}{s o o o m m m m m}{}
                                       \{\langle markset \rangle\}
\newmarkset
                                     28 \newcommand{\newmarkset}[1]{}
                                       * \{\langle markset \rangle\} \{\langle macro-name \rangle\}
\newextramark
                                     29 \NewDocumentCommand{\newextramarkset}{s m m}{}
\botextramarks
                                       \{\langle markset \rangle\}
                                     30 \newcommand{\botextramarks}[1]{}
\topextramarks
                                       \{\langle markset \rangle\}
                                     31 \newcommand{\topextramarks}[1]{}
                                       \{\langle markset \rangle\}
\firstextramarks
                                     32 \newcommand{\firstextramarks}[1]{}
\nextextramarks
                                       \{\langle markset \rangle\}
                                     33 \newcommand{\nexttopextramarks}[1]{}
                                       \{\langle markset \rangle\}
\outerextramarks
                                     34 \newcommand{\operatorname{\operatorname{Nouterextramarks}[1]}{}}
                                       \{\langle markset \rangle\}
\innerextramarks
                                     35 \newcommand{\innerextramarks}[1]{}
                         File 518 lwarp-titleref.sty
                        Package titleref
            § 627
                                    titleref is emulated.
                 titleref (Pkg)
                                     1 \LWR@ProvidesPackageDrop{titleref}[2001/04/05]
             for HTML output:
                                     3 \LetLtxMacro\titleref\nameref
                                     5\providecounter{LWR@currenttitle}
                                     7 \newcommand*{\currenttitle}{%
```

```
8
                        \addtocounter{LWR@currenttitle}{1}%
                        \label{currenttitle\arabic{LWR@currenttitle}}%
                 10
                        \nameref{currenttitle\arabic{LWR@currenttitle}}%
                 11 }
                 13 \newcommand*{\theTitleReference}[2]{}
       File 519 lwarp-titlesec.sty
      Package titlesec
                  (Emulates or patches code by Javier Bezos.)
titlesec(Pkg)
                 titlesec is emulated. All user options and macros are ignored and disabled.
                  Discard all options for lwarp-titlesec:
                  1 \LWR@ProvidesPackageDrop{titlesec}[2016/03/21]
                  3 \newbool{LWR@loadtitleps}
                  4 \boolfalse{LWR@loadtitleps}
                  6 \DeclareOption{pagestyles}{
                        \booltrue{LWR@loadtitleps}
                  8 }
                 10 \DeclareOption*{}
                 12 \ProcessOptions\relax
                 14 \ifbool{LWR@loadtitleps}{
                        \RequirePackage{lwarp-titleps}
                 16 }{}
                   \{\langle label\text{-}format\rangle\}
                 17 \newcommand*{\titlelabel}[1]{}
                   \{\langle command \rangle\} \{\langle format \rangle\}
                    \{\langle command \rangle\} \ [\langle shape \rangle] \ \{\langle format \rangle\} \ \{\langle label \rangle\} \ \{\langle sep \rangle\} \ \{\langle begfore \rangle\} \ [\langle after \rangle] 
                 18 \newcommand\titleformat{%
                     \@ifstar{\ttl@format@s}%
                               {\ttl@format@i}}
                 21 \mbox{ newcommand{\ttl@format@s}[1]{}}
                 22 \MewDocumentCommand{\tilde{\mu} m o m m m o}{}
                 23 \@ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
                 24 \newcommand\chaptertitlename{\@chapapp}
```

* $\{\langle command \rangle\} \{\langle left \rangle\} \{\langle before \rangle\} \{\langle after \rangle\} [\langle right \rangle]$

25 \NewDocumentCommand{\titlespacing}{s m m m m o}{}

§ 628

\titlelabel

\titleformat*

\titleformat

\chaptertitlename

\titlespacing

for HTML output:

```
\filright
                                   26 \newcommand*{\filright}{}
\filcenter
                                   27 \newcommand*{\filcenter}{}
\filleft
                                   28 \newcommand*{\filleft}{}
\fillast
                                   29 \newcommand*{\fillast}{}
\filinner
                                   30 \newcommand*{\filinner}{}
\filouter
                                   31 \newcommand*{\filouter}{}
\wordsep
                                   32 \newcommand\wordsep{\fontdimen\tw@\font \@plus
                                   33 \fontdimen\thr@@\font \@minus \fontdimen4\font}
                                      * [\langle align \rangle] \{\langle material \rangle\}
\titleline
                                   34 \NewDocumentCommand{\titleline}{s o m}{}
\titlerule
                                      [\langle height \rangle]
                                   35 \providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}
                                   36 \newcommand*{\ttl@rule}[1][]{}
                                   37 \newcommand*{\ttl@row}[2][]{}
                                      \{\langle true \rangle\} \{\langle false \rangle\}
\iftitlemeasuring
                                   38 \newcommand{\iftitlemeasuring}[2]{#2}
                                      \{\langle command \rangle\} \{\langle pagestyle \rangle\}
\assignpagestyle
                                   39 \newcommand{\assignpagestyle}[2]{#2}
                                      \{\langle name \rangle\} [\langle startlevel \rangle] \{\langle class \rangle\} [\langle cmd \rangle]
\titleclass
                                   40 \ensuremath{\mbox{NewDocumentCommand}{\tilde{\mbox{titleclass}}}{\mbox{m o m o}}{\mbox{}}}
```

File 520 lwarp-titletoc.sty

```
§ 629 Package titletoc
```

(Emulates or patches code by Javier Bezos.)

titletoc (Pkg) titletoc is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titletoc:

for HTML output: 1 \LWR@ProvidesPackageDrop{titletoc}[2011/12/15]

\dottedcontents $\{\langle section \rangle\} [\langle left \rangle] \{\langle above \rangle\} \{\langle label \rangle\} \{\langle leader \rangle\}$

2 \NewDocumentCommand{\dottedcontents}{m o m m m}{}

 $\begin{tabular}{ll} $ $ $ $ (section) $ [(left)] $ (above) $ (numberless) $ (filler) $ [(below)] $ (above) $ (numberless) $ (filler) $ [(below)] $ (above) $ (numberless) $ (filler) $ [(below)] $ (above) $ (above)$

 $or\ begin \] [\langle separator \rangle] [\langle end \rangle]$

3 \newcommand{\titlecontents}{\@ifstar{\ttl@tcstar}{\ttl@tcnostar}}

4 \NewDocumentCommand{\ttl@tcstar}{m o m m m m o o o}{} 5 \NewDocumentCommand{\ttl@tcnostar}{m o m m m m o}{}

\contentsmargin $[\langle correction \rangle] \{\langle right \rangle\}$

6 \newcommand{\contentsmargin}[2][]{}

\thecontentslabel

7 \newcommand*{\thecontentslabel}{thecontentslabel}

\thecontentspage

8 \newcommand*{\thecontentspage}{thecontentspage}

\contentslabel $[\langle format \rangle] \{\langle space \rangle\}$

9 \newcommand{\contentslabel}[2][]{\thecontentslabel}

\contentspage $[\langle format \rangle]$

 ${\tt 10 \ lemmand \{\ l$

\contentspush $\{\langle \textit{text} \rangle\}$

11 $\newcommand{\contentspush}[1]{}$

\contentsuse $\{\langle name \rangle\} \{\langle text \rangle\}$

12 \newcommand{\contentsuse}[2]{}

\startcontents $[\langle name \rangle]$

13 \newcommand*{\startcontents}[1][]{} \stopcontents $[\langle name \rangle]$ 14 \newcommand*{\stopcontents}[1][]{} \resumecontents $[\langle name \rangle]$ 15 \newcommand*{\resumecontents}[1][]{} \printcontents $[\langle name \rangle] \{\langle prefix \rangle\} \{\langle start \rangle\} \{\langle code \rangle\}$ 16 \newcommand{\printcontents}[4][]{} $[\langle name \rangle] \{\langle list \rangle\}$ \startlist 17 \newcommand{\startlist}[2][]{} \stoplist $[\langle name \rangle] \{\langle list \rangle\}$ 18 \newcommand{\stoplist}[2][]{} $[\langle name \rangle] \{\langle list \rangle\}$ \resumelist 19 \newcommand{\resumelist}[2][]{} $[\langle name \rangle] \{\langle list \rangle\} \{\langle prefix \rangle\} \{\langle code \rangle\}$ \printlist 20 \newcommand{\printlist}[4][]{} File 521 lwarp-titling.sty titling Package § 630 (Emulates or patches code by Peter Wilson.) titling(Pkg)package support lwarp supports the native LATEX titling commands, and also supports the packages authblk and titling. If both are used, authblk should be loaded before titling. ⚠ load order \published and \subtitle If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubtitlePublished in the preamble. See section 69.8. The various titling footnote restyling commands have no effect. Pass all options to lwarp-titling: 1 \LWR@ProvidesPackagePass{titling}[2009/09/04] for HTML output: **\@bsmtitlempty** Patch \@bsmtitlempty: ${\tt 2 \ let \ LWR@orig@bsmtitlempty \ @bsmtitlempty}$ 3\renewcommand*{\@bsmtitlempty}{% 4 \LWR@orig@bsmtitlempty%

5 }

```
\keepthetitle Patch \keepthetitle:
                    6 \let\LWR@origkeepthetitle\keepthetitle
                    7\renewcommand*{\keepthetitle}{%
                    8 \LWR@orig@keepthetitle%
      \killtitle Patch \killtitle:
                    10 \let\LWR@origkilltitle\killtitle
                    11 \renewcommand*{\killtitle}{%
                    12 \LWR@orig@killtitle%
                    13 }
  titlingpage (env.)
                    14 \renewenvironment*{titlingpage}
                    15 {%
                    Start an HTML titlepage div:
                    16 \LWR@printpendingfootnotes
                    17 \begin{titlepage}
                    Prepare for a custom version of \maketitle inside the titlingpage:
                    18 \LWR@maketitlesetup
                    19 \let\maketitle\LWR@titlingmaketitle
                    20 }
                    21 {
                    At the end of the environment, end the HTML titlepage div:
                    22 \end{titlepage}
                    23 }
                    Patch the pre/post title/author/date to add HTML tags, then initilize:
                    24 \AtBeginDocument{
                          \pretitle{}
                    26
                          \posttitle{}
                    27
                          \preauthor{}
                   28
                          \postauthor{}
                   29
                   30
                   31
                          \predate{}
                          \postdate{}
                   32
                   33 }
\LWR@maketitlesetup Patches \thanks macros.
                    34 \renewcommand*{\LWR@maketitlesetup}{%
                    Redefine the footnote mark:
```

35

```
\thefootnote ⇒ \nameuse{arabic}{footnote}, or \thefootnote ⇒ \nameuse{fnsymbol}{footnote}
```

Redefine the footnote text:

```
36 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
37 \makethanksmark~%
```

Print the text:

```
38 {##1}%
39 }% \@makefntext
40}
```

\thanksfootmark

```
41\renewcommand{\thanksfootmark}{%
42 % \hb@xt@\thanksmarkwidth{\hfil\normalfont%
43 \thanksscript{%
44 \thanksfootpre \tamark \thanksfootpost%
45 }%
46 % }%
47}
```

\maketitle HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

```
48 \renewcommand*{\maketitle}{%
```

An HTML titlepage <div> is used for all classes.

```
49 \begin{titlepage}
```

Select which kind of footnote marks to use:

```
50 \@bsmarkseries
```

Set up special patches:

51 \LWR@maketitlesetup

Typeset the title, etc:

```
52 \@maketitle
```

Immediately generate any \thanks footnotes:

```
53 \LWR@stoppars\@thanks\LWR@startpars
```

```
Close the HTML titlepage div:
```

```
54 \end{titlepage}
```

Reset the footnote counter:

```
55 \@bscontmark
56 }
```

\@maketitle Typesets the title, etc. Patched for HTML.

```
57\providecommand*{\@maketitle}{}
58\renewrobustcmd{\@maketitle}{%
      \maketitlehooka
60
          \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
61
          \@bspretitle \@title \@bsposttitle%
62
          \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
63
64
      }
      \maketitlehookb
65
66
67
          \begin{BlockClass}{author}
68
          \renewcommand{\and}{%
69
              \end{BlockClass}%
              \begin{BlockClass}{oneauthor}%
70
71
          \begin{BlockClass}{oneauthor}%
72
          \@bspreauthor \@author \@bspostauthor%
73
          \end{BlockClass}%
74
75
          \end{BlockClass}%
76
77
      \maketitlehookc
78
          \begin{BlockClass}{titledate}%
79
          \@bspredate \@date \@bspostdate%
80
          \end{BlockClass}%
81
82
      \maketitlehookd
83
84 }
```

\LWR@titlingmaketitle \maketitle for use inside an HTML titlingpage environment.

```
85 \renewcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

86 \LWR@stoppars\@thanks\LWR@startpars

Select which kind of footnote marks to use:

87 \@bsmarkseries

Set up special patches:

88 \LWR@maketitlesetup

Typeset the title, etc:

```
89 \@maketitle
```

Immediately generate any \thanks footnotes:

90 \LWR@stoppars\@thanks\LWR@startpars

Reset the footnote counter:

```
91 \@bscontmark
92 }
```

```
\thanksmarkseries \{\langle series \rangle\}
```

Sets the type of footnote marks used by \thanks, where type is 'arabic', 'roman', 'fnsymbol', etc.

Set default titlepage thanks footnote marks. See section 69.7.

```
96\IfClassLoadedTF{memoir}{
97  \thanksmarkseries{arabic}
98}{% not memoir
99\if@titlepage
100  \thanksmarkseries{arabic}
101\else
102  \thanksmarkseries{fnsymbol}
103\fi
104}% not memoir
```

File 522 lwarp-tocbasic.sty

§ 631 Package tocbasic

(Emulates or patches code by Markus Kohm.)

tocbasic (Pkg) tocbasic is nullified for lwarp.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. \DeclareDocumentCommand is used to overwrite the koma-script definitions.

```
for HTML output: 1 \LWR@ProvidesPackagePass{tocbasic}[2018/12/30]
```

```
2 \DeclareDocumentCommand{\usetocbasicnumberline}{o}{}
3 \DeclareDocumentCommand{\DeclareTOCStyleEntry}{o m m}{}
4 \DeclareDocumentCommand{\DeclareTOCStyleEntries}{o m m}{}
5 \DeclareDocumentCommand{\DeclareTOCEntryStyle}{m o m}{}
6 \DeclareDocumentCommand{\DefineTOCEntryOption}{m o m}{}
7 \DeclareDocumentCommand{\DefineTOCEntryBooleanOption}{m o m m m}{}
8 \DeclareDocumentCommand{\DefineTOCEntryCommandOption}{m o m m m}{}
9 \DeclareDocumentCommand{\DefineTOCEntryIfOption}{m o m m m}{}
10 \DeclareDocumentCommand{\DefineTOCEntryLengthOption}{m o m m m}{}
}
```

```
11 \DeclareDocumentCommand{\DefineTOCEntryNumberOption}{m o m m m}{}
12 \DeclareDocumentCommand{\CloneTOCEntryStyle}{m m}{}
13 \DeclareDocumentCommand{\TOCEntryStyleInitCode}{m m}{}
14 \DeclareDocumentCommand{\TOCEntryStyleStartInitCode}{m m}{}
```

File 523 lwarp-tocbibind.sty

§ 632 Package tocbibind

(Emulates or patches code by Peter Wilson.)

tocbibind (*Pkg*) tocbibind is patched for use by lwarp.

placement and Toc options An index may be placed inline with other HTML text, or on its own HTML page:

makeidx (Pkg) Inline, with a manual Toc entry:

A commonly-used method to introduce an index in a LATEX document:

\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex

makeidx (Pkg) On its own HTML page, with a manual Toc entry:

\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex

tocbibind (*Pkg*) Inline, with an automatic Toc entry:

The tocbibind package may be used to automatically place an entry in the TOC.

\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex

tocbibind (Pkg) On its own HTML page, with an automatic TOC entry:

\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex

numindex (*Opt*) [tocbibind] numbered index section

Use the tocbibind numindex option to generate a numbered index. Without this option, the index heading has no number.

Other packages, such as imakeidx, may also have options for including the index in the Table of Contents.

```
for HTML output:
                   1 \let\simplechapterdelim\relax
                   3 \LWR@ProvidesPackagePass{tocbibind}[2010/10/13]
                   4\renewenvironment{theindex}%
                   5 { %
                   6
                          \if@bibchapter
                   7
                             \if@donumindex
                   8
                                 \chapter{\indexname}
                   9
                             \else
                               \if@dotocind
                   10
                                 \chapter*{\indexname}
                   11
                                 \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
                   12
                  13
                                 \chapter*{\indexname}
                   14
                               \fi
                   15
                             \fi
                  16
                         \else
                   17
                             \if@donumindex
                   19
                                 \section{\indexname}
                  20
                             \else
                               \if@dotocind
                  21
                                 \section*{\indexname}
                  22
                                 \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
                  23
                  24
                                 \section*{\indexname}
                  25
                  26
                               \fi
                             \fi
                          \fi
                  29 \LetLtxMacro\item\LWR@indexitem%
                  30 \LetLtxMacro\subitem\LWR@indexsubitem%
                  31 \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
                  32 }{}
                   The following code is shared by anonchap.
                  33 \DeclareDocumentCommand{\simplechapter}{0{\@empty}}{%
                         \def\@chapcntformat##1{%
                             #1~\csname the##1\endcsname\simplechapterdelim\quad%
                  35
                         }%
                  36
                  37 }
                  39 \DeclareDocumentCommand{\restorechapter}{}{%
                  40 \let\@chapcntformat\@seccntformat%
                  41 }
          File 524 lwarp-tocdata.sty
         Package tocdata
§ 633
```

(Emulates or patches code by Brian Dunn.)

1 \LWR@ProvidesPackagePass{tocdata}[2019/07/06]

tocdata (Pkg) tocdata is patched for use by lwarp.

for HTML output:

```
2\renewcommand*{\LWR@maybetocdata}{%
                                  \ifdefempty{\TD@thistocdata}{}{%
                                                        \qquad \InlineClass{authorartist}{\tocdataformat{\TD@thistocdata}}%
   5
                                                        \def\TD@thistocdata{}
   6
                                 }
   7 }
   {\tt 8 \ lemewrobustcmd} \\ {\tt 1} \\ {\tt 2} \\ {\tt 3} \\ {\tt 4} \\ {\tt 3} \\ {\tt 5} \\ {\tt 6} \\ {\tt 8} \\ {\tt 7} \\ {\tt 8} \\ {\tt 7} \\ {\tt 8} \\ {\tt 
   9 { %
                                  \InlineClass{authorartist}{%
10
11
                                                        \qquad --- %
                                                        \TDoptionalnameprint{#1}\TDoptionalnameprint{#2}#3#4%
12
                                 }%
13
14 }
16 \@ifundefined{chapter}{}{
                                 \let\tocdatachapterprint\tocdatapartprint
17
18 }
19 \let\tocdatasectionprint\tocdatapartprint
20 \let\tocdatasubsectionprint\tocdatapartprint
22 \newcommand*{\LWR@TD@settextalign}[1]{%
                                  \def\LWR@TD@textalign{justify}%
                                 \ifcsstring{TD@#1align}{\centering}%
25
                                                       {\def\LWR@TD@textalign{center}}%
26
                                 27
                                                       {\def\LWR@TD@textalign{right}}%
28
29
                                 \label{thm:continuity} $$ \left( TD@\#1align \right)_{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}{\norm{1}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}
30
                                                       {\def\LWR@TD@textalign{left}}%
31
32
33 }
34
35\renewcommand{\TDartistauthorprint}[5]{%
                                  \LWR@TD@settextalign{#1}%
                                  \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
37
                          \InlineClass{authorartist}{\TDoptionalnameprint{#2}\TDoptionalnameprint{#3}#4#5}%
38
                                 \end{BlockClass}%
39
40 }
41
42 \newcommand*{\LWR@TD@setnamealign}[1]{%
                                 \def\LWR@TD@textalign{justify}%
43
                                  \ifcsstring{TD@#1textalign}{\centering}%
44
                                                       {\def\LWR@TD@textalign{center}}%
45
                                                       {}%
46
47
                                 \ifcsstring{TD@#1textalign}{\raggedleft}%
                                                       {\tt \{\def\LWR@TD@textalign\{right\}\}\%}
48
49
                                 \label{thm:linear_to_thm} $$ \left( TD@\#1 textalign \right)_{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\norm{15}{\n
50
                                                       {\tt \{\def\LWR@TD@textalign\{left\}\}\%}
51
                                                       {}%
52
53 }
54
55 \renewcommand{\TDartistauthortextprint}[2]{%
                                  \LWR@TD@setnamealign{#1}%
                                  \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
57
58
                                 #2%
                                 \end{BlockClass}%
59
60 }
```

File 525 lwarp-tocenter.sty

Package tocenter § 634

tocenter (Pkg) tocenter is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{tocenter}[2004/12/09]

2 \NewDocumentCommand{\ToCenter}{s o m m}{}

3 \NewDocumentCommand{\FromMargins}{s o m m m m}{}

File 526 lwarp-tocloft.sty

Package tocloft § 635

(Emulates or patches code by Peter Wilson.)

tocloft (Pkg) tocloft is emulated. Most user options and macros are ignored and disabled.

\newlistof and \cftchapterprecis are supported.

tocloft (Pkg)

If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft & other packages tocloft to use standard LATEX commands to create the titles, allowing other packages to work with it.

Discard all options for lwarp-tocloft:

1 \LWR@ProvidesPackageDrop{tocloft}[2017/08/31] for HTML output:

 $\{\langle style \rangle\}$ \tocloftpagestyle

2 \newcommand{\tocloftpagestyle}[1]{}

\cftmarktoc

3 \newcommand*{\cftmarktoc}{}

\cfttoctitlefont

4\newcommand*{\cfttoctitlefont}{}

\cftaftertoctitle

5 \newcommand*{\cftaftertoctitle}{}

6 \newlength{\cftbeforetoctitleskip} 7 \newlength{\cftaftertoctitleskip}

\cftmarklof

8 \newcommand*{\cftmarklof}{}

```
\cftloftitlefont
                               9 \newcommand*{\cftloftitlefont}{}
\cftafterloftitle
                              10 \newcommand*{\cftafterloftitle}{}
                              11 \newlength{\cftbeforeloftitleskip}
                              12 \newlength{\cftafterloftitleskip}
\cftmarklot
                              13 \newcommand*{\cftmarklot}{}
\cftlottitlefont
                              14 \newcommand*{\cftlottitlefont}{}
\cftafterlottitle
                              15 \newcommand*{\cftafterlottitle}{}
                              16 \newlength{\cftbeforelottitleskip}
                              17 \newlength{\cftafterlottitleskip}
\cftdot
                              18 \providecommand*{\cftdot}{.}
\cftdotsep
                              19 \providecommand*{\cftdotsep}{1}
\cftnodots
                              20 \providecommand*{\cftnodots}{5000}
\cftdotfill
                                \{\langle sep \rangle\}
                              21 \providecommand{\cftdotfill}[1]{}
\cftsetpnumwidth
                                \{\langle length \rangle\}
                              22 \DeclareDocumentCommand{\cftsetpnumwidth}{m}{}
                                \{\langle length \rangle\}
\cftsetrmarg
                              23 \DeclareDocumentCommand{\cftsetrmarg}{m}{}
                                \{\langle alignment \rangle\}
\cftpnumalign
                              24 \DeclareDocumentCommand{\cftpnumalign}{m}{}
                              25 \LWR@providelength{\cftparskip}
```

The part-related items are also provided by memoir:

```
26 \LWR@providelength{\cftbeforepartskip}
27 \LWR@providelength{\cftpartindent}
28 \LWR@providelength{\cftpartnumwidth}
29 \providecommand*{\cftpartfont}{}
30 \providecommand*{\cftpartpresnum}{}
31 \providecommand*{\cftpartaftersnum}{}
32 \providecommand*{\cftpartaftersnumb}{}
33 \providecommand*{\cftpartleader}{}
34 \providecommand*{\cftpartdotsep}{1}
35 \providecommand*{\cftpartpagefont}{}
36\providecommand*{\cftpartafterpnum}{}
memoir uses the full name "chapter" instead of "chap":
37 \LWR@providelength{\cftbeforechapskip}
38 \LWR@providelength{\cftchapindent}
39 \LWR@providelength{\cftchapnumwidth}
40 \newcommand*{\cftchapfont}{}
41 \newcommand*{\cftchappresnum}{}
42 \newcommand*{\cftchapaftersnum}{}
43 \newcommand*{\cftchapaftersnumb}{}
44 \newcommand*{\cftchapleader}{}
45 \newcommand*{\cftchapdotsep}{1}
46 \newcommand*{\cftchappagefont}{}
47 \newcommand*{\cftchapafterpnum}{}
The following do not appear in memoir:
48 \LWR@providelength{\cftbeforesecskip}
49 \LWR@providelength{\cftsecindent}
50 \LWR@providelength{\cftsecnumwidth}
51 \newcommand*{\cftsecfont}{}
52 \newcommand*{\cftsecpresnum}{}
53 \newcommand*{\cftsecaftersnum}{}
54 \newcommand*{\cftsecaftersnumb}{}
55 \newcommand*{\cftsecleader}{}
56 \newcommand*{\cftsecdotsep}{1}
57 \newcommand*{\cftsecpagefont}{}
58 \newcommand*{\cftsecafterpnum}{}
59 \LWR@providelength{\cftbeforesubsecskip}
60 \LWR@providelength{\cftsubsecindent}
61 \LWR@providelength{\cftsubsecnumwidth}
62 \newcommand*{\cftsubsecfont}{}
63 \newcommand*{\cftsubsecpresnum}{}
64 \newcommand*{\cftsubsecaftersnum}{}
65 \newcommand*{\cftsubsecaftersnumb}{}
66 \newcommand*{\cftsubsecleader}{}
67 \newcommand*{\cftsubsecdotsep}{1}
68 \newcommand*{\cftsubsecpagefont}{}
69 \newcommand*{\cftsubsecafterpnum}{}
70 \LWR@providelength{\cftbeforesubsubsecskip}
71 \LWR@providelength{\cftsubsubsecindent}
72 \LWR@providelength{\cftsubsubsecnumwidth}
73 \newcommand*{\cftsubsubsecfont}{}
```

74 \newcommand*{\cftsubsubsecpresnum}{}

```
75 \newcommand*{\cftsubsubsecaftersnum}{}
76 \newcommand*{\cftsubsubsecaftersnumb}{}
77 \newcommand*{\cftsubsubsecleader}{}
78 \newcommand*{\cftsubsubsecdotsep}{1}
79 \newcommand*{\cftsubsubsecpagefont}{}
80 \newcommand*{\cftsubsubsecafterpnum}{}
{\tt 81 \LWR@providelength\{\cftbeforeparaskip\}}
82 \LWR@providelength{\cftparaindent}
83 \LWR@providelength{\cftparanumwidth}
84 \newcommand*{\cftparafont}{}
85 \newcommand*{\cftparapresnum}{}
86 \newcommand*{\cftparaaftersnum}{}
87 \newcommand*{\cftparaaftersnumb}{}
88 \newcommand*{\cftparaleader}{}
89 \newcommand*{\cftparadotsep}{1}
90 \newcommand*{\cftparapagefont}{}
91 \newcommand*{\cftparaafterpnum}{}
92 \LWR@providelength{\cftbeforesubparaskip}
93 \LWR@providelength{\cftsubparaindent}
94 \LWR@providelength{\cftsubparanumwidth}
95 \newcommand*{\cftsubparafont}{}
96 \newcommand*{\cftsubparapresnum}{}
97 \newcommand*{\cftsubparaaftersnum}{}
98 \newcommand*{\cftsubparaaftersnumb}{}
99 \newcommand*{\cftsubparaleader}{}
100 \newcommand*{\cftsubparadotsep}{1}
101 \newcommand*{\cftsubparapagefont}{}
102 \newcommand*{\cftsubparaafterpnum}{}
{\tt 103 \ LWR@providelength\{\ cftbeforefigskip\}}
104 \LWR@providelength{\cftfigindent}
{\tt 105 \LWR@providelength\{\cftfignumwidth\}}
106 \newcommand*{\cftfigfont}{}
107 \newcommand*{\cftfigpresnum}{}
108 \newcommand*{\cftfigaftersnum}{}
109 \newcommand*{\cftfigaftersnumb}{}
110 \newcommand*{\cftfigleader}{}
111 \newcommand*{\cftfigdotsep}{1}
112 \newcommand*{\cftfigpagefont}{}
113 \newcommand*{\cftfigafterpnum}{}
114 \LWR@providelength{\cftbeforesubfigskip}
115 \LWR@providelength{\cftsubfigindent}
116 \LWR@providelength{\cftsubfignumwidth}
117 \newcommand*{\cftsubfigfont}{}
119 \newcommand*{\cftsubfigaftersnum}{}
120 \newcommand*{\cftsubfigaftersnumb}{}
121 \newcommand*{\cftsubfigleader}{}
122 \newcommand*{\cftsubfigdotsep}{1}
123 \newcommand*{\cftsubfigpagefont}{}
124 \newcommand*{\cftsubfigafterpnum}{}
125 \LWR@providelength{\cftbeforetabskip}
126 \LWR@providelength{\cfttabindent}
127 \LWR@providelength{\cfttabnumwidth}
128 \newcommand*{\cfttabfont}{}
```

```
129 \newcommand*{\cfttabpresnum}{}
130 \newcommand*{\cfttabaftersnum}{}
131 \newcommand*{\cfttabaftersnumb}{}
132 \newcommand*{\cfttableader}{}
133 \newcommand*{\cfttabdotsep}{1}
134 \newcommand*{\cfttabpagefont}{}
135 \newcommand*{\cfttabafterpnum}{}
{\tt 136 \LWR@providelength\{\cftbeforesubtabskip\}}
137 \LWR@providelength{\cftsubtabindent}
138 \LWR@providelength{\cftsubtabnumwidth}
139 \newcommand*{\cftsubtabfont}{}
140 \newcommand*{\cftsubtabpresnum}{}
141 \newcommand*{\cftsubtabaftersnum}{}
142 \newcommand*{\cftsubtabaftersnumb}{}
143 \newcommand*{\cftsubtableader}{}
144 \newcommand*{\cftsubtabdotsep}{1}
145 \newcommand*{\cftsubtabpagefont}{}
146 \newcommand*{\cftsubtabafterpnum}{}
147 \DeclareDocumentCommand{\cftsetindents}{m m m}{}
148 \providecommand{\cftpagenumbersoff}[1]{}
149 \providecommand{\cftpagenumberson}[1]{}
  [\langle within \rangle] \{\langle counter \rangle\} \{\langle ext \rangle\} \{\langle level-1 \rangle\}
150 \DeclareDocumentCommand{\newlistentry}{o m m m}
152 \LWR@traceinfo{newlistentry #2 #3 #4}%
153 \IfValueTF{#1}%
154 {%
       \@ifundefined{c@#2}{%
155
           \newcounter{#2}[#1]%
156
157
           \expandafter\edef\csname the#2\endcsname{%
             \expandafter\noexpand\csname the#1\endcsname.\noexpand\arabic{#2}%
158
       }{}%
160
161 }%
162 {%
       \@ifundefined{c@#2}{%
163
           \newcounter{#2}%
164
       }{}%
165
166 }%
167 \@namedef{l@#2}##1##2{%
       \hypertocfloat{1}{#2}{#3}{##1}{##2}%
       \def\cftwhatismyname{#2}% from memoir
169
170 }%
171 \expandafter\newlength\csname cftbefore#2skip\endcsname%
172 \expandafter\newlength\csname cft#2indent\endcsname%
173 \expandafter\newlength\csname cft#2numwidth\endcsname%
174 \@namedef{cft#2font}{}%
175 \@namedef{cft#2presnum}{}%
176 \@namedef{cft#2aftersnum}{}%
177 \@namedef{cft#2aftersnumb}{}%
178 \@namedef{cft#2leader}{}%
179 \@namedef{cft#2dotsep}{1}%
180 \@namedef{cft#2pagefont}{}%
```

\newlistentry

```
181 \@namedef{cft#2afterpnum}{}%
                                                               182 \@namedef{toclevel@#2}{#4}%
                                                               183 \@namedef{cft#2fillnum}##1{}%
                                                               184 \LWR@traceinfo{newlistentry done}%
                                                               185 }
                                                                     [\langle within \rangle] \{\langle type \rangle\} \{\langle ext \rangle\} \{\langle listofname \rangle\}
\newlistof
                                                                  Emulated through the \newfloat mechanism.
                                                               186 \DeclareDocumentCommand{\newlistof}{o m m m}
                                                               187 {%
                                                               188
                                                                                \IfValueTF{#1}%
                                                               189
                                                                                         {\newlistentry[#1]{#2}{#3}{0}}%
                                                               190
                                                                                         {\newlistentry{#2}{#3}{0}}%
                                                               191
                                                                                \@namedef{ext@#2}{#3}%
                                                               192
                                                                                \label{lem:counter} $$ \operatorname{counter}(c@\#3depth)_{\newcounter}^{\#3depth}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{\newcounter}_{\newcounter}^{
                                                               193
                                                                               \setcounter{#3depth}{1}%
                                                                                \@namedef{cftmark#3}{}%
                                                               194
                                                               195
                                                                                \@namedef{listof#2}{\LWR@listof{#2}{#4}}%
                                                               196
                                                                                \@namedef{@cftmake#3title}{}%
                                                                                \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
                                                               197
                                                               198
                                                                                \expandafter\newlength\csname cftafter#3titleskip\endcsname%
                                                               199
                                                                                \@namedef{cft#3titlefont}{}%
                                                               200
                                                                                \@namedef{cftafter#3title}{}%
                                                               201
                                                                                \@namedef{cft#3prehook}{}%
                                                               202
                                                                               \@namedef{cft#3posthook}{}%
                                                               203 }
\cftchapterprecis
                                                                     \{\langle text \rangle\}
                                                               204 \newcommand{\cftchapterprecis}[1]{%
                                                                         \cftchapterprecishere{#1}
                                                                         \cftchapterprecistoc{#1}}
                                                               207 \newcommand{\cftchapterprecishere}[1]{%
                                                                         \begin{quote}\textit{#1}\end{quote}}
                                                               209 \newcommand{\cftchapterprecistoc}[1]{
                                                               210
                                                                         \addtocontents{toc}{%
                                                               211
                                                               212
                                                                                  \protect\begin{quote}#1\protect\end{quote}}
                                                               213
                                                                         }
                                                               214 }
                                            File 527 lwarp-tocstyle.sty
                                           Package tocstyle
                     § 636
                              tocstyle (Pkg) tocstyle is ignored.
             ⚠ Not fully tested! Please send bug reports!
                       for HTML output:
                                                                  1 \LWR@ProvidesPackageDrop{tocstyle}[2017/02/23]
                                                                  2\newcommand*{\usetocstyle}[2][]{}
                                                                  3 \newcommand*{\deactivatetocstyle}[1][]{}
                                                                  4 \newcommand*{\reactivatetocstyle}[1][]{}
                                                                  5 \NewDocumentCommand{\settocfeature}{o o m m}{}
```

```
6 \NewDocumentCommand{\settocstylefeature}{o m m}{}
7 \NewDocumentCommand{\newtocstyle}{o o m m}{}
8 \newcommand*{\aliastoc}[2]{}
9 \newcommand*{\showtoc}[2][]{}
10 \newcommand{\iftochasdepth}[4]{}
```

File 528 lwarp-todo.sty

```
§ 637 Package todo
```

(Emulates or patches code by Federico Garcia.)

todo (Pkg) todo is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{todo}[2010/03/31]

```
2\renewcommand\todoitem[2]{%
3
      \refstepcounter{todo}%
      \item[%
5
          \HTMLunicode{2610} \quad%
6
          \ref{todopage:\thetodo}
       ] : {\todoformat\ifx#1\todomark\else\textbf{#1} \fi}#2%
      \label{todolbl:\thetodo}%
8
9 }%
10
11 \renewcommand\doneitem[2]{%
      \stepcounter{todo}%
12
13
      \item[%
          \HTMLunicode{2611} \quad%
14
          \ref{todopage:\thetodo}
15
16
      ] \@nameuse{@done\the\c@todo}:
17
          {\todoformat\ifx\#1\todomark\else\textbf{\#1} \ \fi} \#2\%
18 }
```

The following are not errors because the code will still compile and be usable if the patch is not possible.

If cleveref is in use, name the new todo notes:

```
32 \AtBeginDocument{
33 \ifdef{\crefname}{
34 \crefname{todo}{todo}{todos}
```

```
35 \Crefname{todo}{Todo}{Todos}
36 }{}
37 }
```

File 529 lwarp-todonotes.sty

§ 638 Package todonotes

(Emulates or patches code by Henrik Skov Midtiby.)

todonotes (*Pkg*) todonotes is emulated.

The documentation for todonotes and luatodonotes have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

for HTML output: 1 \LWR@ProvidesPackagePass{todonotes}[2012/07/25]

```
2 \if@todonotes@disabled
3 \else
4
5 \newcommand{\ext@todo}{tdo}
8 \let\LWRTODONOTES@orig@todototoc\todototoc
10 \renewcommand*{\todototoc}{%
11 \LWR@phantomsection%
12 \LWRTODONOTES@orig@todototoc%
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{
16 \fcolorbox
     {\@todonotes@currentbordercolor}
     {\@todonotes@currentbackgroundcolor}
     {\arabic{@todonotes@numberoftodonotes}}
19
20 \marginpar{\@todonotes@drawMarginNote}
21 }
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
     {\@todonotes@currentbordercolor}%
26
     {\@todonotes@currentbackgroundcolor}%
27
     {%
         \if@todonotes@authorgiven%
28
         {\@todonotes@author:\,}%
29
          \fi%
30
          \@todonotes@text%
31
     }%
32
33 }
35 \renewcommand{\@todonotes@drawMarginNote}{%
     \if@todonotes@authorgiven%
36
          \@todonotes@author\par%
37
38
     \arabic{@todonotes@numberoftodonotes}: %
39
```

```
\fcolorbox%
40
      {\@todonotes@currentbordercolor}%
41
42
      {\@todonotes@currentbackgroundcolor}%
43
44
          \@todonotes@sizecommand%
          \@todonotes@text %
45
      }%
46
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{}
51 \renewcommand{\@todonotes@drawLineToLeftMargin}{}
53\renewcommand{\missingfigure}[2][]{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
      {\@todonotes@currentbordercolor}%
      {\@todonotes@currentfigcolor}%
58
59
      {%
          \setlength{\fboxrule}{4pt}%
60
          \fcolorbox{red}{white}{Missing figure} \quad #2%
61
62
      }
63 }
65 \LetLtxMacro\LWRTODONOTES@orig@todo\@todo
67 \RenewDocumentCommand{\@todo}{o m}{%
68 \begingroup%
69 \renewcommand*{\phantomsection}{}%
70 \IfValueTF{#1}{%
      \LWRTODONOTES@orig@todo[#1]{#2}%
71
72 }{%
73
      \LWRTODONOTES@orig@todo{#2}%
74 }
75 \endgroup%
76 }
77
78 \fi% \if@todonotes@disabled
```

File 530 lwarp-topcapt.sty

```
§ 639 Package topcapt
```

topcapt (Pkg) topcapt is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]

 ${\tt 2 \ LetLtxMacro \ topcaption \ caption}$

File 531 **lwarp-tram.sty**

§ 640 Package tram

tram (Pkg) tram is emulated.

The HTML emulation uses a <div>, which must not appear inside an HTML or an HTML paragraph. For this reason, the tram environment should only be used to contain paragraphs inside a \parbox or minipage. tram should not be used to mark up inline text.

To disable tram, allowing source compatibility with inline uses:

```
\begin{warpHTML}
\renewenvironment{tram}[1][]{}{}
\end{warpHTML}
```

for HTML output:

1 \LWR@ProvidesPackageDrop{tram}[2013/04/04]

```
2 \newenvironment{tram}[1][]%
     {\BlockClass[background:lightgray]{tram}}
     {\endBlockClass}
```

File 532 lwarp-transparent.sty

Package transparent \$641

(Emulates or patches code by Heiko Oberdiek.)

transparent (Pkg) transparent is emulated. \texttransparent works for inline objects. \transparent only works for \includegraphics.

Not XalateX Note that transparent does not work with XalateX.

```
for HTML output:
                  1 \LWR@ProvidesPackagePass{transparent}[2019/11/29]
```

```
4 \LWR@formatted{transparent}
7 \newcommand*{\LWR@HTML@texttransparent}[2]{%
8 \begingroup%
9 \transparent{#1}%
10 \InlineClass[opacity: #1]{transparent}{#2}%
11 \endgroup%
12 }
14 \LWR@formatted{texttransparent}
```

File 533 lwarp-trimclip.sty

Package trimclip § 642

trimclip (Pkg) trimclip is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{trimclip}[2018/04/08]

The third argument, the text, is not touched. This allows \bgroup / \egroup, and verbatim content.

```
2 \csdef{trimbox}{\@ifstar\@gobble\@gobble}
3 \csletcs{trimbox*}{trimbox}
4 \def\endtrimbox{}
5 \csletcs{endtrimbox*}{endtrimbox}
6
7 \csletcs{clipbox}{trimbox}
8 \csletcs{clipbox*}{trimbox}
9 \csletcs{endclipbox}{endtrimbox}
10 \csletcs{endclipbox*}{endtrimbox}
11
12 \csletcs{marginbox}{trimbox}
13 \csletcs{marginbox}{trimbox}
14 \csletcs{endmarginbox}{endtrimbox}
15 \csletcs{endmarginbox*}{endtrimbox}
```

File 534 lwarp-trivfloat.sty

§ 643 Package trivfloat

(Emulates or patches code by Joseph Wright.)

trivfloat (Pkg) trivfloat is forced to use the built-in lwarp emulation for floats.

To create a new float type and change its name:

```
\trivfloat{example}
\renewcommand{\examplename}{Example Name}
\crefname{example}{examples}
\Crefname{example}{Examples}
```

Discard all options for lwarp-trivfloat. This tells trivfloat not to use floatrow or memoir.

```
1 \LWR@ProvidesPackageDrop{trivfloat}[2009/04/23]
2 \LWR@origRequirePackage{trivfloat}
```

\tfl@chapter@fix

Nullified at the beginning of the document. Is used by trivfloat to correct float chapter numbers, but is not needed for lwarp.

 $\verb| 3 \land tBeginDocument{\DeclareDocumentCommand{\tfl@chapter@fix}{m m}{}}|$

§ 643.1 Combining \newfloat, \trivfloat, and algorithmicx

For both print and HTML output:

When using float, trivfloat, or algorithmicx at the same time, be aware of conflicting file usage. algorithmicx uses .loa. trivfloat by default starts with .loa and goes up for additional floats, skipping .lof and .lot.

When using \newfloat, be sure to manually assign higher letters to the \newfloat files to avoid .loa used by algorithmicx, and any files used by trivfloat. Also avoid using .lof and .lot.

When using \trivfloat, you may force it to avoid conflicting with algorithmics by starting trivfloat's file extensions with .lob:

\makeatletter
\setcounter{tfl@float@cnt}{1} % start trivfloats with .lob
\makeatletter

File 535 lwarp-truncate.sty

§ 644 Package truncate

truncate (Pkg) truncate is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{truncate}[2001/08/20]

2 \providecommand{\TruncateMarker}{}

 ${\tt 3 \ lowcommand \{ \ truncate \} [3] [\ Truncate Marker] \{ \# 3 \} }$

File 536 lwarp-turnthepage.sty

§ 645 Package turnthepage

turnthepage (Pkg) turnthepage is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]

2 \newcommand{\turnthepage}{}

File 537 lwarp-twoup.sty

§ 646 Package **twoup**

twoup (Pkg) twoup is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]

2 \newcommand{\cleartolastpage}{}

File 538 lwarp-txfonts.sty

```
§ 647 Package txfonts
```

(Emulates or patches code by Young Ryu.)

txfonts (Pkg) txfonts is used as-is for svg math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{txfonts}[2008/01/22]

For MATHJAX:

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{txfonts}
6
7 \LWR@mathjax@addgreek@l@up{}{up}
8 \end{warpMathJax}
```

File 539 lwarp-txgreeks.sty

§ 648 Package **txgreeks**

(Emulates or patches code by Jean-François Burnol.)

txgreeks (Pkg) txgreeks is used as-is for svg math, and is emulated for MATHJAX.

The MathJax emulation honors all package options.

```
for HTML output: 1 \LWR@ProvidesPackagePass{txgreeks}[2011/03/16]
```

```
3 \LWR@infoprocessingmathjax{txgreeks}
4 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
6 \begin{warpMathJax}
7\iftgs@uplower% upright lowercase Greek
      \LWR@mathjax@addgreek@l@up{}{}
9
      \LWR@mathjax@addgreek@l@it{other}{}
10 \else% italic lowercase Greek
      \LWR@mathjax@addgreek@l@it{}{}
      \LWR@mathjax@addgreek@l@up{other}{}
12
13 \fi
14
15\iftgs@itupper % italic uppercase Greek
      \LWR@mathjax@addgreek@u@it*{}{}
16
      \LWR@mathjax@addgreek@u@up*{other}{}
17
      \LWR@mathjax@addgreek@u@up*{var}{}
18
19 \else% upright uppercase Greek
      \LWR@mathjax@addgreek@u@up*{}{}
21
      \LWR@mathjax@addgreek@u@it*{other}{}
```

```
22 \LWR@mathjax@addgreek@u@it*{var}{}
23 \fi
24 \end{warpMathJax}
```

File 540 lwarp-typearea.sty

§ 649 Package **typearea**

(Emulates or patches code by Markus Конм.)

typearea (Pkg) typearea is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. \DeclareDocumentCommand is used to overwrite the koma-script definitions.

for HTML output: 1 \LWR@ProvidesPackageDrop{typearea}[2018/03/30]

```
2 \DeclareDocumentCommand{\typearea}{o m}{}
3 \DeclareDocumentCommand{\recalctypearea}{}{}
4 \@ifundefined{footheight}{\newlength\footheight}{}
5 \DeclareDocumentCommand{\areaset}{o m m}{}
6 \DeclareDocumentCommand{\activateareas}{}{}
7 \DeclareDocumentCommand{\storeareas}{m}{}
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{}
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{}
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{}
```

11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{}

File 541 lwarp-typicons.sty

§ 650 Package **typicons**

(Emulates or patches code by Arthur Vigil, Xavier Danaux.)

typicons (Pkg) typicons is patched for use by lwarp.

If \ticon is used, the name of the icon is used in the alt tag. Otherwise, for each of the individual icon macros, a generic alt tag is used.

```
for HTML output: 1 \LWR@ProvidesPackagePass{typicons}[2015/05/20]
```

```
2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@orig@typicon@TI\TI
5
6 \newcommand*{\LWR@typicon@symbol}[1]{%
7  \begin{lateximage}*[typicon][typicon#1]%
8  \begingroup%
9  \LWR@orig@typicon@TI%
10  \LWR@orig@symbol{#1}%
11  \endgroup%
12  \end{lateximage}%
13 }
```

```
14
15 \renewcommand*{\TI}{%
16  \LetLtxMacro\symbol\LWR@typicon@symbol%
17 }
18
19 \renewcommand*{\ticon}[1]
20 {%
21  \begin{lateximage}*[#1 icon][typicon#1]%
22  \TI\csname ticon@#1\endcsname%
23  \end{lateximage}%
```

File 542 lwarp-ulem.sty

§ 651 Package **ulem**

(Emulates or patches code by Donald Arseneau.)

ulem (Pkg) Patched for use by lwarp.

for HTML output: Use the original package:

1 \LWR@ProvidesPackagePass{ulem}[2012/05/18]

Basic markup commands, using css:

```
2 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
          (text-decoration:underline; text-decoration-skip: auto)%
5
          {uline}{\LWR@isolate{#1}}%
6 }
7 \LWR@formatted{uline}
9 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{%
      \InlineClass%
10
          (%
11
              text-decoration:underline; text-decoration-skip: auto;%
12
13
              text-decoration-style:double%
14
          {uuline}{\LWR@isolate{#1}}%
17 \LWR@formatted{uuline}
19 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
      \InlineClass%
20
21
22
              text-decoration:underline; text-decoration-skip: auto;%
23
              text-decoration-style:wavy%
          )%
24
          {uwave}{\LWR@isolate{#1}}%
27 \LWR@formatted{uwave}
29 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
      \InlineClass%
30
          (text-decoration:line-through)%
31
          {sout}{\LWR@isolate{#1}}%
32
```

```
33 }
34 \LWR@formatted{sout}
{\tt 36 \ NewDocumentCommand\{\ LWR@HTML@xout\}\{+m\}\{\%\})}
      \InlineClass%
          (text-decoration:line-through)%
38
          {xout}{\LWR@isolate{#1}}%
39
40 }
41 \LWR@formatted{xout}
43 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
44
      \InlineClass%
45
          (%
46
               text-decoration:underline;%
47
               text-decoration-skip: auto;%
               text-decoration-style:dashed%
48
49
          {dashuline}{\LWR@isolate{#1}}%
50
51 }
52 \LWR@formatted{dashuline}
53
54 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
      \InlineClass%
55
          (%
56
57
               text-decoration:underline;%
58
               text-decoration-skip: auto;%
59
               text-decoration-style: dotted%
          )%
60
          {dotuline}{\LWR@isolate{#1}}%
61
62 }
63 \LWR@formatted{dotuline}
Nullified/emulated macros:
64 \NewDocumentCommand{\LWR@HTML@markoverwith}{m}{}
65 \LWR@formatted{markoverwith}
67 \NewDocumentCommand{\LWR@HTML@ULon}{+m}{\uline{#1}\egroup}
68 \LWR@formatted{ULon}
```

File 543 lwarp-umoline.sty

§ 652 Package umoline

(Emulates or patches code by Hiroshi Nakashima.)

umoline (*Pkg*) umoline is patched for use by lwarp.

```
for HTML output: 1 \LWR@ProvidesPackagePass{umoline}[2000/07/11]

2 \newcommand*{\LWR@HTML@Underline}[1]{%
3 \InlineClass{uline}{#1}%
4 }
5 \LWR@formatted{Underline}
6
7 \newcommand*{\LWR@HTML@Midline}[1]{%
```

\InlineClass{sout}{#1}%

```
9 }
10 \LWR@formatted{Midline}
12 \newcommand*{\LWR@HTML@Overline}[1]{%
      \InlineClass{oline}{#1}%
14 }
15 \LWR@formatted{Overline}
17 \newcommand*{\LWR@HTML@UMOline}[2]{%
      \InlineClass{uline}{#2}%
19 }
20 \LWR@formatted{UMOline}
22 \NewDocumentCommand{\LWR@HTML@UMOspace}{s m o}{\hspace*\{#2\}}
23 \LWR@formatted{UMOspace}
25 \NewDocumentCommand{\LWR@HTML@UMOnewline}{s}{\newline}
26 \LWR@formatted{UMOnewline}
```

File 544 lwarp-underscore.sty

Package underscore § 653

underscore (*Pkg*) underscore is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

File 545 lwarp-unicode-math.sty

Package unicode-math § 654

(Emulates or patches code by WILL ROBERTSON.)

unicode-math (Pkg) unicode-math is supported as-is for HTML with svGmath.

MATHJAX If the document source includes embedded Unicode characters, these may not be reproduced correctly for *pdftotext*, and thus not display correctly in MATHJAX.

> Symbol font commands are emulated, but not all combinations are supported by MathJax, especially with the dedicated Greek macros. Symbol macros such as \symbfsf may not be sans or bold. For Greek, use the Unicode equivalent, if necessary.

\mathversion

The MathJax emulation does not change with the use of \mathversion. Whatever emulation is established at the begin of the document will remain.

The option sans-style honors upright and italic, but italic will not be sans, in order to support Greek macros.

Greek macros such as \alpha respond to the math-style option. Latin symbols does not, per MathJax limitations, unless placed inside \symbit or similar.

Macros from the categories $\mbox{\mbox{\it mathopen}}$, $\mbox{\mbox{\it mathfence}}$ are emulated. Due to current MATHJAX limitations, not all stretch to the correct height.

Also emulated are macros from the categories \mathpunct, \mathover, \mathunder, \mathbotaccent, \mathbotaccent, and \mathop.

The individual unicode-math macros of categories \mathbin, \mathord, and \mathrel are not emulated for MathJax, as there are more than two thousand of them, but they may be added as needed. Place the following in the document preamble after loading unicode-math, including a definition for each macro which is used in the document but undefined in MathJax:

```
\begin{warpMathJax}
\CustomizeMathJax{\newcommand{\uplus}{\mathbin{\unicode{x0228E}}}}
...
\end{warpMathJax}
```

Use \mathrel, \mathbin, etc. depending on the category of each macro. For a list of macro names and symbols, see **texdoc unimath-symbols**.

for HTML output:

```
1 \LWR@ProvidesPackagePass{unicode-math}[2019/09/26]
```

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-letters}
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{unicode-math}
7% Not all are possible in MathJax.
8 \CustomizeMathJax{\let\symnormal\mathit}
9 \CustomizeMathJax{\let\symliteral\mathrm}
10 \CustomizeMathJax{\let\symbb\mathbb}
11 \CustomizeMathJax{\left\left( \right)} not italic
12 \CustomizeMathJax{\let\symcal\mathcal}
13 \CustomizeMathJax{\let\symscr\mathscr}
14 \CustomizeMathJax{\let\symfrak\mathfrak}
16 \CustomizeMathJax{\let\symsfup\mathsf}
18 \CustomizeMathJax{\let\symsfit\mathit}% not sans
19 % \CustomizeMathJax{\newcommand{\symsfit}[1]{%
20 %
        \mmlToken{mi}[mathvariant="sans-serif-italic"]{#1}}% not greek
21 % }
22
23 \CustomizeMathJax{\left\left( \c symbfsf\mathbf \right) \% \ not \ sans \ }
24% \CustomizeMathJax{\newcommand{\symbfsf}[1]{%
        \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}% not greek
25 %
26 % }
28 \CustomizeMathJax{\let\symbfup\mathbf}
29 \CustomizeMathJax{\newcommand{\symbfit}[1]{\boldsymbol{#1}}}
30 \CustomizeMathJax{\let\symbfcal\mathcal}% not bold
32\CustomizeMathJax{\left\{ \right\} } not bold
33 % \CustomizeMathJax{\newcommand{\symbfscr}[1]{
        \mmlToken{mi}[mathvariant="math-bold-script"]{#1}}% not greek
34 %
35 % }
37 \CustomizeMathJax{\let\symbffrak\mathfrak}% not bold
38% \CustomizeMathJax{\newcommand{\symbffrak}[1]{%
        \mmlToken{mi}[mathvariant="math-bold-fraktur"]{#1}}% not greek
39 %
40 % }
```

```
42 \CustomizeMathJax{\let\symbfsfup\mathbf}% not sans
43% \CustomizeMathJax{\newcommand{\symbfsfup}[1]{%}
        \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}% not greek
45 % }
46
47 \CustomizeMathJax{\newcommand{\symbfsfit}[1]{\boldsymbol{#1}}}% not sans
48% \CustomizeMathJax{\newcommand{\symbfsfit}[1]{%}
        \mmlToken{mi}[mathvariant="sans-serif-bold-italic"]{#1}}% not greek
49 %
50 % }
51
52% Duplicates below are commented out.
53 \CustomizeMathJax{\let\symup\mathrm}
54 \constant{hJax{\left<text>} \ above }
55 \CustomizeMathJax{\let\symit\mathit}
56% \CustomizeMathJax{\let\symbfit\mathit}% not bold
57 \ExplSyntaxOn
58 \AtBeginDocument{
59\bool_if:NTF \g__um_sfliteral_bool
60
      {\CustomizeMathJax{\let\symsf\symsfup}}
61
62
          \bool_if:NTF \g__um_upsans_bool
63
              {\CustomizeMathJax{\let\symsf\symsfup}}
64
              {\CustomizeMathJax{\let\symsf\symsfit}}
65
66 }
67 \ExplSyntaxOff
68% \CustomizeMathJax{\let\symbfsfup\mathbf}% not sans
69 % \CustomizeMathJax{\let\symsfit\mathit}% not sans
70 % \CustomizeMathJax{\let\symbfsfit\mathit}% not bold nor sans
71 \CustomizeMathJax{\let\symtt\mathtt}
72% \CustomizeMathJax{\let\symbb\mathbb}
73% \CustomizeMathJax{\let\symbbit\mathbb}% not italic
74% \CustomizeMathJax{\let\symscr\mathscr}
75% \CustomizeMathJax{\let\symbfscr\mathscr}% not bold
76% \CustomizeMathJax{\let\symfrak\mathfrak}
77 \CustomizeMathJax{\let\symbffrac\mathbffrac}
Some symbol categories defined by unicode-math, in case they are used inside
custom macros:
78 \CustomizeMathJax{\newcommand{\mathfence}[1]{\mathord{#1}}}
79 \CustomizeMathJax{\newcommand{\mathover}[1]{#1}}
80 \CustomizeMathJax{\newcommand{\mathunder}[1]{#1}}
81 \CustomizeMathJax{\newcommand{\mathaccent}[1]{#1}}
82 \CustomizeMathJax{\newcommand{\mathbotaccent}[1]{#1}}
83 \CustomizeMathJax{\newcommand{\mathalpha}[1]{\mathord{#1}}}
math-style is one of: ISO, TeX, french, upright, or literal, which set \g__um_upGreek_bool
and \g__um_upgreek_bool.
84 \ExplSyntaxOn
86 \AtBeginDocument{
87 \bool_if:NTF \g__um_upGreek_bool
     {\LWR@mathjax@addgreek@u@up*{}{}}
```

{\LWR@mathjax@addgreek@u@it*{}{}}

89

```
91\bool_if:NTF \g__um_upgreek_bool
                        {\LWR@mathjax@addgreek@l@up{}{}}
                        {\LWR@mathjax@addgreek@l@it{}{}}
  94 }
  96 \LWR@mathjax@addgreek@u@up*{up}{}
  97 \LWR@mathjax@addgreek@u@it*{it}{}
  98 \LWR@mathjax@addgreek@l@up{up}{}
  99 \LWR@mathjax@addgreek@l@it{it}{}
101 \ExplSyntaxOff
103 \CustomizeMathJax{\let\lparen(}
104 \CustomizeMathJax{\let\rparen)}
105 \CustomizeMathJax{\newcommand{\cuberoot}[1]{\,{}^3\!\!\sqrt{#1}}\,}
106 \continuous {106 \continuous {1}{1}{\continuous {1}{1}{\chi,{}^4\!\!\sqrt{#1}}\,}}
     Many \mathopen / \mathclose delimiters are defined in lwarp_mathjax.txt, where
    \left/\right support is added.
107 \CustomizeMathJax{\newcommand{\longdivision}[1]{\mathord{\unicode{x027CC}#1}}}}
109 \CustomizeMathJax{\newcommand{\mathcomma}{,}}
110 \CustomizeMathJax{\newcommand{\mathcolon}{:}}
111 \CustomizeMathJax{\newcommand{\mathsemicolon}{;}}
\label{locality} $$114 \subset \mathcal{N}_{newcommand}(\nderbracket)[1]_{\mathbf{timef(\nderbracket)[1]}}}$
\label{lem:likelike} \begin{tabular}{l} $$116 \subset MathJax{\newcommand{\overbar}[1]_{\mathbb{4}} & \newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcomman
117 \CustomizeMathJax{\newcommand{\ovhook}[1]{\mathord{#1\unicode{x00309}}}}
118 \CustomizeMathJax{\newcommand{\ocirc}[1]{\mathord{#1\unicode{x0030A}}}}
\label{localize} \label{localize} $$121 \subset Mathord{#1\operatorname{\coommand}(\operatorname{\coommatopright}[1]_{\mathcal{H}} $$
127 \CustomizeMathJax{\newcommand{\annuity}[1]{\mathord{#1\unicode{x020E7}}}}
128 \CustomizeMathJax{\newcommand{\widebridgeabove}[1]{\mathord{#1\unicode{x020E9}}}}
129 \CustomizeMathJax{\newcommand{\asteraccent}[1]{\mathord{#1\unicode{x020F0}}}}
\label{localize} 130 \land Customize MathJax{\newcommand{\three underdot}[1]{\mathord{\#1}unicode{x020E8}}}} \\
\label{limits} \ensuremath Jax {\newcommand {\Bbbsum} {\newcome} \newcommand {\newcommand {\newcommand} \newcommand {\newcommand} \newcommand} \newcommand {\newcommand} \newcommand {\newcommand} \newcommand} \ne
133 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicode{x222F}}\limits}}
134 \CustomizeMathJax{\newcommand{\oiiint}{\mathop{\unicode{x2230}}\limits}}
\label{limits} $$135 \subset MathJax{\newcommand{\intclockwise}_{\newcom}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\newcommand}_{\
\label{limit} $$136 \subset \mathcal{X}_{newcommand}\circ \mathcal{X}_{ne
\label{limits} I 37 \customize Math Jax {\newcommand {\ointctrclockwise} {\mbox{\newcome} \{x2233\}} \ limits \} }
\label{thm:lockwise} $$138 \subset MathJax{\newcommand{\varointclockwise}{\mathbb{Z}232}}\ imits}$
140 \CustomizeMathJax{\newcommand{\rightouterjoin}{\mathop{\unicode{x27D6}}\limits}}
142 \CustomizeMathJax{\newcommand{\bigbot}{\mathop{\unicode{x27D8}}\limits}}
143 \CustomizeMathJax{\newcommand{\bigtop}{\mathop{\unicode{x27D9}}\limits}}
144 \CustomizeMathJax{\newcommand{\xsol}{\mathop{\unicode{x29F8}}\limits}}
```

```
147 \CustomizeMathJax{\newcommand{\bigsqcap}{\mathop{\unicode{x2A05}}\limits}}
149 \CustomizeMathJax{\newcommand{\disjquant}{\mathop{\unicode{x2A08}}\limits}}
\label{limits} $$150 \subset Mathop{\unicode{x2A09}}\limits}$$
151 \CustomizeMathJax{\newcommand{\modtwosum}{\mathop{\unicode{x2A0A}}\limits}}
152 \CustomizeMathJax{\newcommand{\sumint}{\mathop{\unicode{x2A0B}}\limits}}
\label{limits} $$154 \code{x2A0E}}\limits} $$154 \code{x2A0E}\}\limits} $$
156 \CustomizeMathJax{\newcommand{\cirfnint}{\mathop{\unicode{x2A10}}\limits}}
157 \CustomizeMathJax{\newcommand{\awint}{\mathop{\unicode{x2A11}}\limits}}
\label{limits} $$ \customizeMathJax{\newcommand{\rppolint}{\mathbb{x}2A12}}\limits} $$
159 \CustomizeMathJax{\newcommand{\scpolint}{\mathop{\unicode{x2A13}}\limits}}
160 \CustomizeMathJax{\newcommand{\npolint}{\mathop{\unicode{x2A14}}\limits}}
162 \CustomizeMathJax{\newcommand{\sqint}{\mathop{\unicode{x2A16}}\limits}}
166 \CustomizeMathJax{\newcommand{\intcup}{\mathop{\unicode{x2A1A}}\\limits}}
167 \CustomizeMathJax{\newcommand{\upint}{\mathop{\unicode{x2A1B}}\limits}}
168 \CustomizeMathJax{\newcommand{\lowint}{\mathop{\unicode{x2A1C}}\limits}}
169 \CustomizeMathJax{\newcommand{\bigtriangleleft}{\mathop{\unicode{x2A1E}}\limits}}
170 \CustomizeMathJax{\newcommand{\zcmp}{\mathop{\unicode{x2A1F}}\limits}}
171 \CustomizeMathJax{\newcommand{\zpipe}{\mathop{\unicode{x2A20}}\limits}}
172 \CustomizeMathJax{\newcommand{\zproject}{\mathop{\unicode{x2A21}}\limits}}
\label{lower} $$174 \subset MathJax{\newcommand{\bigtalloblong}{\mathbf x2AFF}}\sim $$174 \subset Mathop{\unicode{x2AFF}}\sim $$174 \subset Mathop{\unicode{x2AF
178 \end{warpMathJax}
```

File 546 lwarp-units.sty

§ 655 Package units

6

(Emulates or patches code by AXEL REICHERT.)

units (Pkg) units is patched for use by lwarp.

Values are not styled by css, and take the style of the surrounding нтм text.

 $\left(\mathbb{R}^{B}\right)$

Units are styled according to the print version, so they will be forced to upright roman in HTML if the print version does so. It may be necessary to adjust the document's body css to match the print version.

```
8
                        \LWR@textcurrentfont{#2}%
                    }%
              9
              10 }
              11 \LWR@formatted{unit}
              12 \DeclareRobustCommand*{\LWR@HTML@unitfrac}[3][]{%
              13 \ifblank{#1}%
                    {%
              14
              15
                            \nicefrac{#2}{#3}%
              16
                    }%
              17
                    {%
                            #1%
              18
                            \ifthenelse{\boolean{B@UnitsLoose}}{~}{\,}%
              19
              20
                            \nicefrac{#2}{#3}%
              21
                    }%
              22 }
              24 \LWR@formatted{unitfrac}
              For Mathjax:
              25 \begin{warpMathJax}
               27 \customizeMathJax{\newcommand{\unitfrac}[3][]{\#1 \mathinner{{}^{\#2}\cdot!/\cdot!_{\#3}}}} 
              28 \end{warpMathJax}
     File 547 lwarp-unitsdef.sty
     Package unitsdef
              (Emulates or patches code by PATRICK HAPPEL.)
unitsdef (Pkg) unitsdef is patched for use by lwarp.
              1 \LWR@ProvidesPackagePass{unitsdef}[2005/01/04]
              2 \newcommand{\LWR@HTML@unitvaluesep}{\,}
              3 \LWR@formatted{unitvaluesep}
              5 \newcommand{\LWR@HTML@unittimes}{\@@setunitsepfalse\HTMLunicode{22c5}}% \cdot
              6 \LWR@formatted{unittimes}
              8 \newunit{\LWR@HTML@arcmin}{%
                    \HTMLunicode{2032}% prime
              10 }
              11 \LWR@formatted{arcmin}
              12
              13 \newunit{\LWR@HTML@arcsec}{%
                    \HTMLunicode{2033}% dbl prime
              14
              15 }
              16 \LWR@formatted{arcsec}
              17
```

\$656

for HTML output:

18 \newrobustcmd{\LWR@HTML@SI}[2]{%

\let\unit@@xspace\relax%

\LWR@textcurrentfont{#1#2}% lwarp

\unitSIdef\selectfont%

\begingroup%

20

21

22

23 \endgroup%

```
24 }
                  25 \LWR@formatted{SI}
         File 548 lwarp-upgreek.sty
         Package upgreek
§657
                   (Emulates or patches code by Walter Schmidt.)
    upgreek (Pkg) upgreek is used as-is for svg math, and is emulated for MATHJAX.
for HTML output:
                   1 \LWR@ProvidesPackagePass{upgreek}[2003/02/12]
                   For MATHJAX:
                   2\begin{warpMathJax}
                   3 \CustomizeMathJax{\require{upgreek}}
                   4\end{warpMathJax}
         File 549 lwarp-upref.sty
         Package upref
§ 658
      upref (Pkg) upref is ignored.
                   Discard all options for lwarp-upref:
for HTML output:
                   1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
         File 550
                  lwarp-url.sty
         Package url
§ 659
                   (Emulates or patches code by Donald Arseneau.)
        url (Pkg) url is patched for use by lwarp.
for HTML output:
                   1 \LetLtxMacro\LWR@url@orig@url\LWR@url
                   3 \LWR@ProvidesPackagePass{url}[2013/09/16]
                   4\newcommand*{\LWR@HTML@Url@FormatString}{%
                        \expandafter\LWR@url@orig@url\expandafter{\Url@String}%
                   6 }
                   7 \LWR@formatted{Url@FormatString}
```

```
File 551 lwarp-ushort.sty
                  ushort
         Package
$660
                  (Emulates or patches code by Martin Väth.)
     ushort (Pkg)
                  ushort is used as-is, and emulated for MATHJAX.
for HTML output:
                  1 \LWR@ProvidesPackagePass{ushort}[2001/06/13]
                  2 \begin{warpMathJax}
                  3 \CustomizeMathJax{\newcommand{\ushortdline}[1]{%
                        \kern{.1em}\underline{\underline{{#1}}}\kern{.1em}%
                  \label{lemain} $$ 6 \subset \mathcal{H}_{newcommand_{ushort}[1]}(\end{1.1em}\underline{#1}\kern{1.1em}} $$
                  7 \CustomizeMathJax{\newcommand{\ushortd}[1]{\ushortdline{#1}}}
                   8 \customizeMathJax{\newcommand{\ushortw}[1]{\kern{.1em}}} 
                  \\ 9 \command{\whortdw}[1]{\whortdline{\#1}}}
                  10 \end{warpMathJax}
         File 552 lwarp-uspace.sty
         Package USPace
$661
     uspace (Pkg) uspace is ignored.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{uspace}[2016/11/06]
                  lwarp-varioref.sty
         File 553
                 varioref
$662
         Package
                  (Emulates or patches code by Frank Mittelbach.)
   varioref (Pkg)
                  varioref is patched for use by lwarp.
for HTML output:
                   1 \LWR@ProvidesPackagePass{varioref}[2020/01/23]
                  Page-related output is not used for HTML output.
                  2\def\reftextfaceafter {\unskip}%
                  3 \def\reftextfacebefore{\unskip}%
                  4 \def\reftextafter
                                         {\unskip}%
                  5 \def\reftextbefore
                                         {\unskip}%
                  6 \def\reftextcurrent {\unskip}%
                  7 \def\reftextfaraway#1{\unskip}%
                  8 \def\reftextpagerange#1#2{\unskip}%
```

File 554 lwarp-verse.sty

§ 663 Package **Verse**

(Emulates or patches code by Peter Wilson.)

verse (*Pkg*) verse is supported and patched by lwarp.

for HTML output: Pass all options for lwarp-verse:

1 \LWR@ProvidesPackagePass{verse}[2009/09/04]

When using verse or memoir, always place a \\ after each line.

\attrib The documentation for the verse and memoir packages suggest defining an \attrib command, which may already exist in current documents, but it will only work for print output. lwarp provides \attribution, which works for both print and HTML output. To combine the two so that \attrib is used for print and \attribution is used for HTML:

\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}

\vleftmargini (Len)
\vleftmargini (Len)
\HTMLvleftskip (Len)
\HTMLleftmargini (Len)

These lengths are used by verse and memoir to control the left margin, and they may already be set by the user for print output. New lengths \hTMLvleftskip and \hTMLleftmargini are provided to control the margins in html output. These new lengths may be set by the user before any verse environment, and persist until they are manually changed again. One reason to change \hTMLleftmargini is if there is a wide \flagverse in use, such as the word "Chorus", in which case the value of \htmlleftmargini should be set to a wide enough length to contain "Chorus". The default is wide enough for a stanza number.

verse margin

Horizontal spacing relies on *pdftotext*'s ability to discern the layout (-layout option) of the text in the HTML-tagged PDF output. For some settings of \HTMLleftmargini or \HTMLleftskip the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

verse (env.) The verse environment will be placed inside a HTML .

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching verse.}
```

At the beginning of the verse environment:

```
4 \AtBeginEnvironment{verse}
5 {%
```

Use the original list environment inside a to attempt to preserve formatting.

The verse or memoir packages can place stanza numbers to the left with their

```
6 \LWR@restoreoriglists%
```

verse (Pkg)

\flagverse command. The following does not allow them to go into the left margin, which would cause pdfcrop to crop the entire page further to the left.

\text{Vleftskip (Len)} 7 \ifdef{\vleftskip}{\% 8 \setlength{\vleftskip}{\vleftskip}{\text{HTMLvleftskip}} 9 \setlength{\\leftmargini}{\text{HTMLleftmargini}} \\ 10 \}{\} \\ 11 \LWR@forcenewpage \\ 12 \LWR@atbeginverbatim{\verse}\% \\ 13 \}

After the end of the verse environment, which places the tag at the regular left margin:

```
14 \AtEndEnvironment{verse}{%
15 \leavevmode%
16 \LWR@afterendverbatim%
17 }
```

Patch to place poemtitle inside an HTML of class poemtitle:

```
18 \ifdef{\poemtitle}{
19 \DeclareDocumentCommand{\@vstypeptitle}{m}{%
20  \vspace{\beforepoemtitleskip}%
21  {\InlineClass{poemtitle}{\poemtitlefont #1}\par}%
22  \vspace{\afterpoemtitleskip}%
23  }
24 }{}
25
26 \LWR@traceinfo{Finished patching verse.}
27 }% AfterEndPreamble
```

File 555 lwarp-versonotes.sty

§ 664 Package Versonotes

(Emulates or patches code by Norman Gray.)

versonotes (Pkg) versonotes is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{versonotes}[2019/07/06]

```
2 \newcommand{\versonote}[1]{\marginpar{#1}}
3 \newdimen\versotextwidth
4 \newdimen\versoleftmargin
5 \newcommand*{\versolayout}{}
```

In case the user changed the page number before loading versonotes:

```
6\setcounter{page}{1}
```

File 556 lwarp-vertbars.sty

```
Package vertbars
$665
                    (Emulates or patches code by Peter Wilson.)
    vertbars (Pkg) vertbars is emulated.
for HTML output:
                    1 \LWR@ProvidesPackageDrop{vertbars}[2010/11/27]
                    2 \newlength{\barwidth}
                    3 \setlength{\barwidth}{0.4pt}
                    4 \newlength{\barspace}
                    5 \setlength{\barspace}{1em}
                    7 \newenvironment{vertbar}{
                         \LWR@forcenewpage
                    8
                         \verb|\LWR@forceminwidth{\barwidth}| \\
                    9
                         \begin{BlockClass}[%
                   10
                             border-left: \LWR@printlength{\LWR@atleastonept} solid black ; %
                   11
                             padding-left: \LWR@printlength{\barspace}%
                   12
                   13
                         ]{vertbar}
                   14 }{
                         \end{BlockClass}
                   15
                   16 }
```

File 557 lwarp-vmargin.sty

```
Package vmargin
$666
                     vmargin (Pkg) vmargin is ignored.
   for HTML output:
                                                                                     1 \LWR@ProvidesPackageDrop{vmargin}[2004/07/15]
                                                                                    2 \newcommand*{\LWRVM@customsize}[2]{}
                                                                                    3 \newcommand*{\setpapersize}[2][]{\ifstrequal{#2}{custom}{\LWRVM@customsize}{}}
                                                                                    4\newcommand*{\setmargins}[8]{}
                                                                                    5 \newcommand*{\setmarginsrb}[8]{}
                                                                                    6 \newcommand*{\setmargnohf}[4]{}
                                                                                    \label{lem:command*{\setmargnohfrb}[4]{}} % \label{lem:command*{
                                                                                    9 \newcommand*{\setmargrb}[4]{}
                                                                                  10 \newlength{\PaperWidth}
                                                                                  11 \setlength{\PaperWidth}{8.5in}
                                                                                  12 \newlength{\PaperHeight}
                                                                                  13 \setlength{\PaperHeight}{11in}
                                                                                 14 \newif\ifLandscape
```

File 558 lwarp-vowel.sty

§ 667 Package VOWel

(Emulates or patches code by FUKUI Rei.)

vowel (*Pkg*) vowel is patched for use by lwarp.

This package has been tested with *pdflatex* and the Type 1 TIPA fonts using the following package load sequence:

```
\usepackage[T3,T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[noenc]{tipa}
\usepackage{vowel}
```

for HTML output:

1 \LWR@ProvidesPackagePass{vowel}[2002/08/08]

File 559 lwarp-vpe.sty

§ 668 Package **VPE**

vpe (Pkg) vpe is ignored.

 $\begin{tabular}{ll} \textbf{for HTML output:} & 1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18] \end{tabular}$

File 560 lwarp-vwcol.sty

§ 669 Package **VWCO**

(Emulates or patches code by Will Robertson.)

vwcol (*Pkg*) vwcol is patched for use with lwarp.

The width option is ignored. All vwcol environments adjust to 1–3 equal-width columns, depening on the width of the browser window.

The remaining options are supported, except for lines and maxrecursion.

for HTML output: 1 \LWR@ProvidesPackagePass{vwcol}[2015/02/10]

Factored from \vwcol. Each is given a style tag to append to the final style.

```
\LWR@vwcol@addrule
                               \{\langle style\ tag \rangle\}
                             2 \newcommand*{\LWR@vwcol@addrule}[1]{%
                                   \appto{\LWR@vwcolstyle}{%
                                       #1: %
                                     \LWR@printlength{\vwcol@rule} solid \LWR@origpound\LWR@vwcol@rulecolor; %
                             5
                                   }%
                             6
                             7 }
\LWR@vwcol@addrule
                               \{\langle style\ tag \rangle\}
                             8 \newcommand*{\LWR@vwcol@addgap}[1]{%
                                   \appto{\LWR@vwcolstyle}{%
                             9
                             10
                                       #1: %
                                        \LWR@printlength{\vwcol@sep}; %
                             11
                             12
                                   }%
                             13 }
                               \{\langle key/values \rangle\}
 vwcol
                              Redefine the environment to add a HTML style. The style is built depending on the
                             required options.
                             14 \renewenvironment*{vwcol}[1][]{%
                             New paragraph, and process the options:
                             15 \LWR@stoppars%
                             16 \vwcolsetup{#1}%
                             Begin with no style:
                             17 \newcommand*{\LWR@vwcolstyle}{}
                             presep and postsep are created with HTML margins:
                             18 \if@vwcol@presep
                                   \appto{\LWR@vwcolstyle}{margin-left: 1em ; padding-left: .5em ; }
                             19
                             20\fi
                             21 \if@vwcol@postsep
                                   \appto{\LWR@vwcolstyle}{margin-right: 1em ; padding-right: .5em ; }
                            22
                            23\fi
                              sep becomes column-gap:
                             24 \ifdimgreater{\vwcol@sep}{1sp}{
                                   \LWR@vwcol@addgap{column-gap}
                                   \LWR@vwcol@addgap{-moz-column-gap}
                             27
                                   \LWR@vwcol@addgap{-webkit-column-gap}
                             28 }{}
                             rule become column-rule, while prerule and postrule become HTML borders:
                             29 \convertcolorspec{named}{\vwcol@rulecol}{HTML}\LWR@vwcol@rulecolor%
                             30 \ifdimgreater{\vwcol@rule}{0pt}{
                                   \ifdimless{\vwcol@rule}{1pt}{
                             31
                                        \setlength{\vwcol@rule}{1pt}
                             32
                             33
                                   }{}
                                   \LWR@vwcol@addrule{column-rule}
                            34
                                   \LWR@vwcol@addrule{-moz-column-rule}
                             35
                                   \LWR@vwcol@addrule{-webkit-column-rule}
                             36
```

\if@vwcol@prerule\LWR@vwcol@addrule{border-left}\fi

37

```
\if@vwcol@postrule\LWR@vwcol@addrule{border-right}\fi
                38
                39 }{}
                Each of the justify options becomes a text-align. Indentation is added where
                appropriate.
                40 \ifdefequal{\vwcol@justify}{\RaggedRight}{
                      \appto{\LWR@vwcolstyle}{text-align: left; }
                41
                      \ifdimgreater{\vwcol@parindent}{0pt}{
                42
                          \appto{\LWR@vwcolstyle}{%
                43
                              text-indent: \LWR@printlength{\vwcol@parindent} ; %
                44
                45
                          }
                46
                      }{}
                47 }{}
                48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{
                      \appto{\LWR@vwcolstyle}{text-align: right ; }
                50 }{}
                51 \ifdefequal{\vwcol@justify}{\Centering}{
                52
                      \appto{\LWR@vwcolstyle}{text-align: center ; }
                53 }{}
                54 \ifdefequal{\vwcol@justify}{\justifying}{
                      \appto{\LWR@vwcolstyle}{text-align: justify ; }
                56
                      \ifdimgreater{\vwcol@parindent}{0pt}{
                          \appto{\LWR@vwcolstyle}{%
                57
                              text-indent: \LWR@printlength{\vwcol@parindent} ; %
                58
                59
                          }
                60
                      }{}
                61 }{}
                Create the <div> with the assembled style:
                62 \BlockClass[\LWR@vwcolstyle]{multicols}
                63 }
                When the environment ends:
                64 {
                      \endBlockClass
                65
                      \LWR@startpars
                66
                67 }
       File 561 lwarp-wallpaper.sty
                wallpaper
      Package
                (Emulates or patches code by Michael H.F. Wilkinson.)
wallpaper (Pkg)
                wallpaper is ignored.
                1 \LWR@ProvidesPackageDrop{wallpaper}[2005/01/18]
                2 \newcommand*{\CenterWallPaper}[2]{}
                3 \newcommand*{\ThisCenterWallPaper}[2]{}
                4\newcommand*{\TileWallPaper}[3]{}
                5 \newcommand*{\ThisTileWallPaper}[3]{}
```

6 \newcommand*{\TileSquareWallPaper}[2]{} 7\newcommand*{\ThisTileSquareWallPaper}[2]{} 8 \newcommand*{\ULCornerWallPaper}[2]{}

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for HTML output:

```
9 \newcommand*{\ThisULCornerWallPaper}[2]{}
                        10 \newcommand*{\LLCornerWallPaper}[2]{}
                        11 \newcommand*{\ThisLLCornerWallPaper}[2]{}
                        12 \newcommand*{\URCornerWallPaper}[2]{}
                        13 \newcommand*{\ThisURCornerWallPaper}[2]{}
                        14 \newcommand*{\LRCornerWallPaper}[2]{}
                        15 \newcommand*{\ThisLRCornerWallPaper}[2]{}
                        16 \newcommand*{\ClearWallPaper}{}
                        17 \newlength{\wpXoffset}
                        18 \newlength{\wpYoffset}
               File 562 lwarp-watermark.sty
               Package watermark
                         (Emulates or patches code by Alexander I. Rozhenko.)
        watermark (Pkg)
                         watermark is ignored.
                         1 \LWR@ProvidesPackageDrop{watermark}[2004/12/09]
                         2 \newcommand{\watermark}[1]{}
                         3 \newcommand{\leftwatermark}[1]{}
                         4 \newcommand{\rightwatermark}[1]{}
                         5 \newcommand{\thiswatermark}[1]{}
                         6 \newcommand{\thispageheading}[1]{}
               File 563 lwarp-widetable.sty
               Package widetable
                         (Emulates or patches code by CLAUDIO BECCARI.)
        widetable (Pkg) widetable is emulated.
                         1 \LWR@ProvidesPackageDrop{widetable}[2019-06-25]
                         2 \newenvironment{widetable}{\begin{tabular*}}{\end{tabular*}}
               File 564 lwarp-widows-and-orphans.sty
               Package widows-and-orphans
                         widows-and-orphans is ignored.
widows-and-orphans (Pkg)
                         1 \LWR@ProvidesPackageDrop{widows-and-orphans}[2018/09/01]
                         2 \NewDocumentCommand\WaOsetup{m}{}
                         {\tt 3 \ NewDocumentCommand\ WaOparameters \{\} \{\} }
```

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§ 672

§ 673

for HTML output:

for HTML output:

4 \NewDocumentCommand\WaOignorenext{}{}

for HTML output:

File 565 lwarp-witharrows.sty

§ 674 Package witharrows

(Emulates or patches code by F. Pantigny.)

witharrows (Pkg) witharrows is patched for use by lwarp. Emulation is provided for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{witharrows}[2019/12/27]

```
2\ifbool{mathjax}{
     \% For the hidden print version in the HTML:
3
      \newcommand{\Arrow}[2][]{}
4
      \newcommand{\unicode}[1]{}
5
      6
              \IfValueTF{#1}{
8
                  \begin{displaymath}
9
                  #1 \left\lbrace
10
11
                  \begin{align}
                  #3
13
                  \end{align}
                  \right .
14
                  \end{displaymath}
15
             }{
16
                  \begin{displaymath}
17
                  \begin{align}
18
19
20
                  \end{align}
21
                  \end{displaymath}
             }
22
         }
23
         {}
24
      \NewDocumentEnvironment { DispWithArrows* } { ! d <> ! 0 { } +b}
25
26
         {
              \IfValueTF{#1}{
27
                  \begin{displaymath}
28
                  #1 \left\lbrace
29
                  \begin{align*}
30
                  #3
31
32
                  \end{align*}
33
                  \right .
34
                  \end{displaymath}
35
             }{
                  \begin{displaymath}
36
                  \begin{align*}
37
38
                  \end{align*}
39
                  \end{displaymath}
40
41
             }
42
         }
43
          {}
44 }{
     % If not MathJax, use SVG images.
45
    \BeforeBeginEnvironment{WithArrows}{\global\booltrue{LWR@unknownmathsize}}
46
      \BeforeBeginEnvironment{DispWithArrows}{%
47
```

```
48
                                             \begin{BlockClass}{displaymathnumbered}%
49
                                             \begin{lateximage}%
50
51
                           \AfterEndEnvironment{DispWithArrows}{\end{lateximage}\end{BlockClass}}
52
                           \BeforeBeginEnvironment{DispWithArrows*}{%
                                             \begin{BlockClass}{displaymath}%
53
                                             \begin{lateximage}%
54
55
                           \AfterEndEnvironment{DispWithArrows*}{\end{lateximage}\end{BlockClass}}
56
57 }
58
59 \begin{warpMathJax}
60 \CustomizeMathJax{\newenvironment{\WithArrows}[1][]{\begin{aligned}}{\}}
61% Unable to make a sized box.
\label{large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-large-lar
63 \end{warpMathJax}
```

File 566 lwarp-wrapfig.sty

§ 675 Package wrapfig

(Emulates or patches code by Donald Arseneau.)

wrapfig (Pkg) wrapfig is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{wrapfig}[2003/01/31]

```
2 \newcommand*{\LWR@wrapposition}{}
4 \newcommand{\LWR@wrapfig@printHTMLwidth}{\LWR@printlength{\LWR@templengthone}}
6 \AtBeginDocument{
      \IfPackageLoadedTF{keyfloat}{
7
8
          \renewcommand{\LWR@wrapfig@printHTMLwidth}{%
9
              \ifboolexpr{
10
                  test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or
11
                  bool {KFLT@inkeysubfloats}
              }%
12
                {\LWR@printpercentlength{\LWR@templengthone}{\linewidth}\%; }%
13
                  {\LWR@printlength{\LWR@templengthone}}%
14
15
          }%
      }{}
16
17 }
18
19 \newcommand*{\LWR@subwrapfigure}[2]{%
      \renewcommand*{\LWR@wrapposition}{}%
20
      \ifthenelse{%
21
          \equal{#1}{r}\OR\equal{#1}{R}\OR%
22
          \equal{#1}{o}\OR\equal{#1}{0}%
23
24
25
          {\renewcommand*{\LWR@wrapposition}{float:right}}%
26
          {\renewcommand*{\LWR@wrapposition}{float:left}}%
      \setlength{\LWR@templengthone}{#2}%
27
      \LWR@BlockClassWP{%
28
29
          width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
30
          margin:10pt%
31
      }%
```

```
32
      {%
           width:\LWR@wrapfig@printHTMLwidth; %
33
           \LWR@wrapposition; %
34
35
      }%
36
      (note)%
37
      {marginblock}%
      \label{linewidth} $$\left\langle LWR@templengthone\right\rangle $$
38
39 }
40
41
42 \NewDocumentEnvironment{wrapfigure}{o m o m}
43 {%
44
      \begin{LWR@setvirtualpage}*%
45
      \LWR@subwrapfigure{#2}{#4}%
46
      \renewcommand*{\@captype}{figure}%
47 }
48 {%
      \endLWR@BlockClassWP%
49
50
      \end{LWR@setvirtualpage}%
51 }
52
53
54 \NewDocumentEnvironment\{wraptable\}\{o\ m\ o\ m\}
55 {%
56
      \begin{LWR@setvirtualpage}*%
      \verb|\LWR@subwrapfigure{#2}{#4}||
57
      58
59 }
60 {%
      \endLWR@BlockClassWP%
61
62
      \end{LWR@setvirtualpage}%
63 }
64
66 \NewDocumentEnvironment{wrapfloat}{m o m o m}
67 {%
      \begin{LWR@setvirtualpage}*%
68
      \verb|\LWR@subwrapfigure{#3}{#5}|%
69
      \verb|\command*{\command*{\captype}{#1}}|
70
71 }
72 {%
      \endLWR@BlockClassWP%
73
      \end{LWR@setvirtualpage}%
74
75 }
77 \newlength{\wrapoverhang}
```

File 567 lwarp-wrapfig2.sty

§ 676 Package wrapfig2

(Emulates or patches code by Donald Arseneau, Claudio Beccari.)

wrapfig2 (*Pkg*) wrapfig2 is emulated via a modified version of the wrapfig emulation.

for HTML output: 1 \@ifpackageloaded{color}{}{%

```
2
     \@ifpackageloaded{xcolor}{}\LWR@origRequirePackage{xcolor}}%
3 }
5 \RequirePackage{float}
7 \IfPackageLoadedWithOptionsTF{wrapfig2}{WFold}
8{}% v4.0
9 {% v5+
10 \floatstyle{plain}
    \ifcsname chapter\endcsname
11
      \newfloat{text}{tbp}{lotx}[chapter]
12
13
    \else
14
      \newfloat{text}{tbp}{lotx}
15
    \fi
16
    \floatname{text}{Text}
     \let\WF@text@caption\float@caption
17 %
18 }
19
21 \LWR@ProvidesPackageDrop{wrapfig2}[2022-02-16]
23 \LWR@origRequirePackage{lwarp-wrapfig}
24 \RenewDocumentEnvironment{wrapfigure}{o m o G{0pt} s}% original
    {\wrapfloat{figure}[#1]{#2}[#3]{#4}}%
    {\endwrapfloat}
28 \RenewDocumentEnvironment{wraptable}{o m o G{0pt} s}% original
    {\wrapfloat{table}[#1]{#2}[#3]{#4}}%
    {\endwrapfloat}
31
32 \RenewDocumentEnvironment{wrapfloat}{m o m o G{0pt}}% lwarp
33 {%
      \begin{LWR@setvirtualpage}*%
34
      \LWR@subwrapfigure{#3}{#5}%
35
      \renewcommand*{\@captype}{#1}%
36
37 }
38 {%
      \endLWR@BlockClassWP%
39
      \end{LWR@setvirtualpage}%
40
41 }
42 \IfPackageLoadedWithOptionsTF{wrapfig2}{WFold}
43 {% v4.0:
      \NewDocumentEnvironment{wraptext}%
44
                   D||\{0.5\columnwidth\}\ D<>\{0\}\ D()\{figure\}\}%
45
46
      {%
          \wrapfloat{#4}[]{#1}[]{#2}%
47
          \tcolorbox%
48
49
      {%
50
          \endtcolorbox%
51
52
          \endwrapfloat%
53
          \ignorespaces%
54
      }
55 }{}
57 \IfPackageLoadedWithOptionsTF{wrapfig2}{WFfive}
58 {% v5
```

```
59
      \definecolor{WFbackground}{rgb}{0.95,0.95,0.95}
      \definecolor{WFframe}{rgb}{0.1,0.1,0.1}
60
      \colorlet{WFtext}{black}
61
62
      \def\SetWFbgd#1{\colorlet{WFbackground}{#1}}
63
      \def\SetWFfrm#1{\colorlet{WFframe}{#1}}
64
      \def\SetWFtxt#1{\colorlet{WFtext}{#1}}
      \def\WFsplitdimens#1,#2!{\fboxrule=#1\relax\fboxsep=#2\relax}
65
66
      67
68
      {%
69
          \wrapfloat{text}[]{#2}[]{#4}%
70
      }
71
      {%
72
          \endwrapfloat%
73
          \ignorespaces%
74
      }
75
      \NewDocumentCommand\includeframedtext{O{\insertwidth} m O{1pt,1ex} o}%
76
77
          \WFsplitdimens #3!
78
          \convertcolorspec{named}{\WFtext}{\HTML}\L\WR\@tempcolor\%
79
          \LWR@HTML@fcolorboxBlock%
80
              [named]{WFframe}[named]{WFbackground}{#2}%
81
82
                  color:\ \LWR@origpound\LWR@tempcolor ; %
83
                  border-radius:\ 1ex%
84
85
              )%
86
87 }{% v6+
      \RequirePackage{xkeyval}
88
89
      \definecolor{WFbackground}{rgb}{0.95,0.95,0.95}
90
      \definecolor{WFframe}{rgb}{0.1,0.1,0.1}
91
      \colorlet{WFtext}{black}
      \def\SetWFbgd#1{\colorlet{WFbackground}{#1}}
93
      \def\SetWFfrm#1{\colorlet{WFframe}{#1}}
94
95
      \def\SetWFtxt#1{\colorlet{WFtext}{#1}}
      \def\WFsplitdimens#1,#2!{\fboxrule=#1\relax\fboxsep=#2\relax}
96
97
      \newlength{\LWR@wrapfigtwo@radius}
98
      \setlength{\LWR@wrapfigtwo@radius}{1ex}
99
100
      \DeclareOptionX<wraptext>{scalefactor}[0.8]{%
101
102 %
            \def\WFscalefactor{#1}%
103
      \DeclareOptionX<wraptext>{fboxrule}[1pt]{\fboxrule=#1}
104
      \DeclareOptionX<wraptext>{fboxsep}[1ex]{\fboxsep=#1}
105
      \DeclareOptionX<wraptext>{framecolor}[WFframe]{\SetWFfrm{#1}}
106
      107
      \DeclareOptionX<wraptext>{textcolor}[WFtext]{\SetWFtxt{#1}}}
108
      \DeclareOptionX<wraptext>{fontstyle}[\normalfont]{#1}
109
      \DeclareOptionX<wraptext>{radius}[\fboxsep]{%
110
          \setlength{\LWR@wrapfigtwo@radius}{#1}%
111
112
      \DeclareOptionX<wraptext>{insertionwidth}[0.5\columnwidth]{%
113
            \insertwidth=#1%
114 %
115
116
      \DeclareOptionX*{\PackageWarning{wrapfig2}{'\CurrentOption' ignored}}
117
118
```

```
\ExecuteOptionsX<wraptext>{scalefactor, fboxrule, fboxsep, framecolor,
119
      backgroundcolor, textcolor, fontstyle, radius, insertionwidth}
120
121
      \ProcessOptionsX*
122
123
      124
125
      {%
          \wrapfloat{text}[]{#2}[]{#4}%
126
127
      }
128
      {%
129
          \endwrapfloat%
130
          \ignorespaces%
131
      }
132
      \NewDocumentCommand\includeframedtext{O{\insertwidth} m O{} o}
133
134
        \ExecuteOptionsX<wraptext>{#3}%
                                         executes possible key=value options
135
          \convertcolorspec{named}{WFtext}{HTML}\LWR@tempcolor%
136
          \LWR@HTML@fcolorboxBlock%
137
              [named]{WFframe}[named]{WFbackground}%
138
              {\LWR@textcurrentfont{#2}}%
139
              (%
140
                  color:\ \LWR@origpound\LWR@tempcolor ; %
141
142
                  border-radius:\ \LWR@printlength{\LWR@wrapfigtwo@radius}%
143
              )%
144
      }
145 }
```

File 568 lwarp-xbmks.sty

```
§ 677 Package xbmks
```

xbmks (Pkg) xbmks is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{xbmks}[2018/07/04]

```
2 \newcommand{\xbmksetup}[1]{}
```

- ${\tt 3 \ NewDocumentCommand\{\pdfbookmarkx\}\{o\ m\ o\ m\}\{\}}\\$
- 4 \NewDocumentCommand{\currentpdfbookmarkx}{m o m}{}
- 5 \NewDocumentCommand{\subpdfbookmarkx}{m o m}{}
- $\label{lowpdfbookmarkx} \mbox{\em m} \mbox{\em belowpdfbookmarkx} \mbox{\em m} \m$

File 569 lwarp-xcolor.sty

§ 678 Package **xcolor**

(Emulates or patches code by Dr. Uwe Kern.)

xcolor (Pkg) xcolor is supported by lwarp.

§ 678.1 Limitations

\colorboxBlock and \fcolorboxBlock

\colorboxBlock and \fcolorboxBlock are provided for increased HTML compatibility, and they are identical to \colorbox and \fcolorbox in print mode. In HTML mode they place their contents into a <diy> instead of a . These <diy>s are set to display: inline-block so adjacent \colorboxBlocks appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for \colorboxBlock and \fcolorboxBlock are created by lwarp's core if xcolor is loaded.

background: none

\fcolorbox and \fcolorboxBlock allow a background color of none, in which case only the frame is drawn, which can be useful for HTML.

color support

Color definitions, models, and mixing are fully supported without any changes required.

colored text and boxes \textcolor, \colorbox, and \fcolorbox are supported.

\color and \pagecolor \color and \pagecolor are ignored. Use css or \textcolor where possible.

§ 678.2 xcolor definitions: location and timing

The lwarp core and its lwarp-xcolor package are tightly integrated to allow comparable results for print, HTML, and print inside an HTML lateximage. This requires a number of definitions and redefintions depending on whether each of xcolor and lateximage is being used, and whether print or HTML is being generated. Some of these actions are one-time when xcolor is loaded, and others are temporary as lateximage is used.

When xcolor is loaded in print mode: No special actions are taken at the time that xcolor is loaded in print mode, but see \AtBeginDocument below.

When lwarp-xcolor is loaded in HTML mode: xcolor's original definitions are saved for later restoration. \LWR@restoreorigformatting is appended to restore these definitions for use inside a lateximage. New HTML-mode definitions are created for \textcolor, \pagecolor, \nopagecolor, \colorbox, \colorboxBlock, \fcolorbox, \fcolorboxBlock, and fcolorminipage.

\AtBeginDocument in print or HTML mode: See Section 89. If xcolor has been loaded, the print-mode \fcolorbox is modified to accept a background color of none, and additional definitions are created for lwarp's new macros printmode macros \colorboxBlock, \fcolorboxBlock, and fcolorminipage. The HTML versions of these macros will already have been created by lwarp-xcolor if it has been loaded.

For use inside an HTML lateximage, \LWR@restoreorigformatting is appended to temporarily set these functions to their print-mode versions.

In a lateximage in HTML mode: \LWR@restoreorigformatting temporarily restores the print-mode definitions of xcolor's functions. See \LWR@restoreorigformatting on page 539.

\color:

Print: Used as-is.

HTML: Ignored by *pdftotext*, and will not appear.

```
HTML lateximage: Colors will appear in a lateximage.
\textcolor:
     Print: Used as-is.
     HTML: Redefined by lwarp-xcolor, page 1250.
     HTML lateximage: Remembers and reuses the print version.
\pagecolor:
     Print: Used as-is.
     HTML: Ignored.
     HTML lateximage: Colors will be picked up in a lateximage.
\nopagecolor:
     Print: Used as-is.
     HTML: Ignored.
     HTML lateximage: Colors will be picked up in a lateximage.
\colorbox:
     Print: Used as-is.
     HTML: Redefined by lwarp-xcolor, page 1250.
     HTML lateximage: Remembers and reuses the print version.
\colorboxBlock:
     Print: Becomes \colorbox.
     HTML: Newly defined by lwarp-xcolor to use a <div>, page 1251.
     HTML lateximage: Remembers and reuses the print version \colorbox.
\fcolorbox:
     Print: Modified to allow a background of none.
          \LWR@print@fcolorbox at section 89
     HTML: Redefined by lwarp-xcolor, page 1251.
     HTML lateximage: Remembers and reuses the print version.
\fcolorboxBlock:
     Print: Becomes \fcolorbox. Section 89
     HTML: Newly defined by lwarp-xcolor to use a <div>, page 1252.
     HTML lateximage: Remembers and reuses the print version \fcolorbox.
fcolorminipage:
     Print: Newly defined in the lwarp core.
          LWR@print@fcolorminipage at section 89
     HTML: Newly defined by lwarp-xcolor, page 1252.
     HTML lateximage: Uses the print version.
\boxframe:
     Print: Used as-is.
     HTML: Redefined by lwarp-xcolor, page 1253.
     HTML lateximage: Remembers and reuses the print version.
```

§ 678.3 Package loading

for HTML output:

1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]

\color@endgroup's \endgraf was conflicting with lwarp's paragraph handling.

2 \let\color@endgroup\endgroup

§ 678.4 Remembering and restoring original definitions

Remember the following print-mode actions to be restored when inside a lateximage environment:

```
3 \LetLtxMacro\LWR@print@pagecolor\pagecolor
4 \LetLtxMacro\LWR@print@nopagecolor\nopagecolor
```

\LWR@restoreorigformatting Inside a lateximage the following gets restored to their print-mode actions:

```
\verb§5\appto\LWR@restoreorigformatting{%}
     \LetLtxMacro\pagecolor\LWR@print@pagecolor%
     \LetLtxMacro\nopagecolor\LWR@print@nopagecolor%
7
8 }
```

§678.5 \normalcolor

\normalcolor

```
9 \DeclareRobustCommand{\LWR@HTML@normalcolor}{\color{black}}%
11 \LWR@formatted{normalcolor}
```

§ 678.6 HTML color style

\LWR@findcurrenttextcolor

Sets \LWR@tempcolor to the current color.

```
12 \renewcommand*{\LWR@findcurrenttextcolor}{%
      \LWR@traceinfo{LWR@findcurrenttextcolor}%
      \protect\colorlet{LWR@current@color}{.}%
14
      \LWR@traceinfo{LWR@findcurrenttextcolor B}%
    \verb|\protect| convert colorspec{named}{LWR@current@color}{HTML}\\ LWR@tempcolor\\ relax%
16
17
      \LWR@traceinfo{LWR@findcurrenttextcolor: done}%
18 }
```

Prints a color style for the current color.

\LWR@currenttextcolorstyle

```
19 \newcommand*{\LWR@currenttextcolorstyle}{%
      \LWR@findcurrenttextcolor%
21
      \ifdefstring{\LWR@tempcolor}{000000}%
22
23
          {color: \LWR@origpound\LWR@tempcolor; }%
24 }
```

\LWR@textcurrentcolor $\{\langle text \rangle\}$ Like \textcolor but uses the current \color instead.

```
25 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
26
      \begingroup%
      \LWR@hook@processingtags%
27
      \LWR@findcurrenttextcolor%
28
```

\LWR@colorstyle

\LWR@borderpadding

```
\InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
                      29
                                 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
                      30
                      31
                             }%
                      32
                      33
                             \endgroup%
                      34 }
                         \{\langle 1: model \rangle\} \{\langle 2: color \rangle\}
                       For a color style, prints the color converted to HTML colors.
                      35 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
                      36
                             \begingroup%
                             \LWR@hook@processingtags%
                      37
                       Use the xcolor package to convert to an HTML color space:
                             \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
                       Print the converted color:
                             \LWR@origpound\LWR@tempcolor%
                      39
                             \endgroup%
                      40
                      41 }
\LWR@backgroundcolor [\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}
                       Similar to \textcolor, but prints black text against a color background.
                       Converted into an HTML hex color span.
                      42 \NewDocumentCommand{\LWR@backgroundcolor}{O{named} m m}{%
                             \begingroup%
                      43
                             \LWR@hook@processingtags%
                      44
                             \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
                      45
                      46
                      47
                      48
                             \endgroup%
                      49 }
              § 678.7 HTML border
                        \{\langle colorstyle \rangle\} \{\langle color \rangle\} Prints the HTML attributes for a color border and padding.
                       \LWR@forceminwidth must be used first in order to set the border width.
                      50 \newcommand*{\LWR@borderpadding}[2]{%
                           border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2}; %
                             padding:\LWR@printlength{\fboxsep}%
                      53 }
```

§ 678.8 High-level macros

```
\color [\langle model \rangle] \{\langle color \rangle\}
```

 \triangle

The current \color is used by HTML rules and frames, but does not affect the current HTML text output, due to the lack of HTML states and scoping limitations. Use \textcolor if possible.

```
Use \textcolor if possible.
              54 \NewDocumentCommand{\LWR@HTML@color}{o m}{%
                     \IfValueTF{#1}{%
                          \LWR@print@color[#1]{#2}%
              56
                          \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
              58
                     }{%
                         \LWR@print@color{#2}%
              59
                         \verb|\convertcolorspec{named}{#2}{HTML}\\ LWR@tempcolor%
              60
              61
                     \edef\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
              62
              63 }
              65 \LWR@formatted{color}
 \textcolor [\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}
              Converted into an HTML hex color span.
              66 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
                     \begingroup%
                     \LWR@hook@processingtags%
              68
                     \IfValueTF{#1}{%
              69
              70
                         \color[#1]{#2}%
              71
                     }{%
              72
                         \color{#2}%
                     }%
              73
                     \InlineClass[color:\LWR@currenttextcolor]{textcolor}{#3}%
              74
                     \endgroup%
              75
              76 }%
              77
              78 \LWR@formatted{textcolor}
 \pagecolor [\langle model \rangle] \{\langle color \rangle\}
              Ignored. Use css instead.
              79 \renewcommand*{\pagecolor}[2][named]{}
\nopagecolor Ignored.
              80 \renewcommand*{\nopagecolor}{}
   \colorbox [\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}
              Converted into an HTML hex background color <span>.
```

81 \NewDocumentCommand{\LWR@HTML@colorbox}{O{named} m +m}{%}

\begingroup%

```
83 \LWR@hook@processingtags%
84 \InlineClass[%
85 background:\LWR@colorstyle{#1}{#2}; %
86 padding:\LWR@printlength{\fboxsep}%
87 ]{colorbox}{#3}%
88 \endgroup%
89}
```

 $\colorboxBlock [\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}$

Converted into an HTML hex background color <div>.

```
90 \NewDocumentCommand{\LWR@HTML@colorboxBlock}{O{named} m +m}{%
      \begingroup%
      \LWR@hook@processingtags%
92
93
      \LWR@stoppars%
      \begin{BlockClass}[%
95
           background: \LWR@colorstyle{#1}{#2}; %
96
           padding:\LWR@printlength{\fboxsep}%
      ]{colorboxBlock}
97
98
      #3
      \end{BlockClass}%
99
100
      \endgroup%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
101 \global\booltrue{LWR@minipagethispar}%
102 }
```

 $\fine \cite{thm:colorbox} \ [\langle frame model \rangle] \ \{\langle frame color \rangle\} \ [\langle box model \rangle] \ \{\langle box color \rangle\} \ \{\langle text \rangle\} \ \}$

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```
103 \NewDocumentCommand{\LWR@HTML@fcolorbox}{O{named} m O{#1} m +m}{%
                                   \LWR@traceinfo{HTML fcolorbox #2 #4}%
104
                                    \begingroup%
105
106
                                   \LWR@hook@processingtags%
107
                                   \LWR@forceminwidth{\fboxrule}%
108
                                   \ifthenelse{\equal{#4}{none}}%
109
                                                        {% no background color
                                                                             \InlineClass[%
110
                                                                             \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
111
                                                                             ]{fcolorbox}{#5}%
112
                                                        }%
113
                                                        {% yes background color
114
                                                                              \InlineClass[%
115
                                                                             \LWR@borderpadding{#1}{#2}; %
116
117
                                                                             background:\LWR@colorstyle{#3}{#4}%
118
                                                                             ]{fcolorbox}{#5}%
                                                        }%
119
                                   \endgroup%
120
121 }
```

 $\begin{tabular}{ll} $$ \closeboxBlock $$ [\langle framemodel \rangle] $$ {\langle framecolor \rangle} $$ [\langle boxmodel \rangle] $$ {\langle text \rangle} $$ (\langle add'l\ html\ style \rangle) $$ \end{tabular}$

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```
122 \NewDocumentCommand{\LWR@HTML@fcolorboxBlock}{O(named) m O(#1) m +m d()){%
123
       \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
124
       \begingroup%
       \LWR@hook@processingtags%
125
       \LWR@forceminwidth{\fboxrule}%
126
       \LWR@stoppars%
127
       \left\{ \begin{array}{l} \left( \#4 \right) \end{array} \right\}
128
           {% no background color
129
                \begin{BlockClass}[%
130
                    \LWR@borderpadding{#1}{#2}%
131
                    \IfValueT{#6}{ ; #6}%
132
133
                ]{fcolorboxBlock}
135
                \end{BlockClass}%
136
           }%
           {% yes background color
137
                \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
138
                \begin{BlockClass}[%
139
                    background:\LWR@origpound\LWR@tempcolortwo\ ; %
140
                    \LWR@borderpadding{#1}{#2}%
141
142
                    \IfValueT{#6}{ ; #6}%
                ]{fcolorboxBlock}
143
144
                \end{BlockClass}%
145
146
           }%
147
       \endgroup%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
148 \global\booltrue{LWR@minipagethispar}%
149 \LWR@traceinfo{HTML fcolorboxBlock done}%
150}
```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarp core: section 89

```
\LWR@subfcolorminipage
```

```
 \{\langle frame model \rangle\} \ \{\langle frame color \rangle\} \ \{\langle background \ tag \rangle\} \ \{\langle height \rangle\}
```

151 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%

```
152 \LWR@stoppars%
153 \begin{BlockClass}[%
154 #3%
155 \LWR@borderpadding{#1}{#2}; %
156 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight}; }%
157 width:\LWR@printlength{\LWR@tempwidth}%
```

```
158
                        ]{fcolorminipage}%
                  159 }
[\langle 6:height \rangle] [\langle 7:inner-align \rangle] \{\langle 8:width \rangle\}
                  160 \NewDocumentEnvironment{LWR@HTML@fcolorminipage}{O{named} m O{#1} m O{c} o o m}
                  161 {%
                  162
                        \LWR@hook@processingtags%
                        \setlength{\LWR@tempwidth}{#8}%
                  163
                        \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
                  164
                        \LWR@forceminwidth{\fboxrule}%
                  165
                        \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
                  166
                        \ifthenelse{\equal{#4}{none}}%
                  167
                            {\LWR@subfcolorminipage{#1}{#2}{}{#6}}%
                  168
                  169
                  170
                                \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
                                \LWR@subfcolorminipage{#1}{#2}%
                  172
                                    {background:\LWR@origpound\LWR@tempcolortwo\;}%
                  173
                                    {#6}%
                            }%
                  174
                  175 }%
                  176 { %
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
178 \global\booltrue{LWR@minipagethispar}%
179 }
```

```
\boxframe \{\langle width \rangle\} \{\langle height \rangle\} \{\langle depth \rangle\}
```

\end{BlockClass}%

177

The depth is added to the height, but the box is not decended below by the depth. \textcolor is honored.

```
180 \newcommand*{\LWR@HTML@boxframe}[3]{%
181
       {%
           \setlength{\LWR@tempwidth}{#1}%
182
           \setlength{\LWR@tempheight}{#2}%
183
           \addtolength{\LWR@tempheight}{#3}%
184
            \LWR@forceminwidth{\fboxrule}%
185
            \LWR@findcurrenttextcolor%
186
187
            \InlineClass[%
                display:inline-block ; %
188
                border:%
189
                    \LWR@printlength{\LWR@atleastonept} % space
190
191
                    solid % space
                    \LWR@currenttextcolor{}; % space
192
193
                width:\LWR@printlength{\LWR@tempwidth} ; %
                \label{lem:lemgth} height: LWR@printlength{\LWR@tempheight}\%
194
195
           ]{boxframe}{}%
       }%
196
197 }
198
199 \LWR@formatted{boxframe}
```

File 570 lwarp-xechangebar.sty

§ 680 Package **xellipsis**

(Emulates or patches code by Donald P. Goodman III.)

xellipsis (*Pkg*) xellipsis is patched for use by lwarp.

When non-zero, each of the spaces is converted to an HTML thin unbreakable space.

for HTML output: 1 \LWR@ProvidesPackagePass{xellipsis}[2015/11/01]

```
2 \newcommand*{\LWR@xellipsespace}[1]{%
3 \ifdim#1=0pt\else%
      \ifdim#1<\fontdimen2\font%
          \,%
6
      \else%
      \fi%
8
9\fi%
10 }
11
12 \def\xelip{%
13 \mbox{%
      \LWR@xellipsespace{\xelipprebef}%
      \xelipprechar%
15
16
      \LWR@xellipsespace{\xelippreaft}%
17
      \LWR@xellipsespace{\xelipbef}%
      \xelipchar%
18
      \xel@loopi = 1%
19
      \loop\ifnum\xelipnum>\xel@loopi%
20
          \advance\xel@loopi by1%
21
22
          \LWR@xellipsespace{\xelipgap}%
23
          \xelipchar%
24
      \repeat%
25
      \LWR@xellipsespace{\xelipaft}%
      \LWR@xellipsespace{\xelippostbef}%
27
      \xelippostchar%
      \LWR@xellipsespace{\xelippostaft}%
28
29 }%
30 }%
```

File 572 lwarp-xetexko.sty

Package xetexko \$681 (Emulates or patches code by Dohyun Kim.) xetexko (*Pkg*) xetexko is patched for use by lwarp. for HTML output: 1 \LWR@loadbefore{xetexko} 3 \LWR@ProvidesPackagePass{xetexko}[2021/09/06] 4\protected\def\typesetvertical{} 5 \protected\def\typesethorizontal{} 7 \def\verticaltypesetting{\BlockClass{verticalrl}} 8 \def\beginverticaltypesetting{\BlockClass{verticalrl}} 9 \def\endVerticaltypesetting{\endBlockClass} 11 \protected\def\vertical#1{\BlockClass{verticalrl}} 12 \protected\def\endvertical{\endBlockClass} 13 \protected\def\horizontal#1{\BlockClass{horizontaltb}} 14 \protected\def\endhorizontal{\endBlockClass} 15 \DeclareDocumentCommand{\vertlatin}{m}{#1}

File 573 lwarp-xevlna.sty

§ 682 Package **xevlna**

(Emulates or patches code by Zdeněk Wagner.)

xevlna (*Pkg*) **xevlna** is patched for use by lwarp.

Non-breakable spaces are inserted into HTML.

for HTML output: 1 \LWR@ProvidesPackagePass{xevlna}[2016/09/05]

 ${\tt 2 \def\ProcessCSpreposition\{\ifx\next\xevlnaXeTeXspace\HTMLentity\{nbsp\}\fi\}}$

3

4 \appto{\LWR@hook@processingtags}{\xevlnaDisable}%

File 574 lwarp-xfakebold.sty

§ 683 Package **xfakebold**

 $(Emulates\ or\ patches\ code\ by\ Herbert\ Voss.)$

xfakebold (*Pkg*) xfakebold is patched for use by lwarp, and additional underlying support is found in the lwarp core.

xfakebold is only used in svg math and lateximages. Text mode is not set bold, but \setBold in text will be applied to any following svg math.

for HTML output:

```
1 \LWR@ProvidesPackagePass{xfakebold}[2020/06/24]
```

```
2 \newcommand*{\LWR@HTML@setBold}{\booltrue{LWR@xfakebold}}
3 \LWR@formatted{setBold}
5 \newcommand*{\LWR@HTML@unsetBold}{\boolfalse{LWR@xfakebold}}
6 \LWR@formatted{unsetBold}
8 \renewcommand*{\LWR@applyxfakebold}{%
     \ifbool{LWR@xfakebold}{\LWR@print@setBold}{\LWR@print@unsetBold}%
10 }
```

For MathJax, xfakebold is ignored.

```
11 \begin{warpMathJax}
12 \CustomizeMathJax{\newcommand{\setBold}[1][]{}}
13 \CustomizeMathJax{\newcommand{\unsetBold}{}}
14 \end{warpMathJax}
```

File 575 lwarp-xfrac.sty

\$684

Package **xfrac**

(Emulates or patches code by The LATEX3 PROJECT.)

xfrac (*Pkg*) Supported by adding xfrac instances, and emulated for MATHJAX.

for HTML output:

1 \LWR@ProvidesPackagePass{xfrac}[2018-08-23]



In the user's document preamble, lwarp should be loaded after font-related setup. During HTML conversion, this font is used by lwarp to generate its initial PDF output containing HTML tags, later to be converted by *pdftotext* to a plain text file. While the text may be in any font which *pdftotext* can read, the math is directly converted into svG images using this same user-selected font. xfrac below is set for the Latin Modern (lmr) font. If another font is used, it may be desirable to redefine \xfracHTMLfontsize with a different em size.

 $\lceil \langle instance \rangle \rceil \{\langle num \rangle\} [\langle sep \rangle] \{\langle denom \rangle\}$

A text-mode instance for the default font is provided below. The numerator and denominator formats are adjusted to encase everything in HTML tags. \scalebox is made null inside the numerator and denominator, since the HTML tags should not be scaled, and we do not want to introduce additional HTML tags for scaling.

In math mode, which will appear inside a lateximage, no adjustments are necessary.

\xfracHTMLfontsize User-redefinable macro which controls the font size of the fraction.

2 \newcommand*{\xfracHTMLfontsize}{.6em}

instances Instances of xfrac for various font choices:

Produce css for a small raised numerator and a small denominator.

Scaling is turned off so that *pdftotext* correctly reads the result.

```
3 \DeclareInstance{xfrac}{default}{text}{
     numerator-format = {%
        \begingroup%
5
6
        \RenewDocumentCommand{\scalebox}{m o m}{##3}%
7
        \InlineClass{numerator}{#1}\,%
        \endgroup%
8
9
     },
10
     denominator-format = {%
11
        \begingroup%
        12
        \InlineClass{denominator}{#1}%
13
        \endgroup%
14
15
     },
```

For *pdftotext*, do not scale the text:

```
16
     scaling = false
17 }
18
19 \DeclareInstance{xfrac}{lmr}{text}{
20
     numerator-format = {%
21
         \begingroup%
         \RenewDocumentCommand{\scalebox}{m o m}{##3}%
22
23
         \InlineClass{numerator}{#1}\,%
24
         \endgroup%
     },
25
26
     denominator-format = {%
27
         \begingroup%
         28
29
         \InlineClass{denominator}{#1}%
30
         \endgroup%
31
     },
```

For *pdftotext*, do not scale the text:

```
scaling = false
32
33 }
34
35 \DeclareInstance{xfrac}{lmss}{text}{
      numerator-format = {%
36
37
          \begingroup%
          \RenewDocumentCommand{\scalebox}{m o m}{##3}%
38
39
          \InlineClass{numerator}{#1}\,%
40
          \endgroup%
      },
41
      denominator-format = {%
42
          \begingroup%
43
          \RenewDocumentCommand{\scalebox}{m o m}{##3}%
44
45
          \InlineClass{denominator}{#1}%
          \endgroup%
46
47
      },
```

For *pdftotext*, do not scale the text:

```
48 scaling = false
```

```
49 }
50
51 \DeclareInstance{xfrac}{lmtt}{text}{
      numerator-format = {%
53
          \begingroup%
          \RenewDocumentCommand{\scalebox}{m o m}{##3}%
54
          \InlineClass{numerator}{#1}\,%
55
          \endgroup%
56
57
      },
      denominator-format = {%
58
59
          \begingroup%
60
          \RenewDocumentCommand{\scalebox}{m o m}{##3}%
61
          \InlineClass{denominator}{#1}%
62
          \endgroup%
63
      },
For pdftotext, do not scale the text:
      scaling = false
64
65 }
For MATHJAX:
66 \begin{warpMathJax}
 67 \customizeMathJax{\newcommand{\LWRsfrac}[2][/]{{}^\LWRsfracnumerator\\!#1{}_{#2}}} 
68 \verb|\CustomizeMathJax{\newcommand{\sfrac}[2][]{\def\LWRsfracnumerator{\#2}\LWRsfrac}}|
69 \end{warpMathJax}
```

File 576 lwarp-xltabular.sty

Package xltabular \$685

(Emulates or patches code by Rolf Niepraschk, Herbert Voss.)

xltabular (*Pkg*) xltabular is emulated by lwarp.

Relies on tabularx. for HTML output:

table numbering At present, an xltabular without a caption or with only a \caption* may be misnumbered in HTML, so it may be necessary to place at the end of the table:

\warpHTMLonly{\addtocounter{table}{-1}}

```
1 \RequirePackage{tabularx}
2 \RequirePackage{ltablex}
4 \LWR@ProvidesPackageDrop{xltabular}[2018/05/23]
6 \DeclareDocumentEnvironment{xltabular}{o m m}
7{\longtable{#3}}
8 {\endlongtable}
```

File 577 lwarp-xltxtra.sty Package xltxtra **§ 686** (Emulates or patches code by Will Robertson, Jonathan Kew.) xltxtra (Pkg) xltxtra is emulated. for HTML output: 1 \LWR@ProvidesPackageDrop{xltxtra}[2016/01/21] 2 \RequirePackage{realscripts} 3 \RequirePackage{metalogo} 4 \newcommand*\TeX@logo@spacing[6]{} 6 \newcommand*{\vfrac}[2]{% 7#1/\textsubscript{#2}% 8 } 10 \newcommand\namedglyph[1]{% \@tempcnta=\XeTeXglyphindex "#1"\relax 11 \ifnum\@tempcnta>0 12 \XeTeXglyph\@tempcnta 13 14 \xxt@namedglyph@fallback{#1}% 16 \fi} 17 18 \newcommand\xxt@namedglyph@fallback[1]{[#1]} 20 \DeclareDocumentCommand{\showhyphens}{m}{} File 578 lwarp-xmpincl.sty Package xmpincl \$687 (Emulates or patches code by Maarten Sneep.) xmpincl (Pkg) xmpincl is ignored. Discard all options for lwarp-xmpincl: for HTML output: 1 \LWR@ProvidesPackageDrop{xmpincl}[2008/05/10] 2 \newcommand*{\includexmp}[1]{} File 579 lwarp-xpiano.sty Package xpiano § 688

(Emulates or patches code by Enrico Gregorio.)

xpiano (Pkg) xpiano is patched for use by lwarp.

```
for HTML output:
                   1 \LWR@ProvidesPackagePass{xpiano}
                  2 \ExplSyntaxOn
                  3 \NewDocumentCommand{\LWR@print@keyboard}{ O{}m }
                  5\xpiano_keyboard:nn { #1 } { #2 }
                  6 }
                  8 \NewDocumentCommand{\LWR@HTML@keyboard}{ O{}m }
                  9 {
                  10 \begin{lateximage}*
                  11
                        [%
                            -xpiano-~\PackageDiagramAltText{}: \detokenize\expandafter{#2}%
                  12
                  13
                        [\detokenize\expandafter{#1}]
                  15\xpiano_keyboard:nn { #1 } { #2 }
                  16 \end{lateximage}
                  17 }
                  18 \ExplSyntaxOff
                  20 \LWR@formatted{keyboard}
```

File 580 lwarp-xpinyin.sty

§ 689 Package **xpinyin**

(Emulates or patches code by Soben Lee.)

xpinyin (*Pkg*) xpinyin is supported.

Pinyin is disabled for file names, the sidetoc, and regular footnotes, but is left enabled for minipage footnotes, as per the print mode.

for HTML output: 1 \LWR@ProvidesPackagePass{xpinyin}[2019-04-07]

The original's boxes are not used, instead the contents are used with <ruby>, <rt>, and <rp> tags per modern HTML. Color is detected. ratio is ignored for *pdftotext* to work correctly. Extra spaces are placed inside the tags to allow line breaks in the HTML text.

```
2 \ExplSyntaxOn
3 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_make_pinyin_box:nnn #1#2#3
4 {
      \color_group_begin: \color_ensure_current:
5
6
      \l__xpinyin_pinyin_box_hook_tl
     \renewcommand*{\l_xpinyin_ratio_tl}{1}% for pdftotext
8
      \__xpinyin_select_font:
      \clist_if_exist:cTF { c__xpinyin_multiple_ #1 _clist }
9
          { \l_xpinyin_multiple_tl \l_xpinyin_format_tl }
10
          { \l__xpinyin_format_tl }
11
12
      \ifdefempty{\l__xpinyin_format_tl}
13
          {#3}
          {\LWR@textcurrentcolor{#3}}
14
      \color_group_end:
15
```

```
16 }
17 \LWR@formatted{__xpinyin_make_pinyin_box:nnn}
18 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_CJKsymbol:nn #1#2
20
      \__xpinyin_leavevmode:
21
      \LWR@htmltagc{ruby}
      \__xpinyin_save_CJKsymbol:n {#2}\null% \null removes extra space
22
      \LWR@htmltagc{rp}(\LWR@htmltagc{/rp\space}
23
      \LWR@htmltagc{rt}
24
     \__xpinyin_make_pinyin_box:nnn {#1} {#2} { \use:c { c__xpinyin_ #1 _tl } }
25
      \LWR@htmltagc{/rt\space}
26
      \LWR@htmltagc{rp})\LWR@htmltagc{/rp\space}
27
      \LWR@htmltagc{/ruby\space}\null
28
29
30 \LWR@formatted{__xpinyin_CJKsymbol:nn}
31 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_single_CJKsymbol:nn #1#2
32
      \__xpinyin_leavevmode:
33
      \LWR@htmltagc{ruby}
34
      \__xpinyin_save_CJKsymbol:n {#1}\null% \null removes extra space
35
36
      \LWR@htmltagc{rp}(\LWR@htmltagc{/rp\space}
37
      \LWR@htmltagc{rt}
38
      \__xpinyin_make_pinyin_box:xnn
39
        { \_xpinyin_to\_unicode:n {#1} } {#1} { \_xpinyin\_pinyin:n {#2} }
40
      \LWR@htmltagc{/rt\space}
      \LWR@htmltagc{rp})\LWR@htmltagc{/rp\space}
41
      \LWR@htmltagc{/ruby\space}\null
42
43 }
44 \LWR@formatted{__xpinyin_single_CJKsymbol:nn}
46 \ExplSyntaxOff
The lwarp core uses the following to disable CJK xpinyin for filenames, sidetoc,
and footnotes.
47 \renewcommand*{\LWR@disablepinyin}{\disablepinyin}
49 \FilenameNullify{\LWR@disablepinyin}
```

File 581 lwarp-xr.sty

§ 690 Package XT

(Emulates or patches code by Jean-Pierre Drucbert, David Carlisle.)

xr (*Pkg*) xr is patched for use by lwarp. The *_html.aux file is used. \externaldocument is modified to also accept the optional arguments for xr-hyper, which currently uses xr for HTML output.

See section 5.18.

for HTML output: 1 \LWR@ProvidesPackagePass{xr}[2019/07/22]%

```
{\tt 2 \ LetLtxMacro \ LWR@orig@external document \ external document}
                       \label{lem:command} $$4 \RenewDocumentCommand{\externaldocument} {0() m 0()}{% }
                            \ifblank{#1}{%
                                 \LWR@orig@externaldocument{#3_html}%
                       6
                       7
                            }{%
                                 \LWR@orig@externaldocument[#1]{#3_html}%
                       8
                            }%
                       9
                      10 }
             File 582 lwarp-xr-hyper.sty
             Package xr-hyper
                       (Emulates or patches code by David Carlisle.)
       xr-hyper (Pkg) xr-hyper is replaced by xr, which is modified to accept the optional arguments for
                       \externaldocument. So far, no hyperlinks are provided for citations.
                       See section 5.18.
                       1 \LWR@ProvidesPackageDrop{xr-hyper}[2019/10/03]%
                       3 \LWR@origRequirePackage{lwarp-xr}
             File 583
                       lwarp-xtab.sty
            Package xtab
                       (Emulates or patches code by Peter Wilson.)
           xtab(Pkg) xtab is emulated.
                       1 \LWR@ProvidesPackageDrop{xtab}[2011/07/31]
Misplaced alignment
                       For \tablefirsthead, etc., enclose them as follows:
                            \StartDefiningTabulars
                            \tablefirsthead
                            \StopDefiningTabulars
                       See section 8.10.1.
                      supertabular and xtab are not supported inside a lateximage.
          lateximage
                       2 \newcommand{\LWRXT@firsthead}{}
                       4 \newcommand{\tablefirsthead}[1]{%
```

\long\gdef\LWRXT@firsthead{#1}%

8 \newcommand{\tablehead}[1]{}

10 \newcommand{\tablelasthead}[1]{}

\$691

\$692

for HTML output:

for HTML output:

tab character &

5 6 }

```
12 \newcommand{\notablelasthead}{}
14 \newcommand{\tabletail}[1]{}
16 \newcommand{\LWRXT@lasttail}{}
18 \newcommand{\tablelasttail}[1]{%
      \long\gdef\LWRXT@lasttail{#1}%
19
20 }
21 \newcommand{\tablecaption}[2][]{%
      \long\gdef\LWRXT@caption{%
          \ifblank{#1}%
24
               {\operatorname{(caption}{#2})}%
25
               {\caption[#1]{#2}}%
26
      }%
27 }
28
29 \let\topcaption\tablecaption
30 \let\bottomcaption\tablecaption
31 \newcommand*{\LWRXT@caption}{}
33 \newcommand*{\shrinkheight}[1]{}
35 \newcommand*{\xentrystretch}[1]{}
37 \NewDocumentEnvironment{xtabular}{s o m}
38 {%
39 \LWR@traceinfo{xtabular}%
40 \table%
41 \LWRXT@caption%
42 \begin{tabular}{#3}%
43 \TabularMacro\ifdefvoid{\LWRXT@firsthead}%
44 {\LWR@getmynexttoken}%
45 {\tt \{\expandafter\LWR@getmynexttoken\LWRXT@firsthead\}\%}
46 }%
47 {%
48 \ifdefvoid{\LWRXT@lasttail}%
49 { }%
50 {%
51 \TabularMacro\ResumeTabular%
52 \LWRXT@lasttail%
53 }%
54 \end{tabular}%
55 \endtable%
56 \gdef\LWRXT@caption{}%
57 \LWR@traceinfo{xtabular done}%
58 }
60 \NewDocumentEnvironment{mpxtabular}{s o m}
61 {\minipage{\linewidth}\xtabular{#3}}
62 {\endxtabular\endminipage}
```

File 584 lwarp-xunicode.sty

§ 693 Package **xunicode**

xunicode (*Pkg*) Error if xunicode is loaded after lwarp.

Patch lwarp-xunicode, but also verify that is was loaded before lwarp:

for HTML output:

```
1 \LWR@loadbefore{xunicode}%
2
3 \LWR@ProvidesPackagePass{xunicode}[2011/09/09]
```

\textcircled becomes a span with a rounded border. \providecommand is used to avoid conflict with textcomp.

```
4 \providecommand*{\LWR@HTML@textcircled}[1]{%
5 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
6 }
7
8 \LWR@formatted{textcircled}
```

Nullify xunicode macros when generating filenames:

```
9 \FilenameNullify{%
      \renewcommand*{\textdegree}{}%
10
      \renewcommand*{\textcelsius}{}%
11
12
      \renewcommand*{\textohm}{}%
      \renewcommand*{\textmu}{}%
13
      \renewcommand*{\textlquill}{}%
14
15
      \renewcommand*{\textrquill}{}%
16
      \renewcommand*{\textcircledP}{}%
      \renewcommand*{\texttwelveudash}{}%
17
      \renewcommand*{\textthreequartersemdash}{}%
18
      \renewcommand*{\textmho}{}%
19
      \renewcommand*{\textnaira}{}%
20
      \renewcommand*{\textpeso}{}%
21
      \renewcommand*{\textrecipe}{}%
22
23
      \renewcommand*{\textinterrobang}{}%
      \renewcommand*{\textinterrobangdown}{}%
24
25
      \renewcommand*{\textperthousand}{}%
26
      \renewcommand*{\textpertenthousand}{}%
27
      \renewcommand*{\textbaht}{}%
28
      \renewcommand*{\textdiscount}{}%
      \renewcommand*{\textservicemark}{}%
29
      \renewcommand*{\textcircled}[1]{#1}%
30
      \renewcommand*{\capitalcedilla}[1]{#1}%
31
32
      \renewcommand*{\capitalogonek}[1]{#1}%
33
      \renewcommand*{\capitalgrave}[1]{#1}%
      \renewcommand*{\capitalacute}[1]{#1}%
      \renewcommand*{\capitalcircumflex}[1]{#1}%
      \renewcommand*{\capitaltilde}[1]{#1}%
36
37
      \renewcommand*{\capitaldieresis}[1]{#1}%
      \renewcommand*{\capitalhungarumlaut}[1]{#1}%
38
      \renewcommand*{\capitalring}[1]{#1}%
39
      \renewcommand*{\capitalcaron}[1]{#1}%
40
```

\renewcommand*{\capitalbreve}[1]{#1}%

41

15

16

17 }

```
\renewcommand*{\capitalmacron}[1]{#1}%
                        \renewcommand*{\capitaldotaccent}[1]{#1}%
                  44}% FilenameNullify
         File 585 lwarp-xurl.sty
         Package xurl
$694
        xurl (Pkg) xurl is ignored.
for HTML output:
                   1 \LWR@ProvidesPackageDrop{xurl}[2020/01/14]
                   3 \def\useOriginalUrlSetting{}
         File 586 lwarp-xy.sty
         Package XY
§ 695
                   (Emulates or patches code by Kristoffer H. Rose, Ross Moore.)
         xy(Pkg) xy is patched for use by lwarp.
for HTML output:
                   1 \LWR@ProvidesPackagePass{xy}[2013/10/06]
                   After xy modules have been loaded:
                   2 \AtBeginDocument{
                   The original definitions without a lateximage:
                   3 \LetLtxMacro\LWR@orig@xy\xy
                   4 \LetLtxMacro\LWR@orig@endxy\endxy
                   The outer-most xy environment is placed in a lateximage, but not more than one
                   level deep, which would conflict with xy:
                   5 \renewcommand*{\xy}{%
                        \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
                            {\addtocounter{LWR@lateximagedepth}{1}}%
                   7
                             {\begin{lateximage}[-xy-~\PackageDiagramAltText]}%
                   8
                        \LWR@orig@xy%
                   9
                  10 }
                  11
                  12 \renewcommand*{\endxy}{%
                        \LWR@orig@endxy%
                  13
                        \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
                  14
```

The \xybox must use the original definitions of \xy, \endxy:

{\end{lateximage}}%

{\addtocounter{LWR@lateximagedepth}{-1}}%

```
18 \def\xybox#1{%
                       \LWR@orig@xy#1\LWR@orig@endxy%
                       \Edge@c={\rectangleEdge}\computeLeftUpness@%
                 21 }
                  If \xygraph is used, it is placed inside a lateximage:
                 22 \@ifundefined{xygraph}{}{
                 24 \LetLtxMacro\LWR@origxygraph\xygraph
                 26 \renewcommand{\xygraph}[1]{%
                       \begin{lateximage}[-xy- xygraph \PackageDiagramAltText]
                       \LWR@origxygraph{#1}
                       \end{lateximage}
                 30 }
                 32}% xygraph defined
                 34}% AtBeginDocument
         File 587 lwarp-zhlineskip.sty
         Package zhlineskip
$696
 zhlineskip (Pkg) zhlineskip is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{zhlineskip}[2019/05/15]
                  2 \newcommand*\SetTextEnvironmentSinglespace[1]{}
                  3 \newcommand*\RestoreTextEnvironmentLeading[1]{}
                  4 \newcommand*\SetMathEnvironmentSinglespace[1]{}
                  5 \newcommand*\RestoreMathEnvironmentLeading[1]{}
         File 588 lwarp-zwpagelayout.sty
         Package zwpagelayout
$697
                  (Emulates or patches code by Zdeněk Wagner.)
zwpagelayout (Pkg)
                  zwpagelayout is ignored.
for HTML output:
                  1 \LWR@ProvidesPackageDrop{zwpagelayout}[2013/01/13]
                  2 \def\noBboxes{}
                  3 \@onlypreamble\noBboxes
                  5\expandafter\ifx\csname definecolor\endcsname\relax \else
                     \definecolor{cmykblack}{cmyk}{0,0,0,1}
                     \definecolor{grblack}{gray}{0}
                  8 %
                      \ifzwpl@redefineblack
                         9 %
                  10 %
```

11 \definecolor{cmykred}{cmyk}{0,1,1,0}

```
\definecolor{cmykgreen}{cmyk}{1,0,1,0}
    \definecolor{cmykblue}{cmyk}{1,1,0,0}
    \definecolor{rgbred}{rgb}{1,0,0}
15 \definecolor{rgbgreen}{rgb}{0,1,0}
16 \definecolor{rgbblue}{rgb}{0,0,1}
17 %
    \ifzwpl@redefinetocmyk
        \definecolor{red}{cmyk}{0,1,1,0}
18 %
19 %
        \definecolor{green}{cmyk}{1,0,1,0}
        20 %
21 %
      \fi
22\fi
24 \let\OverprintXeTeXExtGState\relax
26 \DeclareRobustCommand\SetOverprint{\ignorespaces}
27 \DeclareRobustCommand\SetKnockout{\ignorespaces}
28 \DeclareRobustCommand\textoverprint[1]{{\SetOverprint#1}}
29 \DeclareRobustCommand\textknockout[1]{{\SetKnockout#1}}
31 \def\SetPDFminorversion#1{}
32 \@onlypreamble\SetPDFminorversion
34 \newcommand*\Vcorr{}
36 \DeclareRobustCommand\vb[1][]{}
37 \NewDocumentCommand{\NewOddPage}{* o}{}
38 \NewDocumentCommand{\NewEvenPage}{* o}{}
39 \def\SetOddPageMessage#{\gdef\ZW@oddwarning}
40 \def\SetEvenPageMessage#{\gdef\Z@@evenwarning}
{\tt 41 \backslash def\backslash ZW@oddwarning\{Empty\ page\ inserted\}\backslash Let\backslash ZW@evenwarning\backslash ZW@oddwarning\}} \\
42
43 \def\clap#1{#1}
45 \def\CropFlap{2in}
46 \def\CropSpine{1in}
47 \def\CropXSpine{1in}
48 \def\CropXtrim{.25in}
49 \def\CropYtrim{.25in}
50 \def\UserWidth{5in}
51 \def\UserLeftMargin{1in}
52 \def\UserRightMargin{1in}
53 \def\UserTopMargin{1in}
54 \def\UserBotMargin{1in}
55 \def\thePageNumber{\LWR@origpound\,\arabic{page}}
57 \def\ifcaseZWdriver{\ifcase2}
58 \else
59 \def\ifcaseZWdriver{\ifcase1}
60\fi
61 \DeclareRobustCommand\ZWifdriver[2]{}
```

File 589 lwarp-patch-komascript.sty

§ 698 Package patch-komascript

lwarp-patch-komascript (*Pkg*) Patches for komascript classes.

lwarp loads this package when scrbook, scrartcl, or scrreprt classes are detected.

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

\captionformat, \figureformat, and \tableformat are not yet emulated.

Not fully tested! Please send bug reports!

Some features have not yet been tested. Please contact the author with any bug reports.

for HTML output:

```
1\ProvidesPackage{lwarp-patch-komascript}
```

typearea is emulated.

```
2 \RequirePackage{lwarp-typearea}
```

tocbasic is emulated.

```
3 \RequirePackage{lwarp-tocbasic}
```

scrextend patches most of the new macros.

```
4 \RequirePackage{lwarp-scrextend}
```

Indexing macros, simplified for lwarp:

```
5 \AtBeginDocument{
7\renewcommand*{\idx@heading}{%
   \idx@@heading{\indexname}%
9 }
11 \renewenvironment{theindex}{%
12 \idx@heading%
13 \index@preamble\par\nobreak
      \LetLtxMacro\item\LWR@indexitem%
14
      \LetLtxMacro\subitem\LWR@indexsubitem%
15
      \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
16
17 }
18 { }
20 \renewcommand*\indexspace{}
22}% AtBeginDocument
```

The \minisec is placed inside a <div> of class minisec.

```
23 \renewcommand*{\min}[1]{
      \begin{BlockClass}{minisec}
25
26
      \end{BlockClass}
27 }
```

The part and chapter preambles are placed as plain text just after each heading.

```
28 \@ifundefined{setpartpreamble}{}{
29 \RenewDocumentCommand{\setpartpreamble}{o o +m}{%
      \renewcommand{\part@preamble}{#3}%
```

```
31 }
32 }
34 \@ifundefined{setchapterpreamble}{}{
35 \RenewDocumentCommand{\setchapterpreamble}{o o +m}{%
      \renewcommand{\chapter@preamble}{#3}%
37 }
38 }
Do not use \chaptername:
39 \renewcommand*{\LWR@printchaptername}{}
Simple captions are used in all cases.
40 \AtBeginDocument{
41 \AtBeginDocument{
      \LetLtxMacro\captionbelow\caption
43
      \LetLtxMacro\captionabove\caption
44
      \LetLtxMacro\captionofbelow\captionof
45
      \LetLtxMacro\captionofabove\captionof
46
47 }
48 }
50 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
51 {}
52 {%
53
      \IfValueTF{#1}%
54
          {\caption[#1]{#2}}%
55
          {\caption{#2}}%
56 }
58 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
59 { }
60 {%
61
      \IfValueTF{#2}%
62
          {\captionof{#1}[#2]{#3}}%
63
          {\captionof{#1}{#3}}%
64 }
66 \RenewDocumentCommand{\setcapindent}{s m}{}
67 \renewcommand*{\setcaphanging}{}
68 \renewcommand*{\setcapwidth}[2][]{}
69 \renewcommand*{\setcapdynwidth}[2][]{}
70 \RenewDocumentCommand{\setcapmargin}{s o m}{}
```

File 590 lwarp-patch-memoir.sty

Package patch-memoir \$699

(Emulates or patches code by Peter Wilson.)

lwarp-patch-memoir (Pkg) Patches for memoir class.

⚠ Not fully tested! Please send bug reports!

lwarp loads this package when the memoir class is detected.

 \triangle captions lwarp uses caption, which causes a warning from memoir. This is normal. Adjust captions via caption, instead of memoir.

options clash

While emulating memoir, lwarp pre-loads a number of packages (section 699.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading lwarp:

```
\documentclass{memoir}
\PassOptionsToPackage{options_list}{package_name}
\usepackage{lwarp}
\usepackage{package_name}
```

version numbers

memoir emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since lwarp is intended to support the freestanding packages, which are often newer than the date declared by memoir, it is hoped that memoir will update and change its emulated version numbers to match.

\label(bookmark){tag} \label accepts an optional (bookmark) argument, but this is ignored in HTML.

comment

The comment environment is from the comment package, and thus requires that the \begin and \end each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

\newcomment

Comments defined with \newcomment use memoir's defintions, and behave as expected, where the \begin and \end do have to each be on its own line.

verbatim footnotes \verbfootnote is not supported.

\newfootnoteseries \newfootnoteseries, etc. are not supported.

page notes

lwarp loads pagenote to perform memoir's pagenote functions, but there are minor differences in \pagenotesubhead and related macros.

page notes with cleveref To add support for pagenotes with cleveref, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

page note \nameref

Note that for print mode, \nameref print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

poems Poem numbering is not supported.

verbatim

The verbatim environment does not yet support the memoir enhancements. It is currently recommended to load and use fancyvrb instead.

glossaries The memoir glossary system is not yet supported by lwarpmk. The glossaries pack-

age may be used instead, but does require the glossary entries be changed from the memoir syntax to the glossaries syntax.

for HTML output:

1 \ProvidesPackage{lwarp-patch-memoir}

§ 699.1 Packages

These are pre-loaded to provide emulation for many of memoir's functions. memoir pretends that abstract, etc. are already loaded, via its "emulated" package mechanism, but lwarp is directly loading the "lwarp-" version of each, which happens to avoid memoir's emulation system.

```
2 \RequirePackage{lwarp-abstract}% req'd
3% \RequirePackage{lwarp-array}% no longer req'd
4\RequirePackage{lwarp-booktabs}% req'd
5% \RequirePackage{lwarp-ccaption}% emualated below
6 \RequirePackage{lwarp-changepage}% req'd
7 \RequirePackage{lwarp-crop}
8% \RequirePackage{lwarp-dcolumn}% no longer req'd
9 \RequirePackage{lwarp-enumerate}% req'd
10 \RequirePackage{lwarp-epigraph}% req'd
11 \RequirePackage{lwarp-fancyvrb}% req'd
12 \RequirePackage{lwarp-footmisc}% req'd
13 \let\framed\relax \let\endframed\relax
14 \let\shaded\relax \let\endshaded\relax
15 \let\leftbar\relax \let\endleftbar\relax
16 \let\snugshade\relax \let\endsnugshade\relax
17 \RequirePackage{lwarp-framed}% req'd
19 \RequirePackage{lwarp-hanging}% req'd
20 \RequirePackage{lwarp-makeidx}% req'd
21 \DisemulatePackage{moreverb}
22 \RequirePackage{lwarp-moreverb}
23 \RequirePackage{lwarp-mparhack}
24 \RequirePackage{lwarp-needspace}% req'd
25 \RequirePackage{lwarp-nextpage}% req'd
26 \RequirePackage{lwarp-pagenote}% req'd
27 \RequirePackage{lwarp-parskip}
28 \RequirePackage{lwarp-setspace}% req'd
29 \RequirePackage{lwarp-showidx}
30 \makeindex
31% \RequirePackage{lwarp-tabularx}% no longer req'd
32 \RequirePackage{lwarp-titling}% req'd
33 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
34 \RequirePackage{lwarp-tocloft}% req'd
35 \RequirePackage{lwarp-verse}% req'd
```

§ 699.2 Label handling

Insert the lwarp label mechanism into the memoir package mechanism:

• \LWR@orig@label is the kernel version, or nameref version if loaded before lwarp.

- lwarp's \LWR@new@label uses \LWR@orig@label.
- cleveref then encapsulates all the above with \cref@old@label.
- For a subcaption, cleveref modifies memoir's \sf@memsub@label, but that change is undone by lwarp.
- memoir uses the final \label for subcaptions.

Patches for subfloats to support additional lwarp labels. This is the non-hyperref version from memoir.

```
36 \AtBeginDocument{
      \renewcommand*{\sf@@memsub@label}[1]{%
38
          \@bsphack
39 %
            \@mem@kernel@label{#1}%
40
          \cref@label{#1}%
                                                     lwarp
41
          \LWR@label@createtag{sub@#1}%
                                                     lwarp
42
          \protected@write\@auxout{}{%
               \string\newlabel{sub@#1}%
43
44
               {%
                   {\@nameuse{@@thesub\@captype}}%
45
                   {\thepage}%
46
                   {\detokenize\expandafter{\@currentlabelname}}% name
47
                   {#1}% Href
48
                   {}% reserved
49
               }%
50
51
          }%
52
           \LWR@write@lwarplabel{sub@#1}%
                                                     lwarp
53
          \@esphack
54
      }
55 }
```

§ 699.3 Page layout

memoir already set the page size to a default, so it must be forced large for lwarp's use, to avoid tag overflows off the page.

```
56\setstocksize{190in}{20in}
57\setlrmarginsandblock{2in}{2in}{*}
58\setulmarginsandblock{1in}{1in}{*}
59\renewcommand*{\stockavi}{}
60\renewcommand*{\stockav}{}
61\renewcommand*{\stockaiv}{}
62\renewcommand*{\stockaiii}{}
63\renewcommand*{\stockavii}{}
64\renewcommand*{\stockbvi}{}
65\renewcommand*{\stockbvi}{}
66\renewcommand*{\stockbvi}{}
67\renewcommand*{\stockbiii}{}
```

```
68 \renewcommand*{\stockbvii}{}
69% \renewcommand*{\stockmetriccrownvo}{}% in docs but not in the package
70 \renewcommand*{\stockmlargecrownvo}{}
71 \renewcommand*{\stockmdemyvo}{}
72 \renewcommand*{\stockmsmallroyalvo}{}
73 \renewcommand*{\pageavi}{}
74 \renewcommand*{\pageavii}{}
75 \renewcommand*{\pageav}{}
76 \renewcommand*{\pageaiv}{}
77\renewcommand*{\pageaiii}{}
78 \renewcommand*{\pagebvi}{}
79 \renewcommand*{\pagebvii}{}
80 \renewcommand*{\pagebv}{}
81 \renewcommand*{\pagebiv}{}
82 \renewcommand*{\pagebiii}{}
83% \renewcommand*{\pagemetriccrownvo}{}% in docs but not in the package
84 \renewcommand*{\pagemlargecrownvo}{}
85 \renewcommand*{\pagemdemyvo}{}
86 \renewcommand*{\pagemsmallroyalvo}{}
88 \renewcommand*{\stockdbill}{}
89 \renewcommand*{\stockstatement}{}
90 \renewcommand*{\stockexecutive}{}
91 \renewcommand*{\stockletter}{}
92 \renewcommand*{\stockold}{}
93 \renewcommand*{\stocklegal}{}
94 \renewcommand*{\stockledger}{}
95 \renewcommand*{\stockbroadsheet}{}
96 \renewcommand*{\pagedbill}{}
97 \renewcommand*{\pagestatement}{}
98 \renewcommand*{\pageexecutive}{}
99 \renewcommand*{\pageletter}{}
100 \renewcommand*{\pageold}{}
101 \renewcommand*{\pagelegal}{}
102 \renewcommand*{\pageledger}{}
103 \renewcommand*{\pagebroadsheet}{}
105 \renewcommand*{\stockpottvo}{}
106 \renewcommand*{\stockfoolscapvo}{}
107 \renewcommand*{\stockcrownvo}{}
108 \renewcommand*{\stockpostvo}{}
109 \renewcommand*{\stocklargecrownvo}{}
110 \renewcommand*{\stocklargepostvo}{}
111 \renewcommand*{\stocksmalldemyvo}{}
112 \renewcommand*{\stockdemyvo}{}
113 \renewcommand*{\stockmediumvo}{}
114 \renewcommand*{\stocksmallroyalvo}{}
115 \renewcommand*{\stockroyalvo}{}
116 \renewcommand*{\stocksuperroyalvo}{}
117 \renewcommand*{\stockimperialvo}{}
118 \renewcommand*{\pagepottvo}{}
119 \renewcommand*{\pagefoolscapvo}{}
120 \renewcommand*{\pagecrownvo}{}
121 \renewcommand*{\pagepostvo}{}
122 \renewcommand*{\pagelargecrownvo}{}
123 \renewcommand*{\pagelargepostvo}{}
124 \renewcommand*{\pagesmalldemyvo}{}
125 \renewcommand*{\pagedemyvo}{}
126 \renewcommand*{\pagemediumvo}{}
127 \renewcommand*{\pagesmallroyalvo}{}
```

```
128 \renewcommand*{\pageroyalvo}{}
129 \renewcommand*{\pagesuperroyalvo}{}
130 \renewcommand*{\pageimperialvo}{}
132 \renewcommand*{\memfontfamily}{}
133 \renewcommand*{\memfontenc}{}
134 \renewcommand*{\memfontpack}{}
136 \renewcommand*{\anyptfilebase}{}
137 \renewcommand*{\anyptsize}{10}
139 \renewcommand*{\setstocksize}[2]{}
140 \renewcommand*{\settrimmedsize}[3]{}
141 \renewcommand*{\settrims}[2]{}
143% \newlength{\lxvchars}
144% \setlength{\lxvchars}{305pt}
145% \newlength{\xlvchars}
146% \setlength{\xlvchars}{190pt}
147 \renewcommand*{\setxlvchars}[1]{}
148 \renewcommand*{\setlxvchars}[1]{}
149
150 \renewcommand*{\settypeblocksize}[3]{}
151 \renewcommand*{\setlrmargins}[3]{}
152 \renewcommand*{\setlrmarginsandblock}[3]{}
153 \renewcommand*{\setbinding}[1]{}
154 \renewcommand*{\setulmargins}[3]{}
155 \renewcommand*{\setulmarginsandblock}[3]{}
157
158 \renewcommand*{\setheadfoot}[2]{}
159 \renewcommand*{\setheaderspaces}[3]{}
160 \renewcommand*{\setmarginnotes}[3]{}
161 \renewcommand*{\setfootins}[2]{}
162 \renewcommand*{\checkandfixthelayout}[1][]{}
163 \renewcommand*{\checkthelayout}[1]{}
164 \renewcommand*{\fixthelayout}{}
165 %
166% \newlength{\stockheight}
167% \newlength{\trimtop}
168% \newlength{\trimedge}
169 % \newlength{\stockwidth}
170% \newlength{\spinemargin}
171 % \newlength{\foremargin}
172 % \newlength{\uppermargin}
173 % \newlength{\headmargin}
175 \renewcommand*{\typeoutlayout}{}
176 \renewcommand*{\typeoutstandardlayout}{}
177 \renewcommand*{\settypeoutlayoutunit}[1]{}
178 \renewcommand*{\fixpdflayout}{}
179 \renewcommand*{\fixdvipslayout}{}
181 \renewcommand*{\medievalpage}[1][]{}
182 \renewcommand*{\isopage}[1][]{}
183 \renewcommand*{\semiisopage}[1][]{}
185 \renewcommand{\setpagebl}[3]{}
186 \renewcommand{\setpageml}[3]{}
187 \renewcommand{\setpagetl}[3]{}
```

```
188 \renewcommand{\setpagetm}[3]{}
189 \renewcommand{\setpagetr}[3]{}
190 \renewcommand{\setpagemr}[3]{}
191 \renewcommand{\setpagebr}[3]{}
192 \renewcommand{\setpagebm}[3]{}
193 \renewcommand{\setpagecc}[3]{}
```

§ 699.4 Text and fonts

```
194 \let\miniscule\tiny
195 \let\HUGE\Huge
197 \renewcommand*{\abnormalparskip}[1]{}
198 \renewcommand*{\nonzeroparskip}{}
199 \renewcommand*{\traditionalparskip}{}
201 \let\onelineskip\baselineskip
203 \let\OnehalfSpacing\onehalfspacing
204 \let\DoubleSpacing\doublespacing
205 \renewcommand*{\setPagenoteSpacing}[1]{}
206\renewcommand*{\setFloatSpacing}[1]{}
207 \renewcommand{\SingleSpacing}{\@ifstar\singlespacing\singlespacing}
208 \let\setSingleSpace\SetSinglespace
209 \let\SingleSpace\singlespace
210 \let\endSingleSpace\endsinglespace
211 \let\Spacing\spacing
212 \let\endSpacing\endspacing
213 \let\OnehalfSpace\onehalfspace
214 \let\endOnehalfSpace\endonehalfspace
215 \csletcs{OnehalfSpace*}{onehalfspace}
216 \csletcs{endOnehalfSpace*}{endonehalfspace}
217 \let\DoubleSpace\doublespace
218 \let\endDoubleSpace\enddoublespace
219 \csletcs{DoubleSpace*}{doublespace}
220 \csletcs{endDoubleSpace*}{enddoublespace}
221 \renewcommand*{\setDisplayskipStretch}[1]{}
222 \renewcommand*{\memdskipstretch}{}
223 \renewcommand*{\noDisplayskipStretch}{}
224 \renewcommand*{\memdskips}{}
226 \renewcommand*{\midsloppy}{}
227 \renewenvironment*{midsloppypar}{}{}
229 \renewcommand*{\sloppybottom}{}
```

§ 699.5 **Titles**

```
230 \csletcs{titlingpage*}{titlingpage}
231 \csletcs{endtitlingpage*}{endtitlingpage}
232 \let\titlingpageend\relax
233 \newcommand{\titlingpageend}[2]{}
234 \let\andnext\and
235 \renewcommand*{\thanksmarkstyle}[1]{}
236
237 \renewcommand{\thanksfootmark}{%
238  \thanksscript{\tamark}%
239 }
```

```
241% \newlength{\thanksmarksep}% already provided by memoir
       242 \renewcommand\titlingpageend[2]{}
§ 699.6 Abstracts
       243% \newlength{\absindent}
       244% \newlength{\absparsep}
       245 \renewcommand*{\abstractcol}{}
       246 \renewcommand*{\abstractintoc}{}
        247 \renewcommand*{\abstractnum}{}
        248 \renewcommand*{\abstractrunin}{}
§ 699.7 Docment divisions
          * (\langle 2:PDF \ name \rangle) [\langle 3:TOC \ name \rangle] [\langle 4:PDF \ name \rangle] (\langle 5:PDF \ name \rangle) {\langle 6:name \rangle}
        249 \DeclareDocumentCommand{\book}{s d() o o d() m}{%} (x \in \mathbb{R}^n)
               \LWR@section{#1}{#3}{#6}{book}%
       250
       251 }
       252 \def\@apppage{%
               \part*{\appendixpagename}
       253
        255 \renewcommand\mempreaddapppagetotochook{}
        256 \renewcommand\mempostaddapppagetotochook{}
        258 \def\@sapppage{%
        259
               \part*{\appendixpagename}
        260 }
       261 \DeclareDocumentCommand{\mainmatter}{s}{%
               \booltrue{LWR@mainmatter}%
        262
        263 }
        264
        265 \DeclareDocumentCommand{\frontmatter}{s}{%
               \boolfalse{LWR@mainmatter}%
        267 }
       268 \renewcommand*{\raggedbottomsection}{}
       269 \renewcommand*{\normalbottomsection}{}
       270 \renewcommand*{\bottomsectionskip}{}
       271 \renewcommand*{\bottomsectionpenalty}{}
        272 \csletcs{appendixpage*}{appendixpage}
        273 \renewcommand*{\namedsubappendices}{}
        274 \renewcommand*{\unnamedsubappendices}{}
        275 \renewcommand*{\beforebookskip}{}
       276 \renewcommand*{\afterbookskip}{}
       277 \renewcommand*{\beforepartskip}{}
       278 \renewcommand*{\afterpartskip}{}
       279 \renewcommand*{\midbookskip}{}
       280 \renewcommand*{\midpartskip}{}
       281 \renewcommand*{\printbookname}{}
       282 \renewcommand*{\booknamefont}{}
       283 \renewcommand*{\booknamenum}{}
```

284 \renewcommand*{\printbooknum}{}

\book

```
285 \renewcommand*{\booknumfont}{}
286 \renewcommand*{\printpartname}{}
287 \renewcommand*{\partnamefont}{}
288 \renewcommand*{\partnamenum}{}
289 \renewcommand*{\printpartnum}{}
290 \renewcommand*{\partnumfont}{}
291 \renewcommand*{\printbooktitle}[1]{}
292 \renewcommand*{\booktitlefont}{}
293 \renewcommand{\printparttitle}[1]{}
294 \renewcommand*{\parttitlefont}{}
295 \renewcommand*{\bookpageend}{}
296 \renewcommand*{\bookblankpage}{}
297 \renewcommand*{\nobookblankpage}{}
298 \renewcommand*{\partpageend}{}
299 \renewcommand*{\partblankpage}{}
300 \renewcommand*{\nopartblankpage}{}
301 \RenewDocumentCommand{\newleadpage}{s o m m}{}% todo
302 \RenewDocumentCommand{\renewleadpage}{s o m m}{}% todo
303 \renewcommand*{\leadpagetoclevel}{chapter}
304
305 \renewcommand*{\openright}{}
306 \renewcommand*{\openleft}{}
307 \renewcommand*{\openany}{}
308 \renewcommand*{\clearforchapter}{}
309 \renewcommand*{\memendofchapterhook}{}
310 \renewcommand*{\chapterheadstart}{}
311 % \newlength{\beforechapskip}
312 \renewcommand*{\afterchapternum}{}
313 % \newlength{\midchapskip}
314 \renewcommand*{\afterchaptertitle}{}
315 % \newlength{\afterchapskip}
316 \renewcommand*{\printchaptername}{}
317 \renewcommand*{\chapnamefont}{}
318 \renewcommand*{\chapternamenum}{}
319 \renewcommand*{\printchapternum}{}
320 \renewcommand*{\chapnumfont}{}
321 \renewcommand{\printchaptertitle}[1]{}
322 \renewcommand*{\chaptitlefont}{}
323 \renewcommand*{\printchapternonum}{}
324 \renewcommand*{\indentafterchapter}{}
325 \renewcommand*{\noindentafterchapter}{}
326 \renewcommand*{\insertchapterspace}{}
328 \renewcommand*{\chapterstyle}[1]{}
329 \renewcommand{\makechapterstyle}[2]{}
330 \renewcommand*{\chapindent}{}
331 \let\chapterprecis\cftchapterprecis
332 \let\chapterprecishere\cftchapterprecishere
333 \let\chapterprecistoc\cftchapterprecistoc
334 \renewcommand*{\precisfont}{}
335 \renewcommand*{\prechapterprecis}{}
336 \renewcommand*{\postchapterprecis}{}
337 \renewcommand{\precistoctext}[1]{}
338 \renewcommand*{\precistocfont}{}
339 \renewcommand*{\precistocformat}{}
340% \newlength{\prechapterprecisshift}
342 \renewcommand*{\setbeforesecskip}[1]{}
343 \renewcommand*{\setaftersecskip}[1]{}
344 \renewcommand*{\setsecindent}[1]{}
```

```
345 \renewcommand*{\setsecheadstyle}[1]{}
346 \renewcommand*{\setbeforesubsecskip}[1]{}
347 \renewcommand*{\setaftersubsecskip}[1]{}
348 \renewcommand*{\setsubsecindent}[1]{}
349 \renewcommand*{\setsubsecheadstyle}[1]{}
350 \renewcommand*{\setbeforesubsubsecskip}[1]{}
351 \renewcommand*{\setaftersubsubsecskip}[1]{}
353 \renewcommand*{\setsubsubsecheadstyle}[1]{}
354\renewcommand*{\setbeforeparaskip}[1]{}
355 \renewcommand*{\setafterparaskip}[1]{}
356 \renewcommand*{\setparaindent}[1]{}
357 \renewcommand*{\setparaheadstyle}[1]{}
358 \renewcommand*{\setbeforesubparaskip}[1]{}
359 \renewcommand*{\setaftersubparaskip}[1]{}
360 \renewcommand*{\setsubparaindent}[1]{}
361 \renewcommand*{\setsubparaheadstyle}[1]{}
362 \renewcommand{\@hangfrom}[1]{#1}
363 \renewcommand{\sethangfrom}[1]{}
364 \renewcommand{\setsecnumformat}[1]{}
366 \renewcommand*{\hangsecnum}{}
367 \renewcommand*{\defaultsecnum}{}
369 \renewcommand*{\sechook}{}
370 \renewcommand{\setsechook}[1]{}
371 \renewcommand*{\subsechook}{}
372 \renewcommand{\setsubsechook}[1]{}
373 \renewcommand*{\subsubsechook}{}
374 \renewcommand{\setsubsubsechook}[1]{}
375 \renewcommand*{\parahook}{}
376 \renewcommand{\setparahook}[1]{}
377 \renewcommand*{\subparahook}{}
378 \renewcommand{\setsubparahook}[1]{}
380 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
382 \RenewDocumentCommand{\fancybreak}{s +m}{%
      \begin{center}#2\end{center}%
383
384 }
385
386 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
       \begin{center}#4\end{center}%
387
388 }
389
390 \RenewDocumentCommand{\pfbreak}{s}{%
      \begin{center}
392
      \pfbreakdisplay
      \end{center}
393
394 }
395
396% \newlength{\pfbreakskip}
397 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
399 \renewcommand{\makeheadstyles}[2]{}
400 \renewcommand*{\headstyles}[1]{}
```

§ 699.8 Pagination and headers

```
401 \renewcommand*{\savepagenumber}{}
402 \renewcommand*{\restorepagenumber}{}
403 \renewcommand*{\uppercaseheads}{}
404 \renewcommand*{\nouppercaseheads}{}
406 \renewcommand*{\bookpagemark}[1]{}
407 \renewcommand*{\partmark}[1]{}
408 \renewcommand*{\bibmark}{}
409 \renewcommand*{\indexmark}{}
410 \renewcommand*{\glossarymark}{}
412 \LWR@origpagestyle{empty}
413 \renewcommand*{\ps@empty}{}
414 \renewcommand*{\makepagestyle}[1]{}
415 \renewcommand*{\emptypshook}{}%
416% \renewcommand*{\empty@oddhead}{}
417% \renewcommand*{\empty@oddfoot}{}
418% \renewcommand*{\empty@evenhead}{}
419% \renewcommand*{\empty@evenfoot}{}
420 \renewcommand*{\@oddhead}{}
421 \renewcommand*{\@oddfoot}{}
422 \renewcommand*{\@evenhead}{}
423 \renewcommand*{\@evenfoot}{}
424 \renewcommand*{\aliaspagestyle}[2]{}
425 \renewcommand*{\copypagestyle}[2]{}
427 \renewcommand*{\makeevenhead}[4]{}
428 \renewcommand*{\makeoddhead}[4]{}
429 \renewcommand*{\makeevenfoot}[4]{}
430 \mbox{ } \mbox{makeoddfoot}[4]{}
431 \renewcommand*{\makerunningwidth}[3]{}
432 % \newlength{\headwidth}
433 \renewcommand*{\makeheadrule}[3]{}
434 \renewcommand*{\makefootrule}[3]{}
435 \renewcommand*{\makeheadfootruleprefix}[3]{}
436% \newlength{\normalrulethickness}
437% \setlength{\normalrulethickness}{.4pt}
438% \newlength{\footruleheight}
439% \newlength{\footruleskip}
440 \renewcommand*{\makeheadposition}[5]{}
441 \renewcommand{\makepsmarks}[2]{}
442 \mbox{makeheadfootstrut}[3]{}
443 \renewcommand{\createmark}[5]{\csdef{#1mark}[1]{}}
444 \renewcommand{\createplainmark}[3]{\csdef{#1mark}{}}
445 \renewcommand{\memUChead}[1]{}
446 \renewcommand*{\clearplainmark}[1]{}
447 \renewcommand*{\clearmark}[1]{}
448 \renewcommand{\addtopsmarks}[3]{}
449 \renewcommand{\ifonlyfloats}[2]{#2}
450 \renewcommand*{\mergepagefloatstyle}[3]{}
452 \renewcommand*{\framepichead}{}
453 \renewcommand*{\framepictextfoot}{}
454 \renewcommand*{\framepichook}{}
455 \renewcommand*{\showheadfootlocoff}{}
456 \renewcommand*{\showtextblocklocoff}{}
```

§ 699.9 Paragraphs and lists

```
457 \renewcommand{\hangfrom}[1]{#1}
458 \let\centerfloat\centering
459 \renewcommand*{\raggedyright}[1][]{}
460 % \newlength{\ragrparindent}
461 \renewcommand{\sourceatright}[2][]{\attribution{\#2}}
462 \let\memorigdbs\LWR@endofline
463 \renewcommand*{\memorigpar}{\par}
464 \let\atcentercr\LWR@endofline
466 \renewcommand*{\linenottooshort}[1][]{}
467 \renewcommand*{\russianpar}{}
468 \renewcommand*{\lastlinerulefill}{}
469 \renewcommand*{\lastlineparrule}{}
470 \renewcommand*{\justlastraggedleft}{}
471 \renewcommand*{\raggedrightthenleft}{}
472 \renewcommand*{\leftcenterright}{}
473
474 \renewcommand{\leftspringright}[4]{%
       \begin{minipage}{#1\linewidth}#3\end{minipage}\qquad%
     \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
476
477 }
478
479 \renewenvironment*{blockdescription}
480 {\LWR@descriptionstart\LWR@origdescription}
481 {\enddescription}
482
483 \renewcommand*{\blockdescriptionlabel}[1]{\textbf{#1}}
484 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
485 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\\ \text{\text{description}}}}
486 \renewcommand*{\tightlists}{}
487 \renewcommand*{\defaultlists}{}
488 \RenewDocumentCommand{\firmlists}{s}{}
489 \renewcommand*{\firmlist}{}
490 \renewcommand*{\tightlist}{}
491 \renewcommand*{\zerotrivseps}{}
492 \renewcommand*{\savetrivseps}{}
493 \renewcommand*{\restoretrivseps}{}
```

§ 699.10 Contents lists

```
494 \csletcs{tableofcontents*}{tableofcontents}
495 \csletcs{listoffigures*}{listoffigures}
496 \csletcs{listoffables*}{listoffables}
497 \renewenvironment{KeepFromToc}{}{}
498 \renewcommand*{\onecoltocetc}{}
499 \renewcommand*{\twocoltocetc}{}
500 \renewcommand*{\restorefromonecol}{}
501 \renewcommand*{\restorefromonecol}{}
502 \renewcommand*{\doccoltocetc}{}
503
504 \renewcommand{\tocheadstart}{}
505 \renewcommand{\tocheadstart}{}
506 \renewcommand{\tocmark}{}
507 \renewcommand{\doftertoctitle}{}
508 \renewcommand{\lofheadstart}{}
509 \renewcommand{\printloftitle}[1]{}
```

```
511 \renewcommand{\afterloftitle}{}
512 \renewcommand{\lotheadstart}{}
513 \renewcommand{\printlottitle}[1]{}
514 \renewcommand{\lotmark}{}
515 \renewcommand{\afterlottitle}{}
517 \renewcommand*{\setpnumwidth}[1]{}
518 \renewcommand*{\setrmarg}[1]{}
519 \renewcommand*{\cftbookbreak}{}
520 \renewcommand*{\cftpartbreak}{}
521 \renewcommand*{\cftchapterbreak}{}
522 % \newlength{\cftbeforebookskip}
523 % \newlength{\cftbookindent}
524% \newlength{\cftbooknumwidth}
525 \renewcommand*{\cftbookfont}{}
526 \renewcommand*{\cftbookname}{}
527 \renewcommand*{\cftbookpresnum}{}
528 \renewcommand*{\cftbookaftersnum}{}
529 \renewcommand*{\cftbookaftersnumb}{}
530 \renewcommand*{\cftbookleader}{}
531 \renewcommand*{\cftbookdotsep}{1}
532 \renewcommand*{\cftbookpagefont}{}
533 \renewcommand*{\cftbookafterpnum}{}
534 \renewcommand*{\cftbookformatpnum}[1]{}
535 \renewcommand*{\cftbookformatpnumhook}[1]{}
 Part is already defined by tocloft.
536% \newlength{\cftbeforechapterskip}
537% \newlength{\cftchapterindent}
538 % \newlength{\cftchapternumwidth}
539 \renewcommand*{\cftchapterfont}{}
540 \renewcommand*{\cftchaptername}{}
541 \renewcommand*{\cftchapterpresnum}{}
542 \renewcommand*{\cftchapteraftersnum}{}
543 \renewcommand*{\cftchapteraftersnumb}{}
544 \renewcommand*{\cftchapterleader}{}
545 \renewcommand*{\cftchapterdotsep}{1}
546 \renewcommand*{\cftchapterpagefont}{}
547 \renewcommand*{\cftchapterafterpnum}{}
548 \renewcommand*{\cftchapterformatpnum}[1]{}
549 \renewcommand*{\cftchapterformatpnumhook}[1]{}
550 % \newlength{\cftbeforesectionskip}
551 % \newlength{\cftsectionindent}
552% \newlength{\cftsectionnumwidth}
553 \renewcommand*{\cftsectionfont}{}
554 \renewcommand*{\cftsectionname}{}
555 \renewcommand*{\cftsectionpresnum}{}
556 \renewcommand*{\cftsectionaftersnum}{}
557 \renewcommand*{\cftsectionaftersnumb}{}
558 \renewcommand*{\cftsectionleader}{}
559 \renewcommand*{\cftsectiondotsep}{1}
560 \renewcommand*{\cftsectionpagefont}{}
561 \renewcommand*{\cftsectionafterpnum}{}
562 \renewcommand*{\cftsectionformatpnum}[1]{}
563 \renewcommand*{\cftsectionformatpnumhook}[1]{}
```

510 \renewcommand{\lofmark}{}

```
564% \newlength{\cftbeforesubsectionskip}
565 % \newlength{\cftsubsectionindent}
566% \newlength{\cftsubsectionnumwidth}
567 \renewcommand*{\cftsubsectionfont}{}
568 \renewcommand*{\cftsubsectionname}{}
569 \renewcommand*{\cftsubsectionpresnum}{}
570 \renewcommand*{\cftsubsectionaftersnum}{}
571 \renewcommand*{\cftsubsectionaftersnumb}{}
572 \renewcommand*{\cftsubsectionleader}{}
573 \renewcommand*{\cftsubsectiondotsep}{1}
574 \renewcommand*{\cftsubsectionpagefont}{}
575 \renewcommand*{\cftsubsectionafterpnum}{}
576 \renewcommand*{\cftsubsectionformatpnum}[1]{}
577 \renewcommand*{\cftsubsectionformatpnumhook}[1]{}
578 % \newlength{\cftbeforesubsubsectionskip}
579% \newlength{\cftsubsubsectionindent}
580% \newlength{\cftsubsubsectionnumwidth}
581 \renewcommand*{\cftsubsubsectionfont}{}
582 \renewcommand*{\cftsubsubsectionname}{}
583 \renewcommand*{\cftsubsubsectionpresnum}{}
584 \renewcommand*{\cftsubsubsectionaftersnum}{}
585 \ \texttt{\cftsubsubsectionaftersnumb} \ \{\ \texttt{\cftsubsubsectionaftersnumb} \} \ \{\ \texttt{\cftsubsubsectionaftersn
586 \renewcommand*{\cftsubsubsectionleader}{}
587 \renewcommand*{\cftsubsubsectiondotsep}{1}
588 \renewcommand*{\cftsubsubsectionpagefont}{}
589 \renewcommand*{\cftsubsubsectionafterpnum}{}
590 \renewcommand*{\cftsubsubsectionformatpnum}[1]{}
591 \renewcommand*{\cftsubsubsectionformatpnumhook}[1]{}
592 % \newlength{\cftbeforeparagraphskip}
593 % \newlength{\cftparagraphindent}
594% \newlength{\cftparagraphnumwidth}
595 \renewcommand*{\cftparagraphfont}{}
596 \renewcommand*{\cftparagraphname}{}
597 \renewcommand*{\cftparagraphpresnum}{}
598 \renewcommand*{\cftparagraphaftersnum}{}
\verb| 599 \verb| renewcommand*{ \verb| cftparagraphaftersnumb}{ | } |
600 \renewcommand*{\cftparagraphleader}{}
601 \renewcommand*{\cftparagraphdotsep}{1}
602 \renewcommand*{\cftparagraphpagefont}{}
603 \renewcommand*{\cftparagraphafterpnum}{}
604 \ensuremath{\mbox{\cftparagraphformath}} [1] \{\}
606% \newlength{\cftbeforesubparagraphskip}
607% \newlength{\cftsubparagraphindent}
608% \newlength{\cftsubparagraphnumwidth}
609 \renewcommand*{\cftsubparagraphfont}{}
610 \renewcommand*{\cftsubparagraphname}{}
611 \renewcommand*{\cftsubparagraphpresnum}{}
612 \renewcommand*{\cftsubparagraphaftersnum}{}
613 \renewcommand*{\cftsubparagraphaftersnumb}{}
614 \renewcommand*{\cftsubparagraphleader}{}
615 \mbox{ renewcommand} {\cftsubparagraphdotsep}{1}
616 \renewcommand*{\cftsubparagraphpagefont}{}
617 \renewcommand*{\cftsubparagraphafterpnum}{}
618 \renewcommand*{\cftsubparagraphformatpnum}[1]{}
619 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{}
620 % \newlength{\cftbeforefigureskip}
```

```
621% \newlength{\cftfigureindent}
622% \newlength{\cftfigurenumwidth}
623 \renewcommand*{\cftfigurefont}{}
624 \renewcommand*{\cftfigurename}{}
625 \renewcommand*{\cftfigurepresnum}{}
626 \renewcommand*{\cftfigureaftersnum}{}
627 \renewcommand*{\cftfigureaftersnumb}{}
628 \renewcommand*{\cftfigureleader}{}
629 \renewcommand*{\cftfiguredotsep}{1}
630 \renewcommand*{\cftfigurepagefont}{}
631 \renewcommand*{\cftfigureafterpnum}{}
632 \renewcommand*{\cftfigureformatpnum}[1]{}
633 \renewcommand*{\cftfigureformatpnumhook}[1]{}
634% \newlength{\cftbeforesubfigureskip}
635% \newlength{\cftsubfigureindent}
636% \newlength{\cftsubfigurenumwidth}
637 \newcommand*{\cftsubfigurefont}{}
638 \newcommand*{\cftsubfigurename}{}
639 \newcommand*{\cftsubfigurepresnum}{}
640 \mbox{ \cftsubfigureaftersnum}{}
641 \newcommand*{\cftsubfigureaftersnumb}{}
642 \newcommand*{\cftsubfigureleader}{}
643 \newcommand * {\tt \cftsubfiguredotsep} \{1\}
644 \newcommand*{\cftsubfigurepagefont}{}
645 \newcommand*{\cftsubfigureafterpnum}{}
646 \newcommand*{\cftsubfigureformatpnum}[1]{}
647 \newcommand*{\cftsubfigureformatpnumhook}[1]{}
648% \newlength{\cftbeforetableskip}
649 % \newlength{\cfttableindent}
650% \newlength{\cfttablenumwidth}
651 \renewcommand*{\cfttablefont}{}
652 \renewcommand*{\cfttablename}{}
653 \renewcommand*{\cfttablepresnum}{}
654 \renewcommand*{\cfttableaftersnum}{}
655 \renewcommand*{\cfttableaftersnumb}{}
656 \renewcommand*{\cfttableleader}{}
657 \ensuremath{\ensuremath{\mbox{\cfttabledotsep}}{1}}
658 \renewcommand*{\cfttablepagefont}{}
659 \renewcommand*{\cfttableafterpnum}{}
660 \renewcommand*{\cfttableformatpnum}[1]{}
661 \renewcommand*{\cfttableformatpnumhook}[1]{}
662% \newlength{\cftbeforesubtableskip}
663 % \newlength{\cftsubtableindent}
664% \newlength{\cftsubtablenumwidth}
665 \newcommand*{\cftsubtablefont}{}
666 \newcommand*{\cftsubtablename}{}
667 \newcommand*{\cftsubtablepresnum}{}
668 \newcommand*{\cftsubtableaftersnum}{}
669 \newcommand*{\cftsubtableaftersnumb}{}
 670 \newcommand * {\cftsubtableleader} { \} 
671 \newcommand*{\cftsubtabledotsep}{1}
672 \newcommand*{\cftsubtablepagefont}{}
673 \newcommand*{\cftsubtableafterpnum}{}
674 \newcommand*{\cftsubtableformatpnum}[1]{}
675 \newcommand*{\cftsubtableformatpnumhook}[1]{}
676 \renewcommand*{\booknumberline}[1]{}
677 \renewcommand*{\partnumberline}[1]{}
```

```
678 \renewcommand*{\chapternumberline}[1]{}
679 \renewcommand*{\numberlinehook}[1]{}
680% \renewcommand*{\cftwhatismyname}{}%
681 \renewcommand*{\booknumberlinehook}[1]{}
682 \renewcommand*{\partnumberlinehook}[1]{}
683 \renewcommand*{\chapternumberlinehook}[1]{}
684 \renewcommand{\numberlinebox}[2]{}
685 \renewcommand{\booknumberlinebox}[2]{}
686 \renewcommand{\partnumberlinebox}[2]{}
687 \renewcommand{\chapternumberlinebox}[2]{}
688 %
689% \newlength{\cftparfillskip}
690 \renewcommand*{\cftpagenumbersoff}[1]{}
691 \renewcommand*{\cftpagenumberson}[1]{}
692 \renewcommand*{\cftlocalchange}[3]{}
693 \renewcommand*{\cftaddtitleline}[4]{}
694 \renewcommand*{\cftaddnumtitleline}[4]{}
695 \renewcommand{\cftinsertcode}[2]{}
696 \renewcommand{\cftinserthook}[2]{}
697 \renewcommand{\settocpreprocessor}[2]{}
698 \DeclareRobustCommand{\cftpagenumbersoff}[1]{}
699 \DeclareRobustCommand{\cftpagenumberson}[1]{}
```

§ 699.11 Floats and captions

\@xfloat

\@xdblfloat

Reestablish lwarp's takeover the float handing, which memoir tried to grab:

```
700 \AtBeginDocument{
701 \def\@xfloat #1[#2]{%
       \label{loss} $$ \LWR@floatbegin{#1}[#2] $
702
703
       \normalsize
704
       \@nameuse{#1adjustment}%
       \LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment%
705
706 }
707 \def\@xdblfloat #1[#2]{%
       \LWR@floatbegin{#1}[#2]
709
       \normalsize
       \@nameuse{#1adjustment}%
710
711
       \verb|\LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment|| \\
712 }
713 }
   [\langle 1: within \rangle] \{\langle 2: type \rangle\} \{\langle 3: ext \rangle\} \{\langle 4: capname \rangle\}
714 \RenewDocumentCommand{\newfloat}{o m m m}{%
       \def\LWR@tempone{#4}%
715
716
       \def\LWR@temptwo{\@nameuse{#2name}}%
      \ifdefequal{\LWR@tempone}{\LWR@temptwo}{% recursive name, already defined
            \IfValueTF{#1}%
718
                {\DeclareFloatingEnvironment[fileext=#3,within=#1]{#2}}%
719
720
                {\DeclareFloatingEnvironment[fileext=#3]{#2}}%
       }{% not recursive name
721
            \IfValueTF{#1}%
722
             {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
723
                {\DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%
724
```

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later.

\newfloat

```
726 \cslet{listof#2s}\relax%
727 \cslet{listof#2es}\relax%
728}
```

\newlistof

```
[\langle within \rangle] \{\langle type \rangle\} \{\langle ext \rangle\} \{\langle listofname \rangle\}
```

Emulated through the \newfloat mechanism. Note that memoir uses a different syntax than tocloft for the name.

```
729 \RenewDocumentCommand{\newlistof}{o m m m}
730 {%
731
       \IfValueTF{#1}%
732
            {\newlistentry[#1]{#2}{#3}{0}}%
733
            {\newlistentry{#2}{#3}{0}}%
734
       \@namedef{ext@#2}{#3}%
735
       \label{lem:counter} $$ \operatorname{counter}{{\ counter}{\ depth}}{\ }^{\ } $$
736
       \setcounter{#3depth}{1}%
737
       \@namedef{#3mark}{}%
738
       \label{eq:listof} $$ \operatorname{listof}{\#2}_{\text{WR@listof}}$
       \@namedef{@cftmake#3title}{}%
739
       \@ifundefined{cftbefore#3titleskip}{%
740
            \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
741
            \expandafter\newlength\csname cftafter#3titleskip\endcsname%
742
743
       }{}%
       \@namedef{cft#3titlefont}{}%
       \@namedef{cftafter#3title}{}%
746
       \@namedef{cft#3prehook}{}%
747
       \@namedef{cft#3posthook}{}%
748 }
```

749 \renewcommand{\setfloatadjustment}[2]{}

Borrowed from the lwarp version of keyfloat:

```
750 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{O{-1.2ex} m}
751 {% start
     \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}(note){marginblock}%
753
       \renewcommand*{\@captype}{#2}%
754 }
755 {%
       \endLWR@BlockClassWP%
756
757 }
758
759 \DeclareDocumentEnvironment{marginfigure}{o}
    {\begin{KFLTmemoir@marginfloat}{figure}}
760
    {\end{KFLTmemoir@marginfloat}}
761
763 \DeclareDocumentEnvironment{margintable}{o}
    {\begin{KFLTmemoir@marginfloat}{table}}
765
    {\end{KFLTmemoir@marginfloat}}
766 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}
767 \renewcommand{\setmpjustification}[2]{}
768 \renewcommand*{\mpjustification}{}
769 \renewcommand*{\setfloatlocations}[2]{}
770 \DeclareDocumentCommand{\suppressfloats}{o}{}
771 \renewcommand*{\FloatBlock}{}
772 \renewcommand*{\FloatBlockAllowAbove}{}
773 \renewcommand*{\FloatBlockAllowBelow}{}
774 \renewcommand*{\setFloatBlockFor}{}
```

```
776 \renewcommand{\captiontitlefinal}[1]{}
                           \flegtable, \flegfigure, \flegtoctable, \flegtocfigure are defined by memoir
                           using \newfloat. These are defined with an @ in ccaption.
                         777 \renewcommand{\flegtable}{\tablename}
                         778 \renewcommand{\flegfigure}{\figurename}
                         779 \renewcommand{\flegtoctable}{}
                         780 \renewcommand{\flegtocfigure}{}
                         781 \renewcommand{\@makesubfloatcaption}[2]{%
                         782
                                 \minipagefullwidth
                                 \begin{minipage}{\linewidth}%
                         783
                                 #1 \ignorespaces #2 \unskip%
                         784
                         785
                                 \end{minipage}
                         786 }
                         788 \renewcommand*{\tightsubcaptions}{}
                         789 \renewcommand*{\loosesubcaptions}{}
                         791 \renewcommand*{\subcaptionsize}[1]{}
                         792 \renewcommand*{\subcaptionlabelfont}[1]{}
                         793 \renewcommand*{\subcaptionfont}[1]{}
                         794 \renewcommand*{\subcaptionstyle}[1]{}
                         796 \renewcommand*{\hangsubcaption}{}
                         797 \renewcommand*{\shortsubcaption}{}
                         798 \renewcommand*{\normalsubcaption}{}
                           \AfterEndPreamble now required for sidecaption.
                         799 \AfterEndPreamble{%
                         800 \RenewDocumentEnvironment{sidecaption}{o m o}
                         801 { }
                         802 {%
                                 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
                         803
                                 \IfValueT{#3}{\label{#3}}%
                         805 }
                         806 }
                         808% \newlength{\sidecapwidth}
                         809 % \newlength{\sidecapsep}
                         810 \renewcommand*{\setsidecaps}[2]{}
                         811 \renewcommand*{\sidecapmargin}[1]{}
                         812 % \newif\ifscapmargleft
                         813 \scapmargleftfalse
                         814 \renewcommand*{\setsidecappos}[1]{}
sidecontcaption
                         815 \RenewDocumentEnvironment{sidecontcaption}{m o}
                         816 {}
                         817 {%
                                 \ifdef{\ContinuedFloat}%
                         818
                                     {\ContinuedFloat}%
                         819
                                     {\add to counter(\ensuremath{\color{-1}}}%
                         820
                                 \caption{#1}%
                         821
```

Without \@captype, the section is referred to instead.

```
822 \IfValueT{#2}{\label[\@captype]{#2}}%
823 }
```

\sidenamedlegend does not appear to use the TOC argument.

```
824 \renewenvironment{sidenamedlegend}[2][]{
       \begin{center}
825
       \@nameuse{\@captype name}\CaptionSeparator#2
826
827
       \end{center}
828 }
829 {}
831 \renewenvironment{sidelegend}[1]
832 {\begin{center}
833
834
835 }
836 {\end{center}}
838 \renewcommand*{\sidecapstyle}{}
839 \renewcommand*{\overridescapmargin}[1]{}
840% \newlength{\sidecapraise}
841 \renewcommand*{\sidecapfloatwidth}{\linewidth}
843 \verb|\lambda| LetLtxMacro\\ ctabular\\ \ tabular
844 \LetLtxMacro\endctabular\endtabular
846 \renewcommand{\autorows}[5][]{%
847
848 }
849
850 \renewcommand{\autocols}[5][]{%
852 }
```

§ 699.12 Footnotes and page notes

```
853 \renewcommand*{\feetabovefloat}{}
854 \renewcommand*{\feetbelowfloat}{}
855 \renewcommand*{\feetatbottom}{}
856
857 \renewcommand*{\verbfootnote}[2][]{%
       \PackageError{lwarp,memoir}%
859
       {Verbatim footnotes are not yet supported by lwarp}%
860
       {This may be improved some day.}%
861 }
862
863 \renewcommand*{\plainfootnotes}{}
864 \renewcommand*{\twocolumnfootnotes}{}
865 \renewcommand*{\threecolumnfootnotes}{}
866 \renewcommand*{\paragraphfootnotes}{}
867 \renewcommand*{\footfudgefiddle}{}
868
869 \renewcommand*{\newfootnoteseries}[1]{%
       \PackageError{lwarp,memoir}%
       {Memoir footnote series are not yet supported by lwarp}%
871
       {This may be improved some day.}%
872
873 }
874
```

```
875 \renewcommand*{\plainfootstyle}[1]{}
876 \renewcommand*{\twocolumnfootstyle}[1]{}
877 \renewcommand*{\threecolumnfootstyle}[1]{}
878 \renewcommand*{\paragraphfootstyle}[1]{}
880 \renewcommand*{\footfootmark}{}
881 \renewcommand*{\footmarkstyle}[1]{}
883 % \newlength{\footmarkwidth}
884% \newlength{\footmarksep}
885% \newlength{\footparindent}
887 \renewcommand*{\foottextfont}{}
889 \renewcommand*{\marginparmargin}[1]{}
890 \renewcommand*{\sideparmargin}[1]{}
892 \LetLtxMacro\sidepar\marginpar
893 \renewcommand*{\sideparfont}{}
894 \renewcommand*{\sideparform}{}
895 \LWR@providelength{\sideparvshift}
896
897 \renewcommand*{\parnopar}{}
899 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
900 \renewcommand*{\sidebarmargin}[1]{}
901 \renewcommand*{\sidebarfont}{}
902 \renewcommand*{\sidebarform}{}
903% \newlength{\sidebarhsep}
904% \newlength{\sidebarvsep}
905% \newlength{\sidebarwidth}
906% \newlength{\sidebartopsep}
907 \renewcommand{\setsidebarheight}[1]{}
908 \renewcommand*{\setsidebars}[6]{}
909 \renewcommand*{\footnotesatfoot}{}
910 \renewcommand*{\footnotesinmargin}{}
912 \LetLtxMacro\sidefootnote\footnote
913 \LetLtxMacro\sidefootnotemark\footnotemark
914 \LetLtxMacro\sidefootnotetext\footnotetext
915
916 \renewcommand*{\sidefootmargin}[1]{}
917% \newlength{\sidefoothsep}
918% \newlength{\sidefootvsep}
919 % \newlength{\sidefootwidth}
920% \newlength{\sidefootadjust}
921% \newlength{\sidefootheight}
922 \renewcommand*{\setsidefootheight}[1]{}
923% \renewcommand*{\sidefootfont}{}% in docs but not in the package
924 \renewcommand*{\setsidefeet}[6]{}
925 \renewcommand*{\sidefootmarkstyle}[1]{}
926 \renewcommand*{\sidefoottextfont}{}
927 \renewcommand*{\sidefootform}{}
928 \renewcommand*{\continuousnotenums}{\pncontopttrue}% from pagenote
929 \renewcommand*{\notepageref}{}
930 \renewcommand*{\prenotetext}{}
931 \renewcommand*{\postnotetext}{}
932 \LetLtxMacro\printpageinnoteshyperref\printpageinnotes
933 \renewcommand*{\foottopagenote}{}
```

934 \renewcommand*{\pagetofootnote}{}

\m@m@wrpnote

\startnoteentrystart

To have cleveref work with page note labels, the following patch writes \thepagenote and also adds \arabic{pagenote} to the first argument written to the .ent file:

```
\startnoteentry{{\thepagenote}{\arabic{pagenote}}} ...
```

The arabic value is required for cleveref. \thepagenote becomes \@firstoftwo#1 and the arabic value becomes \@secondoftwo#1.

♠ \nameref

Note that for print mode,\nameref print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

```
935 \VerifyCommand[lwarp][lwarp-patch-memoir]{\m@m@wrpnote}{D2AE41FE9A265B639F7074AB2AF29976}
937 \xpatchcmd{\m@m@wrpnote}
      {\string\startnoteentry{\thepagenote}}
939
      {\string\startnoteentry{{\thepagenote}}}}
940
      {\LWR@patcherror{memoir}{m@m@wrpnote}}
941
942
943 \VerifyCommand[lwarp][lwarp-patch-memoir]{\startnoteentrystart}{2A595EA1DC483451337C33072604EDD6}
945 \renewcommand\startnoteentrystart[4]{%
    \prenoteinnotes%
946
    \noteidinnotes{\@firstoftwo#1}{#2}%
    \@ifmtarg{#2}{%
949 %
             \phantomsection\def\@currentlabel{#1}%
                                                                original
950
           \def\@currentlabel{\@firstoftwo#1}%
                                                                lwarp
951
          \def\cref@currentlabel{%
                                                                lwarp
               [pagenote][\@secondoftwo#1][]\@firstoftwo#1%
                                                                lwarp
952
          }%
                                                                lwarp
953
    }{}%
954
    \pagenoteanchor{#4}%
955
    \pageinnotes{#3}%
    \prenotetext%
957
958 }
```

§ 699.13 Decorative text

```
959 \renewcommand*{\epigraphposition}[1]{}
960 \renewcommand*{\epigraphtextposition}[1]{}
961 \renewcommand*{\epigraphsourceposition}[1]{}
962 \renewcommand*{\epigraphfontsize}[1]{}
963 \renewcommand*{\epigraphforheader}[2][]{}
964 \renewcommand*{\epigraphpicture}{}
```

§ 699.14 **Poetry**

```
975
976 \renewcommand*{\NumberPoemTitle}{}
977 \renewcommand*{\PlainPoemTitle}{}
978 \renewcommand*{\poemtitlepstyle}{}
979 \renewcommand*{\poemtitlestarmark}[1]{}
980 \renewcommand*{\poemtitlestarpstyle}{}
981 \renewcommand*{\poemTitleheadstart}{}
982 \renewcommand*{\printPoemTitlenonum}{}
983 \renewcommand*{\printPoemTitlenum}{}
984 \renewcommand*{\afterPoemTitlenum}{}
985 \renewcommand*{\printPoemTitletitle}[1]{}
986 \renewcommand*{\afterPoemTitle}{}
987 \newlength{\midpoemtitleskip}
988 \renewcommand*{\PoemTitlenumfont}{}
989 \renewcommand*{\PoemTitlefont}{}
```

§ 699.15 Boxes, verbatims and files

```
990 \renewenvironment{qframe}{\framed}{\endframed}
991 \renewenvironment{qshade}{\shaded}{\endshaded}
992 \renewcommand*{\setverbatimfont}[1]{}
993 \renewcommand*{\tabson}[1]{}% disabled as of 3.8.2
994 \renewcommand*{\tabsoff}{}% disabled as of 3.8.2
995 \renewcommand*{\wrappingon}{}% disabled as of 3.8.2
996 \renewcommand*{\wrappingoff}{}% disabled as of 3.8.2
997 \renewcommand*{\wrappingoff}{}% disabled as of 3.8.2
997 \renewcommand*{\wrappingoff}{}% no longer used as of 3.8.2
998 \renewcommand*{\werbatimindent}{}% no longer used as of 3.8.2
999 \DefineVerbatimEnvironment{fboxverbatim}{\verbatim}{frame=single}
```

boxedverbatim is already defined by moreverb. boxedverbatim* does not appear to work at all, even in a minimal print memoir document.

```
1000 \renewcommand*{\bvbox}{}
1001 \renewcommand*{\bvtopandtail}{}
1002 \renewcommand*{\bvsides}{}
1003 \renewcommand*{\nobvbox}{}
1004% \newlength\bvboxsep
1005 \renewcommand*{\bvtoprulehook}{}
1006 \renewcommand*{\bvtopmidhook}{}
1007 \renewcommand*{\bvendrulehook}{}
1009 \renewcommand*{\bvrightsidehook}{}
1010 \renewcommand*{\bvperpagetrue}{}
1011 \renewcommand*{\bvperpagefalse}{}
1012 \renewcommand{\bvtopofpage}[1]{}
1013 \renewcommand{\bvendofpage}[1]{}
1014 \renewcommand*{\linenumberfrequency}[1]{}
1015 \renewcommand*{\resetbvlinenumber}{}
1016 \renewcommand*{\setbvlinenums}[2]{}
1017 \renewcommand*{\linenumberfont}[1]{}
1018 \renewcommand*{\bvnumbersinside}{}
1019 \renewcommand*{\bvnumbersoutside}{}
```

§ 699.16 Cross referencing

```
\label{localize} $$1020 \operatorname{\mbox{\mbox{$1]}{\mbox{$1]}}} $$1021 \operatorname{\mbox{$1]}{\mbox{$1]}{\mbox{$1]}}}$
```

```
1022 \renewcommand*{\pref}[1]{\cpageref{#1}}
1023 \renewcommand*{\Aref}[1]{\cref{#1}}
1024 \ensuremath{\Bref}[1]{\ensuremath{\Href}}
1025 \renewcommand*{\Pref}[1]{\cref{#1}}
1026 \renewcommand*{\Sref}[1]{\cref{#1}}
1027 \renewcommand*{\figurerefname}{Figure}
1028 \renewcommand*{\tablerefname}{Table}
1030 \renewcommand*{\bookrefname}{Book~}
1031 \renewcommand*{\partrefname}{Part~}
1032 \renewcommand*{\chapterrefname}{Chapter~}
1033 \renewcommand*{\sectionrefname}{\S}
1034 \renewcommand*{\appendixrefname}{Appendix~}
1035 \LetLtxMacro\titleref\nameref
1036 \renewcommand*{\headnameref}{}
1037 \renewcommand*{\tocnameref}{}
  \currenttitle has been removed from memoir.
1038 \renewcommand*{\theTitleReference}[2]{}
1039 \renewcommand*{\namerefon}{}
1040 \renewcommand*{\namerefoff}{}
```

§ 699.17 Back matter

\@@wrindexhyp

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```
1041 \AtBeginDocument{
1042
1043 \VerifyCommand[lwarp][lwarp-patch-memoir]{\@@wrindexhyp}{8DA7E3C8BE7A830442D98EA033147F63}
1044
1045 \def\@@wrindexhyp#1||\\{%
1046 \addtocounter{LWR@autoindex}{1}% lwarp
1047% \ifshowindexmark\@showidx{#1}\fi
1048 \protected@write\@auxout{}%
1049% {\string\@@wrindexm@m{\@idxfile}{#1}{\thepage}}%
1050 {\string\@@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}% lwarp
```

The label is assigned after the file write to avoid conflict with cleveref.

```
1051 \label{LWRindex-\arabic{LWR@autoindex}}% lwarp
1052 \endgroup
1053 \@esphack}%
```

\@@wrspindexhyp

\specialindex behaves like a regular \index, pointing to where \specialindex is used. If \specialindex is used inside a figure or table after the \caption, then the hyperlink will be given the name of that particular figure or table.

```
1054 \def\@@wrspindexhyp#1||\\{%
1055    \addtocounter{LWR@autoindex}{1}\%
1056 %    \ifshowindexmark\@showidx{#1}\fi
1057    \protected@write\@auxout{}\%
1058 %         {\string\@@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}\%
1059          {\string\@@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}\%
```

The label is assigned after the file write to avoid conflict with cleveref.

1064 }% \AtBeginDocument

```
\@spindex
```

Patched to append _html to the file:

```
1065 \renewcommand{\@spindex}[2]{%
     \@ifundefined{#1@idxfile}%
1067
      {\ifreportnoidxfile
         \@memwarn{Undefined index file #1}%
1068
1069
        \begingroup
1070
        \@sanitize
1071
1072
        \@nowrindex}%
1073
     {\def\@idxfile{#1_html}%
       \def\@sptheidx{#2}%
1074
1075
       \begingroup
1076
       \@sanitize
1077
       \@wrspindex}}
```

\makeindex

Patched to use _html filename and \BaseJobname:

```
1078 \catcode '\_=12%
1079 \renewcommand*{\makeindex}[1][\BaseJobname]{%
     \if@filesw
1080
       \def\gindex{\@bsphack%
1081
1082
          \@ifnextchar [{\@index}{\@index[\BaseJobname]}}
1083
       \def\specialindex{\@bsphack\@spindex}%
1084
        \makememindexhook
       \expandafter\newwrite\csname #1@idxfile\endcsname
1085
1086
      \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1087
       \typeout{Writing index file #1_html.idx }%
1088
     \fi}
1089 \catcode '\_=8%
```

\printindex

Patched to use _html filename and \BaseJobname. This will later be patched by the lwarp core.

```
1090 \catcode'\_=12%
1091 \renewcommand{\printindex}[1][\BaseJobname]{\@input@{#1_html.ind}}
1092 \catcode'\_=8%

1093 \DeclareDocumentCommand{\newblock}{}{}
1094 %
1095 \renewcommand*{\showindexmarks}{}
1096 \renewcommand*{\hideindexmarks}{}
1097
1098 \renewcommand*{\xindyindex}{}
```

§ 699.18 Miscellaneous

```
1099 \renewcommand*{\changemarks}{}
1100 \renewcommand*{\nochangemarks}{}
1101 \renewcommand*{\added}[1]{}
1102 \renewcommand*{\deleted}[1]{}
1103 \renewcommand*{\changed}[1]{}
1104
1105 \renewcommand*{\showtrimsoff}{}
1106 \renewcommand*{\showtrimson}{}
1107 \renewcommand*{\trimXmarks}{}
1108 \renewcommand*{\trimLmarks}{}
```

```
1109 \renewcommand*{\trimFrame}{}
1110 \renewcommand*{\trimNone}{}
1111 \renewcommand*\trimmarkscolor{}
1112 \renewcommand*{\trimmarks}{}
1113 \renewcommand*{\tmarktl}{}
1114 \renewcommand*{\tmarktr}{}
1115 \renewcommand*{\tmarkbr}{}
1116 \renewcommand*{\tmarkbl}{}
1117 \renewcommand*{\t marktm}{}
1118 \renewcommand*{\tmarkmr}{}
1119 \renewcommand*{\tmarkbm}{}
1120 \renewcommand*{\tmarkml}{}
1121 \renewcommand*{\trimmark}{}
1122 \renewcommand*{\quarkmarks}{}
1123 \renewcommand*{\registrationColour}[1]{}
1125 \renewcommand*{\leavespergathering}[1]{}
1126
1127 \renewcommand*{\noprelistbreak}{}
1128
1129 \renewcommand*{\cleartorecto}{}
1130 \renewcommand*{\cleartoverso}{}
1132 \renewenvironment{vplace}[1][]{}{}
```

§ 699.19 ccaption emulation

```
1133 \renewcommand*{\captiondelim}[1]{\renewcommand*{\CaptionSeparator}{#1}}
1134 \renewcommand*{\captionnamefont}[1]{}
1135 \renewcommand*{\captiontitlefont}[1]{}
1136 \renewcommand*{\flushleftright}{}
1137 \renewcommand*{\centerlastline}{}
1138 \renewcommand*{\captionstyle}[2][]{}
1139 \DeclareDocumentCommand{\captionwidth}{m}{}
1140 \renewcommand*{\changecaptionwidth}{}
1141 \renewcommand*{\normalcaptionwidth}{}
1143 \renewcommand*{\indentcaption}[1]{}
1144 \renewcommand*{\normalcaption}{}
1145 \renewcommand{\precaption}[1]{}
1146 \renewcommand{\postcaption}[1]{}
1147 \renewcommand{\midbicaption}[1]{}
1148 \renewcommand{\contcaption}[1]{%
1149 %
       \ContinuedFloat%
1150 %
       \caption{#1}%
       \begin{LWR@figcaption}% later becomes \caption*
1151
       \LWR@isolate{\@nameuse{\@captype name}}~%
1152
       \thechapter.\the\value{\@captype}\CaptionSeparator\LWR@isolate{#1}%
1153
       \end{LWR@figcaption}%
1154
1155 }
1156 \newlength{\abovelegendskip}
1157 \setlength{\abovelegendskip}{0.5\baselineskip}
1158 \newlength{\belowlegendskip}
1159 \setlength{\belowlegendskip}{\abovelegendskip}
```

The extra $\$ here forces a $\$ in HTML when $\$ legend is used in a $\$ marginpar.

```
\label{legend} $$1160 \simeq {\center} $$1161 $$
```

```
1162 \renewcommand{\namedlegend}[2][]{%
       \begin{center}
       \@nameuse{fleg\@captype}\CaptionSeparator#2\\
1164
1165
       \end{center}
1166
       \@nameuse{flegtoc\@captype}{#1}
1167 }
  \flegtable, \flegfigure, \flegtoctable, \flegtocfigure are defined by memoir
  using \newfloat. These are defined with an @ in ccaption.
1168 \renewcommand{\newfixedcaption}[3][\caption]{%
1169 \renewcommand{#2}{\def\@captype{#3}#1}}
1170 \renewcommand{\renewfixedcaption}[3][\caption]{%
1171 \renewcommand{#2}{\def\@captype{#3}#1}}
\providecommand{#2}{\def\@captype{#3}#1}}
1173
1174
1175 \renewcommand{\bitwonumcaption}[6][]{%
1176
       \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1177
       \addtocounter{\@captype}{-1}%
1178
       \begingroup%
1179
       \csdef{\@captype name}{#4}%
       1180
       \endgroup%
1181
       \ifblank{#1}{}{\label{#1}}%
1182
1183 }
1184
1185 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1187 \renewcommand{\bicaption}[5][]{%
       \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1188
1189
       \begin{LWR@figcaption}% later becomes \caption*
1190
       \LWR@isolate{#4} % space
       1191
1192
       \end{LWR@figcaption}%
       \ifblank{#1}{}{\label{#1}}%
1193
1194 }
1195
1196 \renewcommand{\bicontcaption}[3]{%
       \contcaption{#1}%
1197
1198
       \begingroup%
1199
       \csdef{\@captype name}{#2}%
       \contcaption{#3}%
1200
       \endgroup%
1201
1202 }
  Only in ccaption, not in memoir:
1203 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1204 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1205 % \LetLtxMacro\longbicaption\bicaption%
  Patches for subfloats to support additional lwarp labels:
1206 \renewcommand{\@memsubbody}{%
    \bgroup
1207
    \let\label=\memsub@label
1208
     \ifdonemaincaption\else
1209
       \advance\csname c@\@captype\endcsname\@ne
1210
```

1211

\fi

```
1212  % \refstepcounter{sub\@captype}\@contkeep%
1213 % \leavevmode%
1214 \@ifnextchar [%
1215
        {\@memsubfig}%
1216
        {\@memsubfig[\@empty]}}
1217
1218 \renewcommand{\@memcontsubbody}{%
1219 \bgroup
     \let\label=\memsub@label
1220
1221
     \@contset
1222 % \refstepcounter{sub\@captype}\@contkeep%
1223 %
       \leavevmode%
1224 \@ifnextchar [%
1225
        {\@memsubfig}%
1226
        {\@memsubfig[\@empty]}}
1227
1228
\label{longle} \end{cases} $$1229 \leq \end{cases} 1229 = 1229 \end{cases} $$124\% $$
        \@tempcnta=\@ne
1230 %
1231 %
        \if@tightsubcap
1232 %
          \if@minipage
            \@tempcnta=\z@
1233 %
1234 %
          \else
1235 %
            \ifdim\lastskip=\z@
1236~\%
               \@tempcnta=\@ne
1237 %
            \else
1238 %
               \@tempcnta=\tw@
            \fi
1239 %
          \fi
1240 %
1241 %
        \fi
1242 %
        \if@contbotsub
          \def\subfig@top{\subfloattopskip}%
1243 %
1244 %
          \def\subfig@bottom{\subfloatbottomskip}%
1245 %
1246 %
          \def\subfig@top{\subfloatbottomskip}%
1247 %
          \def\subfig@bottom{\subfloattopskip}%
1248 %
        \setbox\@tempboxa \hbox{#4}%
1249 %
1250 %
        \verb|\delta| etc| wd | etc| mpboxa
1251 %
        \vbox
1252 \bgroup%
        \mem@step@subcounter%
1253
1254 %
          \vbox
        \LWR@stoppars%
1255
1256
        \minipagefullwidth%
                                                lwarp
1257
        \begin{minipage}{\linewidth}%
                                                lwarp
1258
        \bgroup
          \ifcase\@tempcnta
1259 %
1260 %
            \@minipagefalse
1261 %
          \or
1262 %
            \vspace{\subfig@top}
1263 %
          \or
            \ifdim \lastskip=\z@ \else
1264 %
1265 %
               \@tempskipb\subfig@top\@xaddvskip
1266 %
            \fi
1267 %
          \fi
1268
        \if@contbotsub
          #4% \box\@tempboxa
1269
          \egroup
1270
          \ifx \@empty#3\relax \else
1271
```

```
1272 %
              \vskip\subfloatcapskip
            \@memsubcaption{#1}{#2}{#3}%
1273
          \fi
1274
1275
       \else
1276
         \ifx \@empty#3\relax \else
1277
           \@memsubcaption{#1}{#2}{#3}%
              \vskip\subfloatcapskip
1278 %
              \vskip\subfloatcaptopadj
1279 %
         \fi\egroup
1280
          #4% \box\@tempboxa
1281
1282
1283 %
          \vspace{\subfig@bottom}
1284
        \end{minipage}%
                                              lwarp
1285
        \LWR@startpars%
                                              lwarp
1286 \egroup
1287 \egroup
1288 }
```

§ 699.20 Final patchwork

```
1289 \newlistof{tableofcontents}{toc}{\contentsname}
1290 \newlistof{listoffigures}{lof}{\listfigurename}
1291 \newlistof{listoftables}{lot}{\listtablename}
```

File 591 lwarp-common-multimedia.sty

§ 700

Package common-multimedia

lwarp-common-multimedia(Pkg)

Common code for multimedia, movie15, and media9.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each addresource=, as well as each flashvars source= and src=. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside \warpprintonly or the warpprint environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For movie15, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YouTubeTM video, use an "embedded" url with .../embed/... instead of .../v/...

for HTML output:

 ${\tt 1\ProvidesPackage\{lwarp-common-multimedia\}[2019/04/22]}$

```
2 \RequirePackage{xkeyval}
3
4 \define@key{LWR@multimedia}{width}{\setlength{\LWR@multimedia@width}{#1}}
5 \define@key{LWR@multimedia}{height}{\setlength{\LWR@multimedia@height}{#1}}
6 \define@key{LWR@multimedia}{totalheight}{\setlength{\LWR@multimedia@height}{#1}}
7 \newlength{\LWR@multimedia@width}
8 \newlength{\LWR@multimedia@height}
9 \newlength{\LWR@multimedia@maxdimension}
```

\LWR@multimedia@printsize

Proportional to \linewidth and the viewport's smaller dimension. This scales each object such that it will always fit on the screen, even if a tall or wide object inside a tall or wide viewport.

```
10 \newcommand*{\LWR@multimedia@printsize}{%
      \setlength{\LWR@multimedia@maxdimension}{%
12
          \maxof%
13
              {\linewidth}%
              {\maxof{\LWR@multimedia@width}{\LWR@multimedia@height}}%
14
15
      }%
    \setlength{\LWR@multimedia@maxdimension}{1.1\LWR@multimedia@maxdimension}%
16
      \ifdimgreater{\LWR@multimedia@width}{0pt}{%
17
          width:%
18
              \LWR@printpercentlength%
19
                  {\LWR@multimedia@width}%
20
                  {\LWR@multimedia@maxdimension}vmin ; % space
21
22
      \ifdimgreater{\LWR@multimedia@height}{0pt}{%
23
24
          height:%
25
              \LWR@printpercentlength%
                  {\LWR@multimedia@height}%
26
                  {\LWR@multimedia@maxdimension}vmin ; % space
27
28
      }{}%
29 }
```

\LWR@multimedia@fileAV

 $\{\langle poster\ text \rangle\} \{\langle filename \rangle\} \{\langle audio/video \rangle\} \{\langle mimetype \rangle\}$

Creates a video or audio from a file. The 2019/10 update of the LATEX kernel may cause extra quotes to be added in the filenames. They are removed here.

```
30 \newcommand*{\LWR@multimedia@fileAV}[4]{%
31 \IfFileExists{#2}{% also sets \@filef@und
32 \StrSubstitute[100]{\@filef@und}{"}{}[\LWR@parsedfilename]%
```

The container <div> is sized as desired.

```
33 \ifstrequal{#3}{audio}{%
```

```
34
           \begin{BlockClass}{AVviewport}
35
      }{%
         \begin{BlockClass}[\LWR@multimedia@printsize\ margin:auto]{AVviewport}
36
37
      }
Paragraph tags are unnecessary for the A/V tags.
      \LWR@stoppars
38
The A/v element is 100% of the container.
       \LWR@htmltag{%
           #3\ % space
40
41
           \ifstrequal{#3}{audio}{}{%
               width=\textquotedbl{}100\%\textquotedbl\ % space
42
               height=\textquotedbl{}100\%\textquotedbl\ % space
43
           }%
44
           controls%
45
      }\LWR@orignewline
46
The file source and type:
       \LWR@htmltag{%
48
           source % space
49
           src=\textquotedbl%
           \LWR@parsedfilename\unskip\textquotedbl\ % space
50
51
           type=\textquotedbl{}#4\textquotedbl}
The poster text inside paragraph tags, along with a reference to the file.
       \LWR@startpars
52
       \LWR@href{\LWR@parsedfilename}{#1}
53
      \LWR@stoppars
Finish.
      \verb|\LWR@htmltag{/#3}\LWR@orignewline| \\
55
       \end{BlockClass}
56
57 }{%
58
      \PackageError{lwarp-common-multimedia}
           {File '#2' not found}
59
           {Perhaps an incorrect path?}
60
61 }%
62 }
  \{\langle poster\ text \rangle\} \{\langle filename \rangle\} \{\langle audio/video \rangle\} \{\langle mimetype \rangle\}
 Creates a video or audio from a URL link.
63 \newcommand*{\LWR@multimedia@httpAV}[4]{%
The container <div> is sized as desired.
      \ifstrequal{#3}{audio}{%
64
65
           \begin{BlockClass}{AVviewport}
66
      }{%
        \begin{BlockClass}[\LWR@multimedia@printsize\ margin:auto]{AVviewport}
67
68
Paragraph tags are unnecessary for the A/V tags.
       \LWR@stoppars
The A/v element is 100% of the container.
       \LWR@htmltag{%
70
71
           #3\ % space
```

\LWR@multimedia@httpAV

```
72
                                           \ifstrequal{#3}{audio}{}{%
                                               width=\textquotedbl{}100\%\textquotedbl\ % space
                                73
                                               74
                                           }%
                                75
                                76
                                      }\LWR@orignewline
                                The file source and type:
                                      \LWR@htmltag{%
                                77
                                78
                                           source % space
                                           src=\textquotedbl#2\textquotedbl\ % space
                                79
                                           type=\textquotedbl#4\textquotedbl}
                                The poster text inside paragraph tags, along with a reference to the URL.
                                81
                                      \LWR@startpars
                                82
                                      \LWR@href{#2}{#1}
                                83
                                      \LWR@stoppars
                                Finish.
                                      \LWR@htmltag{/#3}\LWR@orignewline
                                84
                                      \end{BlockClass}
                                85
                                86 }
                                  \{\langle poster\ text \rangle\} \{\langle filename \rangle\} \{\langle audio/video \rangle\} \{\langle mimetype \rangle\}
                                Creates an audio or video from a file or a URL.
                                87 \newcommand*{\LWR@multimedia@AV}[4]{%
                                      \IfBeginWith{#2}{http}%
                                88
                                           {\LWR@multimedia@httpAV{#1}{#2}{#3}{#4}}%
                                89
                                           {%
                                90
                                               \IfBeginWith{#2}{HTTP}%
                                91
                                                   {\LWR@multimedia@httpAV{#1}{#2}{#3}{#4}}%
                                92
                                                   {\LWR@multimedia@fileAV{#1}{#2}{#3}{#4}}%
                                93
                                94
                                           }%
                                95 }
                                  \{\langle poster\ text \rangle\} \{\langle URL\ or\ filename \rangle\} \{\langle mime\ type \rangle\}
                                Embeds multimedia of an arbitrary type. The poster text is not used, as it would
                                appear along with the video if the <embed> element is supported.
                                96 \newcommand*{\LWR@multimedia@embed}[3]{%
                                      \begin{BlockClass}[width:100\%]{AVviewport}%
                                97
                                      \LWR@stoppars
                                98
                                           \LWR@htmltag{%
                                99
                                               embed % space
                               100
                                               \ifblank{#3}{}{type=\textguotedbl#3\textguotedbl\ }%
                               101
                                           style=\textquotedbl\LWR@multimedia@printsize\ margin:auto\textquotedbl\ % space
                               102
                               103
                                               src=\textquotedbl#2\textquotedbl\ % space
                               104
                                           }%
                               105
                                      \LWR@startpars
                                      \end{BlockClass}
                               106
                               107 }
                                   Error message if the comment character is used among the arguments of
                                \LWR@multimediab.
\LWR@multimedia@percenterror
                               108 \newcommand*{\LWR@multimedia@percenterror}{%
                                      \PackageError{lwarp-media9}
                               109
                               110
                                      {%
```

\LWR@multimedia@AV

\LWR@multimedia@embed

\LWR@multimediab

```
[\langle options \rangle] \{\langle poster\ text \rangle\} \{\langle filename \rangle\}
```

Creates multimedia. Examines the file extension to determine the type. If not a supported type, creates an embedded object if it has a URL. If neither, create a link to the unsupported object.

```
119 \newcommand*{\LWR@multimediab}[3][]{%
```

Error if the percent character appears among the arguments. This could happen since the comment character has been temporarily disabled, for use in a URL.

```
120 \if#1\@percentchar\LWR@multimedia@percenterror\fi%
121 \if#2\@percentchar\LWR@multimedia@percenterror\fi%
122 \if#3\@percentchar\LWR@multimedia@percenterror\fi%
```

Paragraph handling:

123 \LWR@stoppars%

Record the desired size.

```
124 \setlength{\LWR@multimedia@width}{0pt}%
125 \setlength{\LWR@multimedia@height}{0pt}%
126 \setkeys*{LWR@multimedia}{#1}%
```

If a known A/V type, create an HTML5 < video > or <audio >.

```
127 \IfEndWith{#3}{.mp4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
128 \IfEndWith{#3}{.MP4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
129 \IfEndWith{#3}{.mp3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
130 \IfEndWith{#3}{.MP3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
```

If an arbitrary URL, embed it.

```
131 \IfBeginWith{#3}{http}{\LWR@multimedia@embed{#2}{#3}{}}{%
132 \IfBeginWith{#3}{HTTP}{\LWR@multimedia@embed{#2}{#3}{}}{%
133 \IfBeginWith{#3}{ftp}{\LWR@multimedia@embed{#2}{#3}{}}{%
134 \IfBeginWith{#3}{FTP}{\LWR@multimedia@embed{#2}{#3}{}}{%
```

If unknown, create a link to it.

Paragraph handling:

```
137 \LWR@startpars%
138 \endgroup%
139 }
```

Catcodes which may apper in a URL.

```
140 \newrobustcmd*{\LWR@multimedia}{%}
141 \begingroup%
142 \LWR@linkmediacatcodes%
143 \LWR@multimediab%
144 }
```

File 592 lwarp-common-mathjax-letters.sty

§ 701 Package

Package common-mathjax-letters

lwarp-common-mathjax-letters (Pkg)

Common code used by a number of packages to generate Greek math characters for MathJax.

for HTML output:

1 \ProvidesPackage{lwarp-common-mathjax-letters}[2020/08/10]

\LWR@mathjax@addletter

* { $\langle 2: capitalize \ name? \rangle$ } { $\langle 3: prefix \rangle$ } { $\langle 4: postfix \rangle$ } { $\langle 5: name \rangle$ } { $\langle 6: unicode \rangle$ } Star to italicize the result, used when the unicode character does not exist.

```
2 \begin{warpMathJax}
3
4 \NewDocumentCommand{\LWR@mathjax@addletter}{s m m m m}{
      \IfBooleanTF{#2}%
6
          {\edef\LWRdetempone{\LWRtexttitlecase{#5}}}%
7
          {\edef\LWR@tempone{#5}}%
8
      \xdef\LWR@customizedMathJax{%
9
          \LWR@customizedMathJax%
10
          \LWRbackslash(%
          \LWRbackslash def\LWRbackslash%
11
          #3% prefix
12
          \LWR@tempone%name
13
14
          #4% postfix
15
           \LWRleftbrace%
16
17
      \IfBooleanTF{#1}{%
          \xdef\LWR@customizedMathJax{%
18
19
               \LWR@customizedMathJax%
               \verb|\LWR| backslash mathit\LWR| leftbrace%|
20
               \LWRbackslash unicode\LWRleftbrace x#6\LWRrightbrace%
21
               \LWRrightbrace%
22
          }%
23
24
      }{%
25
          \xdef\LWR@customizedMathJax{%
26
               \LWR@customizedMathJax%
               \LWRbackslash unicode\LWRleftbrace x#6\LWRrightbrace%
27
          }%
28
      }%
29
      \xdef\LWR@customizedMathJax{%
30
           \LWR@customizedMathJax%
31
           \LWRrightbrace\LWRbackslash)\par%
32
      }%
33
34 }
```

* $\{\langle 2: prefix \rangle\} \{\langle 3: postfix \rangle\}$

\LWR@mathjax@addgreek@l@up

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, lowercase upright.

```
35 \NewDocumentCommand{\LWR@mathjax@addgreek@l@up}{s m m}{
36 \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{03B1}
```

```
37
      \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{03B2}
      \LWR@mathjax@addletter{#1}{#2}{#3}{varbeta}{03D0}
38
      \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{03B3}
39
      \LWR@mathjax@addletter{#1}{#2}{#3}{digamma}{03DD}
40
      \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{03B4}
41
      \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{03F5}
42
      \LWR@mathjax@addletter{#1}{#2}{#3}{varepsilon}{03B5}
43
      \LWR@mathjax@addletter{#1}{#2}{#3}{zeta}{03B6}
44
      \LWR@mathjax@addletter{#1}{#2}{#3}{eta}{03B7}
45
      \LWR@mathjax@addletter{#1}{#2}{#3}{theta}{03B8}
46
      \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{03D1}
47
      \LWR@mathjax@addletter{#1}{#2}{#3}{iota}{03B9}
48
      \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{03BA}
49
50
      \LWR@mathjax@addletter{#1}{#2}{#3}{varkappa}{03F0}
      \LWR@mathjax@addletter{#1}{#2}{#3}{lambda}{03BB}
52
      \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{03BC}
53
      \LWR@mathjax@addletter{#1}{#2}{#3}{nu}{03BD}
      \LWR@mathjax@addletter{#1}{#2}{#3}{xi}{03BE}
54
      \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{03BF}
55
      \LWR@mathjax@addletter{#1}{#2}{#3}{pi}{03C0}
56
      \LWR@mathjax@addletter{#1}{#2}{#3}{varpi}{03D6}
57
      \LWR@mathjax@addletter{#1}{#2}{#3}{rho}{03C1}
58
      \LWR@mathjax@addletter{#1}{#2}{#3}{varrho}{03F1}
59
      \LWR@mathjax@addletter{#1}{#2}{#3}{sigma}{03C3}
60
      \LWR@mathjax@addletter{#1}{#2}{#3}{varsigma}{03C2}
61
      \LWR@mathjax@addletter{#1}{#2}{#3}{tau}{03C4}
62
      \LWR@mathjax@addletter{#1}{#2}{#3}{upsilon}{03C5}
63
64
      \LWR@mathjax@addletter{#1}{#2}{#3}{phi}{03D5}
      \LWR@mathjax@addletter{#1}{#2}{#3}{varphi}{03C6}
65
      \LWR@mathjax@addletter{#1}{#2}{#3}{chi}{03C7}
66
      \LWR@mathjax@addletter{#1}{#2}{#3}{psi}{03C8}
67
      \LWR@mathjax@addletter{#1}{#2}{#3}{omega}{03C9}
68
69 }
```

* $\{\langle 2: prefix \rangle\} \{\langle 3: postfix \rangle\}$

\LWR@mathjax@addgreek@u@up

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, uppercase upright.

```
70 \NewDocumentCommand{\LWR@mathjax@addgreek@u@up}{s m m}{
                 \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{0391}
71
                 \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{0392}
72
                 \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{0393}
73
                 \LWR@mathjax@addletter{#1}{#2}{#3}{digamma}{03DC}
75
                 \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{0394}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{0395}
76
                77
                78
                79
                 \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{03F4}
80
                 \label{local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-loc
81
                 \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{039A}
82
                 \LWR@mathjax@addletter{#1}{#2}{#3}{lambda}{039B}
83
                 \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{039C}
84
                 \LWR@mathjax@addletter{#1}{#2}{#3}{nu}{039D}
85
                 \LWR@mathjax@addletter{#1}{#2}{#3}{xi}{039E}
86
                 \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{039F}
87
                 88
                 \LWR@mathjax@addletter{#1}{#2}{#3}{varpi}{03D6}
89
```

* $\{\langle 2: prefix \rangle\} \{\langle 3: postfix \rangle\}$

\LWR@mathjax@addgreek@l@it

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, lowercase italic.

```
99 \NewDocumentCommand{\LWR@mathjax@addgreek@l@it}{s m m}{
                      \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{1D6FC}
                      \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{1D6FD}
                      \label{local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-loc
102
                      \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{1D6FE}
103
                      \LWR@mathjax@addletter*{#1}{#2}{#3}{digamma}{03DD}
104
                      \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{1D6FF}
105
                      \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{1D716}
106
                      \LWR@mathjax@addletter{#1}{#2}{#3}{varepsilon}{1D700}
107
                      \LWR@mathjax@addletter{#1}{#2}{#3}{zeta}{1D701}
108
109
                      \LWR@mathjax@addletter{#1}{#2}{#3}{eta}{1D702}
                      \LWR@mathjax@addletter{#1}{#2}{#3}{theta}{1D703}
                      \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{1D717}
112
                      \LWR@mathjax@addletter{#1}{#2}{#3}{iota}{1D704}
                      \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{1D705}
113
                      \label{local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-loc
114
                      115
                      \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{1D707}
116
                      \LWR@mathjax@addletter{#1}{#2}{#3}{nu}{1D708}
117
                      \LWR@mathjax@addletter{#1}{#2}{#3}{xi}{1D709}
118
                      \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{1D70A}
119
                      \LWR@mathjax@addletter{#1}{#2}{#3}{pi}{1D70B}
120
                      \LWR@mathjax@addletter{#1}{#2}{#3}{varpi}{1D71B}
121
                      \LWR@mathjax@addletter{#1}{#2}{#3}{rho}{1D70C}
122
                      \LWR@mathjax@addletter{#1}{#2}{#3}{varrho}{1D71A}
123
124
                      \LWR@mathjax@addletter{#1}{#2}{#3}{sigma}{1D70E}
                      \LWR@mathjax@addletter{#1}{#2}{#3}{varsigma}{1D70D}
125
                      126
                      \LWR@mathjax@addletter{#1}{#2}{#3}{upsilon}{1D710}
127
                      \LWR@mathjax@addletter{#1}{#2}{#3}{phi}{1D719}
128
                      \LWR@mathjax@addletter{#1}{#2}{#3}{varphi}{1D711}
129
                      \LWR@mathjax@addletter{#1}{#2}{#3}{chi}{1D712}
130
                      \LWR@mathjax@addletter{#1}{#2}{#3}{psi}{1D713}
131
                      \LWR@mathjax@addletter{#1}{#2}{#3}{omega}{1D714}
132
133 }
```

* {\langle 2: prefix \rangle} {\langle 3: postfix \rangle}

\LWR@mathjax@addgreek@u@it

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, uppercase italic.

```
134 \NewDocumentCommand{\LWR@mathjax@addgreek@u@it}{s m m}{
135 \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{1D6E2}
```

```
\LWR@mathjax@addletter{#1}{#2}{#3}{beta}{1D6E3}
136
                 \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{1D6E4}
137
                 \LWR@mathjax@addletter*{#1}{#2}{#3}{digamma}{03DC}
138
                 \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{1D6E6}
                 \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
141
                 \LWR@mathjax@addletter{#1}{#2}{#3}{eta}{1D6E8}
142
                 \LWR@mathjax@addletter{#1}{#2}{#3}{theta}{1D6E9}
143
                 \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{1D6F3}
144
                 \LWR@mathjax@addletter{#1}{#2}{#3}{iota}{1D6EA}
145
                 \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{1D6EB}
146
147
                 \LWR@mathjax@addletter{#1}{#2}{#3}{lambda}{1D6EC}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{1D6ED}
148
                 \LWR@mathjax@addletter{#1}{#2}{#3}{nu}{1D6EE}
149
                 \LWR@mathjax@addletter{#1}{#2}{#3}{xi}{1D6EF}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{1D6F0}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{pi}{1D6F1}
152
                 \LWR@mathjax@addletter{#1}{#2}{#3}{rho}{1D6F2}
153
                 \LWR@mathjax@addletter{#1}{#2}{#3}{tau}{1D6F5}
155
                 \LWR@mathjax@addletter{#1}{#2}{#3}{upsilon}{1D6F6}
156
                 \LWR@mathjax@addletter{#1}{#2}{#3}{phi}{1D6F7}
157
                 \LWR@mathjax@addletter{#1}{#2}{#3}{chi}{1D6F8}
158
                 \LWR@mathjax@addletter{#1}{#2}{#3}{psi}{1D6F9}
159
                 \LWR@mathjax@addletter{#1}{#2}{#3}{omega}{1D6FA}
160
```

* $\{\langle 2: prefix \rangle\} \{\langle 3: postfix \rangle\}$

\LWR@mathjax@addgreek@l@bfit

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, lowercase boldface italic.

```
\label{local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-loc
                         \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{1D737}
                         \LWR@mathjax@addletter{#1}{#2}{#3}{varbeta}{03D0}
165
                         \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{1D738}
166
                         \LWR@mathjax@addletter*{#1}{#2}{#3}{digamma}{03DD}
167
                         \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{1D739}
168
                         169
                         \LWR@mathjax@addletter{#1}{#2}{#3}{varepsilon}{1D73A}
170
                         \LWR@mathjax@addletter{#1}{#2}{#3}{zeta}{1D73B}
171
                         \LWR@mathjax@addletter{#1}{#2}{#3}{eta}{1D73C}
172
                         173
                         \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{1D751}
174
                         \LWR@mathjax@addletter{#1}{#2}{#3}{iota}{1D73E}
175
                         \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{1D73F}
176
                         \LWR@mathjax@addletter{#1}{#2}{#3}{varkappa}{1D752}
177
                         \LWR@mathjax@addletter{#1}{#2}{#3}{lambda}{1D740}
178
                         \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{1D741}
179
                         180
                         \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{1D744}
                         183
                         \LWR@mathjax@addletter{#1}{#2}{#3}{varpi}{1D755}
                        \label{local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_local_loc
                         186
                         \LWR@mathjax@addletter{#1}{#2}{#3}{sigma}{1D748}
187
                         \LWR@mathjax@addletter{#1}{#2}{#3}{varsigma}{1D747}
188
```

* $\{\langle 2: prefix \rangle\} \{\langle 3: postfix \rangle\}$

\LWR@mathjax@addgreek@u@bfit

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, uppercase boldface italic.

```
197 \NewDocumentCommand{\LWR@mathjax@addgreek@u@bfit}{s m m}{
                 \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{1D71C}
198
                 \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{1D71D}
199
                 \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{1D71E}
200
                 \LWR@mathjax@addletter*{#1}{#2}{#3}{digamma}{03DC}
201
                 \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{1D71F}
202
                 \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{1D720}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{zeta}{1D721}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{eta}{1D722}
206
                 \LWR@mathjax@addletter{#1}{#2}{#3}{theta}{1D723}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{1D72D}
207
                 \LWR@mathjax@addletter{#1}{#2}{#3}{iota}{1D724}
208
                 \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{1D725}
209
                \LWR@mathjax@addletter{#1}{#2}{#3}{lambda}{1D726}
210
                 \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{1D727}
211
                 \LWR@mathjax@addletter{#1}{#2}{#3}{nu}{1D728}
212
                 \LWR@mathjax@addletter{#1}{#2}{#3}{xi}{1D729}
213
                \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{1D72A}
                \label{local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-local-loc
215
216
                 \LWR@mathjax@addletter{#1}{#2}{#3}{rho}{1D72C}
217
                 \LWR@mathjax@addletter{#1}{#2}{#3}{sigma}{1D72E}
218
                 \LWR@mathjax@addletter{#1}{#2}{#3}{tau}{1D72F}
                 \LWR@mathjax@addletter{#1}{#2}{#3}{upsilon}{1D730}
219
                 \LWR@mathjax@addletter{#1}{#2}{#3}{phi}{1D731}
220
                 \LWR@mathjax@addletter{#1}{#2}{#3}{chi}{1D732}
221
                 \LWR@mathjax@addletter{#1}{#2}{#3}{psi}{1D733}
222
223
                 \LWR@mathjax@addletter{#1}{#2}{#3}{omega}{1D734}
```

\LWR@mathjax@addgreek@u@bfup is not needed.

```
* \{\langle 2: prefix \rangle\} \{\langle 3: postfix \rangle\}
```

\LWR@mathjax@addgreek@u@bfup

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, uppercase boldface upright.

```
225 \NewDocumentCommand{\LWR@mathjax@addgreek@u@bfup}{s m m}{
226 \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{1D6A8}
227 \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{1D6A9}
228 \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{1D6AA}
229 \LWR@mathjax@addletter*{#1}{#2}{#3}{digamma}{03DC}
230 \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{1D6AB}
231 \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{1D6AC}
232 \LWR@mathjax@addletter{#1}{#2}{#3}{zeta}{1D6AD}
```

```
\LWR@mathjax@addletter{#1}{#2}{#3}{eta}{1D6AE}
233
234
     \LWR@mathjax@addletter{#1}{#2}{#3}{theta}{1D6AF}
     \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{1D6B9}
235
     \LWR@mathjax@addletter{#1}{#2}{#3}{iota}{1D6B0}
     \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{1D6B1}
     \LWR@mathjax@addletter{#1}{#2}{#3}{lambda}{1D6B2}
238
     \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{1D6B3}
239
     240
     241
     \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{1D6B6}
242
     \LWR@mathjax@addletter{#1}{#2}{#3}{pi}{1D6B7}
243
     \LWR@mathjax@addletter{#1}{#2}{#3}{rho}{1D6B8}
244
     \LWR@mathjax@addletter{#1}{#2}{#3}{sigma}{1D6BA}
245
     246
     \LWR@mathjax@addletter{#1}{#2}{#3}{upsilon}{1D6BC}
248
     \LWR@mathjax@addletter{#1}{#2}{#3}{phi}{1D6BD}
249
     \LWR@mathjax@addletter{#1}{#2}{#3}{chi}{1D6BE}
250
     \LWR@mathjax@addletter{#1}{#2}{#3}{psi}{1D6BF}
     251
252 }
```

$\{\langle prefix \rangle\}$

\LWR@mathjax@addlatin@u@bfit

Adds \CustomizeMathjax expressions to define a set of macros for bold-face italic Latin letters, uppercase and lowercase.

```
{\tt 253 \ NewDocumentCommand \ LWR@mathjax@addlatin@u@bfit} \{m\} \{to a substitution of the command of the comma
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{A}{1D468} $$
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{C}_{1D46A} $$
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{D}{1D46B} $$
257
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{E}{1D46C} $$
258
                 259
                 \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{G}{1D46E}
260
                 \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{H}{1D46F}
261
                 \label{local-control} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{I}_{1D470} $$
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{J}_{1D471} $$
                 \label{local-control} $$ LWR@mathjax@addletter{\BooleanFalse}{\#1}{}K}{1D472} $$
264
                 265
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{M}{1D474} $$
266
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{N}_{1D475} $$
267
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{0}_{1D476} $$
268
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{P}_{1D477} $$
269
270
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{Q}_{1D478} $$
271
                 \label{local-continuity} $$ LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{R}{1D479} $$
                 272
                 \label{local-control} $$ LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{T}_{1D47B} $$
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{U}_{1D47C} $$
                 \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{V}{1D47D}
275
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{W}_{1D47E} $$
276
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{X}_{1D47F} $$
277
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{Y}{1D480} $$
278
                 \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{Z}_{1D481} $$
279
280 }
```

 $\{\langle prefix \rangle\}$

 $\verb|\LWR@mathjax@addlatin@l@bfit||$

Adds \CustomizeMathjax expressions to define a set of macros for bold-face italic Latin letters, uppercase and lowercase.

 ${\tt 281 \ NewDocumentCommand \ LWR@mathjax@addlatin@l@bfit} \{m\} \{to the command \ the$

```
282
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{a}{1D482}
283
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{b}{1D483}
      \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{c}{1D484} $$
284
      \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{\d}{1D485} $$
285
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{e}{1D486}
286
287
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{f}{1D487}
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{g}{1D488}
288
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{h}{1D489}
289
      \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}_{\#1}_{i}_{1D48A} $$
290
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{j}{1D48B}
291
      292
293
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{l}{1D48D}
294
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{m}{1D48E}
      296
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{o}{1D490}
297
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{p}{1D491}
298
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{q}{1D492}
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{r}{1D493}
299
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{s}{1D494}
300
      \label{local-boolean} $$ \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{t}{1D495} $$
301
      302
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{v}{1D497}
303
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{w}{1D498}
304
305
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{x}{1D499}
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{y}{1D49A}
306
      \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{z}{1D49B}
307
308 }
309 \end{warpMathJax}
```

lwarp-common-mathjax-newpxtxmath.sty

common-mathjax-newpxtxmath § 702 **Package**

(Emulates or patches code by Michael Sharpe.)

lwarp-common-mathjax-newpxtxmaccommon code used by newpxmath, newtxmath, and newtxsf for MATHJAX.

for HTML output:

1 \ProvidesPackage{lwarp-common-mathjax-newpxtxmath}[2020/09/20]

For MATHJAX:

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-nonunicode}
\verb| 3 LWR@origRequirePackage{lwarp-common-mathjax-overlaysymbols}| \\
5 \begin{warpMathJax}
6 \CustomizeMathJax{\newcommand{\fAlt}{f}}
7 \CustomizeMathJax{\newcommand{\rhoAlt}{\rho}}
\label{lem:semand_limitscr} % $$ \customizeMathJax{\newcommand{\imathscr}{\mathscr}_i}$$
```

lwarp_mathjax.txt adds \left/\right support for delimiters.

```
11 \CustomizeMathJax{\let\llbracket\lBrack}
12 \CustomizeMathJax{\let\rrbracket\rBrack}
```

```
14 \CustomizeMathJax{\let\smlbrace\{}
 15 \CustomizeMathJax{\let\smrbrace\}}
 17 \CustomizeMathJax{\newcommand{\nPerp}{\mathrel{\not{\!\unicode{x02AEB}}}}}
 19 \CustomizeMathJax{\newcommand{\Angstrom}{\mathord{\unicode{x212B}}}}
20 \CustomizeMathJax{\newcommand{\Euler}{\mathord{\unicode{x2107}}}}
21 \CustomizeMathJax{\newcommand{\transp}{\mathord{\unicode{xFF34}}}}
{\tt 22 \customizeMathJax{\newcommand{\hermtransp}{\mathord{\unicode{xFF28}}}}}
23 \CustomizeMathJax{\let\htransp=\hermtransp}
24 \CustomizeMathJax{\newcommand{\circledplus}{\mathbin{\unicode{x2295}}}}
25 \CustomizeMathJax{\newcommand{\circledminus}{\mathbin{\unicode{x2296}}}}
26 \colone{CustomizeMathJax{\newcommand{\circledtimes}{\mbox{\newcommand{\circledtimes}}}}) \\
 27 \colone{x2298}) \} \\
28 %
\label{lem:cond} $$29 \subset \mathcal{K}(x) = \mathcal{K}(x) + 
{\tt 31 \ CustomizeMathJax\{\ let\ overgroup ra\ overright arrow\}}
{\tt 32 \CustomizeMathJax\{\let\undergroup\underparen\}}\\
33 \CustomizeMathJax{\let\undergroupla\underleftarrow}
34 \CustomizeMathJax{\newcommand{\widering}[1]{%
                                         \stackrel{\unicode{x2218}}{\overgroup{#1}}%
36 }}
37 \CustomizeMathJax{\let\widearc\overparen}
38 \CustomizeMathJax{\let\wideOarc\overrightarrow}
\label{localize} $$39 \subset \mathcal{L}(\) = \mathcal{L}(\) $$39 \subset \mathcal{L}(\) = \mathcal{L}(\) $$39 \subset \mathcal{L}(
40 \costomizeMathJax{\newcommand{\vv}{\ifstar\LWRvvstar\overrightarrow}} \\
42 \CustomizeMathJax{\let\smallintsl\smallint}
\label{liints} $$43 \subset Mathop{\unicode{x222C}}\limits}$
44 \CustomizeMathJax{\newcommand{\smalliiintsl}{\mathop{\unicode{x222D}}\\limits}}
\label{limits} $$ \customizeMathJax{\newcommand{\smalliiiintsl}{\mathop{\unicode{x2A0C}}\limits}} $$
\label{loss} $$46 \subset \mathcal{X}_2E}_{\mbox{\mathbf x}_1}(\mbox{\mathbf x}_2E}_{\mbox{\mathbf x}_2E}_{\mbox{\mathbf x}_2E}} $$
\label{loss} $$48 \subset \mathcal{N}(x) = \mathcal{N}(x) + \mathcal{N}
{\tt 49 \ CustomizeMathJax{\ newcommand{\ smallvarointclockwisesl}} \{\% \} {\tt 100} {\tt 10
                                         \mathop{\unicode{x2232}}\limits%
51 }}
52 \CustomizeMathJax{\newcommand{\smallointctrclockwisesl}{%
                                         \mathbf{x2233} limits%
54 }}
55 \CustomizeMathJax{\newcommand{\smallsumintsl}{\mathop{\unicode{x2A0B}}\\limits}}
 56 \CustomizeMathJax{\newcommand{\smallfintsl}{\mathop{\unicode{x2A0F}}\limits}}
 57 \CustomizeMathJax{\newcommand{\smallsqintsl}{\mathop{\unicode{x2A16}}\limits}}
59 \CustomizeMathJax{\let\smallintup\smallint}
\label{liintup} $$ 60 \subset MathJax{\newcommand{\smalliintup}{\newcom} \label{liintup} $$ \arrowvert (\newcommand{\smalliintup} \arrowvert (\newcomm
61 \CustomizeMathJax{\newcommand{\smalliiintup}{\mathop{\unicode{x222D}}\limits}}
\label{limit} $$ 62 \subset \mathcal{X}AOC} \subset \mathcal{X}AOC \
\label{lem:cond} % $$G3 \subset \mathcal{L}(x) = G(x) + G(x) . $$G(x) = G(x) + G(x)
\label{lem:cond} $$64 \subset \mathcal{x}_2F}}\limits $$ $$64 \subset \mathcal{x}_2F}\limits $$
65 \coloner{continue} {\bf valloiiintup} {\bf valloiintup} {\bf valloiintup
66 \CustomizeMathJax{\newcommand{\smallvarointclockwiseup}{%
                                          \mathop{\unicode{x2232}}\limits%
69 \ Customize MathJax {\ newcommand {\ smallointctrclockwiseup} } \{\% \} 
70
                                         \mathop{\unicode{x2233}}\limits%
71 }}
```

```
72 \CustomizeMathJax{\newcommand{\smallsumintup}{\mathop{\unicode{x2A0B}}\limits}}
  \label{lem:cond} $$74 \subset \mathcal{X}(\)_{\xi} \
 76 \CustomizeMathJax{\newcommand{\iint}{\mathop{\unicode{x222C}}}\limits}}
 77 \CustomizeMathJax{\newcommand{\iiint}{\mathop{\unicode{x222D}}\\limits}}
 78 \CustomizeMathJax{\newcommand{\iiiint}{\mathop{\unicode{x2A0C}}\limits}}
 79 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicode{x222F}}\limits}}
 80 \CustomizeMathJax{\newcommand{\oiiint}{\mathop{\unicode{x2230}}\limits}}
  81 \costomizeMathJax{\newcommand{\varointclockwise}{\mathop{\unicode{x2232}}\limits}} 
 83 \CustomizeMathJax{\newcommand{\sumint}{\mathop{\unicode{x2A0B}}\limits}}
 84 \CustomizeMathJax{\newcommand{\fint}{\mathop{\unicode{x2A0F}}\limits}}
 85 \customizeMathJax{\newcommand{\sqint}{\mathop{\unicode{x2A16}}\limits}}
 87 \CustomizeMathJax{\let\intsl\int}
 88 \customize MathJax {\newcommand {\iintsl} {\newcommand {\newcomma
 89 \CustomizeMathJax{\newcommand{\iiintsl}{\mathop{\unicode{x222D}}\limits}}
 90 \CustomizeMathJax{\newcommand{\iiiintsl}{\mathop{\unicode{x2A0C}}\limits}}
 91 \CustomizeMathJax{\left\{ \cdot et \circ ints \right\} }
 92 \CustomizeMathJax{\newcommand{\oiintsl}{\mathop{\unicode{x222F}}}\limits}}
 93 \CustomizeMathJax{\newcommand{\oiiintsl}{\mathop{\unicode{x2230}}\limits}}
 94 \CustomizeMathJax{\newcommand{\varointclockwisesl}{\mathop{\unicode{x2232}}\limits}}
 95 \CustomizeMathJax{\newcommand{\ointctrclockwisesl}{\mathop{\unicode{x2233}}\limits}}
 96 \CustomizeMathJax{\newcommand{\sumintsl}{\mathop{\unicode{x2A0B}}\limits}}
 97 \CustomizeMathJax{\newcommand{\fintsl}{\mathop{\unicode{x2A0F}}\limits}}
 98 \CustomizeMathJax{\newcommand{\sqintsl}{\mathop{\unicode{x2A16}}\limits}}
 99 %
100 \CustomizeMathJax{\let\intup\int}
101 \CustomizeMathJax{\newcommand{\iintup}{\mathop{\unicode{x222C}}\limits}}
\label{local-cond} $$102 \subset \mathcal{x}_{newcommand}\simeq \mathcal{x
103 \CustomizeMathJax{\newcommand{\iiiintup}{\mathop{\unicode{x2A0C}}\limits}}
104 \CustomizeMathJax{\let\ointup\oint}
105 \CustomizeMathJax{\newcommand{\oiintup}{\mathop{\unicode{x222F}}\limits}}
106 \CustomizeMathJax{\newcommand{\oiiintup}{\mathop{\unicode{x2230}}\limits}}
107 \CustomizeMathJax{\newcommand{\varointclockwiseup}{%
                \mathop{\unicode{x2232}}\limits%
109 }}
110 \CustomizeMathJax{\newcommand{\ointctrclockwiseup}{%
                \mathop{\unicode{x2233}}\limits%
111
114 \CustomizeMathJax{\newcommand{\fintup}{\mathop{\unicode{x2A0F}}\limits}}
115 \CustomizeMathJax{\newcommand{\sqintup}{\mathop{\unicode{x2A16}}\limits}}
117 \CustomizeMathJax{\newcommand{\bigcupdot}{\mathop{\unicode{x2A03}}}}
118 \CustomizeMathJax{\newcommand{\bigcupplus}{\mathop{\unicode{x2A04}}}}
120 %
{\tt 123 \ CustomizeMathJax\{\ let\ varprod\ bigtimes\}}
126 \CustomizeMathJax{\let\mappedfromchar\mappedfrom}
\label{longmappedfrom} $$128 \subset Mathrel{\unicode{x027FB}}} $$
```

```
129 %
130 \CustomizeMathJax{\newcommand{\Mapsto}{\mathrel{\unicode{x02907}}}}
131 \CustomizeMathJax{\let\Mapstochar\Mapsto}
\label{longmapsto} $$132 \subset Mathrel{\newcommand{\Longmapsto}_{\mathrel{\newcommand{\xi}}}}$
133 \CustomizeMathJax{\newcommand{\Mappedfrom}{\mathrel{\unicode{x02906}}}}
134 \CustomizeMathJax{\let\Mappedfromchar\Mappedfrom}
\label{lem:linear_lambda} $$135 \customizeMathJax{\newcommand{\Mapsfrom}_{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\newcommand{\n
137 %
139 \CustomizeMathJax{\newcommand{\medbullet}{\mathbin{\unicode{x025CF}}}}}
140 \CustomizeMathJax{\newcommand{\varparallel}{\mathrel{\unicode{x02AFD}}}}
141 \CustomizeMathJax{\newcommand{\varparallelinv}{\mathrel{\unicode{x244A}}}}
{\tt 142 \CustomizeMathJax{\newcommand{\nvarparallel}}{\tt 8}}
           \mathrel{\LWRoverlaysymbols{-}{\unicode{x02AFD}}}%
144 }}
{\tt 145 \ Customize Math Jax \{\ newcommand \{\ nvar parallelinv\} \{\% \}}
           \label{local-condition} $$\operatorname{LWRoverlay symbols}_{-}_{\operatorname{unicode}_{x244A}}}\
147 }}
148 %
153 %
154 \CustomizeMathJax{\newcommand{\preceqq}{\mathrel{\unicode{x02AB3}}}}
155 \CustomizeMathJax{\newcommand{\succeqq}{\mathrel{\unicode{x02AB4}}}}
156 %
157
158 \CustomizeMathJax{\newcommand{\nprecsim}{%
           \mathrel{\LWRoverlaysymbols{/}{\unicode{x0227E}}}%
160 }}
161 \CustomizeMathJax{\newcommand{\nsuccsim}{%
162
           \mathrel{\LWRoverlaysymbols{/}{\unicode{x0227F}}}%
163 }}
165 \CustomizeMathJax{\newcommand{\ngtrsim}{\mathrel{\unicode{x02275}}}}
166 %
169 \CustomizeMathJax{\newcommand{\notni}{\mathrel{\unicode{x220C}}}}}
170 \CustomizeMathJax{\let\notowns\notni}
171 %
172 \CustomizeMathJax{\newcommand{\nlessapprox}{%
           \mathrel{\LWRoverlaysymbols{/}{\unicode{x02A85}}}%
173
174 }}
175 \CustomizeMathJax{\newcommand{\ngtrapprox}{%
           \mathrel{\LWRoverlaysymbols{/}{\unicode{x02A86}}}%
176
177 }}
178 %
179 \CustomizeMathJax{\newcommand{\npreccurlyeq}{%
180
           \mathrel{\LWRoverlaysymbols{/}{\unicode{x0227C}}}%
181 }}
```

```
182 \CustomizeMathJax{\newcommand{\nsucccurlyeq}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x0227D}}}%
184 }}
187 \CustomizeMathJax{\newcommand{\nbumpeq}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x0224F}}}%
189 }}
190 \CustomizeMathJax{\newcommand{\nBumpeq}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x0224E}}}%
192 }}
193 %
194 \CustomizeMathJax{\newcommand{\nbacksim}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x0223D}}}%
197 \CustomizeMathJax{\newcommand{\nbacksimeq}{%}
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x022CD}}}%
198
199 }}
{\tt 200 \ CustomizeMathJax{\ newcommand{\ nasymp}{\ mathrel{\ unicode{x226D}}}}}
201 \CustomizeMathJax{\newcommand{\nequiv}{\mathrel{\unicode{x2262}}}}
203 %
204 \CustomizeMathJax{\newcommand{\nll}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x0226A}}}%
206 }}
207 \CustomizeMathJax{\newcommand{\ngg}{%
208
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x0226B}}}%
209 }}
210 \CustomizeMathJax{\newcommand{\nthickapprox}{%}
      \label{local-condition} $$ \mathbf{LWRoverlay symbols}{{\mathbf unicode} x02248}}}\
211
212 }}
213 \CustomizeMathJax{\newcommand{\napproxeq}{%
214
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x0224A}}}%
215 }}
216 \CustomizeMathJax{\newcommand{\nprecapprox}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB7}}}%
217
218 }}
219 \CustomizeMathJax{\newcommand{\nsuccapprox}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB8}}}%
221 }}
222 \CustomizeMathJax{\newcommand{\npreceqq}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB3}}}%
224 }}
225 \CustomizeMathJax{\newcommand{\nsucceqq}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB4}}}%
227 }}
228 \CustomizeMathJax{\newcommand{\nsimeq}{\mathrel{\unicode{x02244}}}}
230 \CustomizeMathJax{\newcommand{\nSubset}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x022D0}}}%
231
232 }}
233 \CustomizeMathJax{\newcommand{\nSupset}{%
      \mathrel{\LWRoverlaysymbols{/}{\unicode{x022D1}}}%
235 }}
236\CustomizeMathJax{newcommand{nsqsubseteq}{mathrel{unicode{x022E2}}}}
237 \CustomizeMathJax{\newcommand{\nsqsupseteq}{\mathrel{\unicode{x022E3}}}}
239 \coloneqq{\mathrel{\unicode{x02254}}}}
240 \CustomizeMathJax{\newcommand{\eqqcolon}{\mathrel{\unicode{x02255}}}}
241 \CustomizeMathJax{\newcommand{\Coloneqq}{\mathrel{\unicode{x02A74}}}}
```

```
242 \customizeMathJax{\newcommand{\Coloneq}{\mathrel{\unicode{x2237}-}}}
243 \CustomizeMathJax{\newcommand{\Eqcolon}{\mathrel{-\unicode{x2237}}}}
245 \CustomizeMathJax{\newcommand{\lvec}[1]{%}}
                        \mathord{\overset{\unicode{x02190}}{#1}}%
247 }}
248 \CustomizeMathJax{\newcommand{\lrvec}[1]{%
                        \mbox{\mbox{\mbox{$\sim$}}{\#1}}%
250 }}
251 \CustomizeMathJax{\newcommand{\harpoonacc}[1]{%
                         \mathord{\overset{\unicode{x021C0}}{#1}}%
252
253 }}
254 \CustomizeMathJax{\newcommand{\lharpoonacc}[1]{%
                         \mathord{\overset{\unicode{x021BC}}{#1}}%
256 }}
{\tt 257 \ CustomizeMathJax{\ newcommand{\ lrharpoonacc}[1]{\%}}
                        \mathord{\overset{\unicode{x0294E}}{#1}}%
258
259 }}
260 \constant{260 \constant{
261 \c Mathord{\c {\c Mathord {\c Mathor
263 \CustomizeMathJax{\newcommand{\tildebar}[1]{\mathord{\overset{\eqsim}{#1}}}}
264 \CustomizeMathJax{\newcommand{\tildetilde}[1]{\mathord{\overset{\approx}{#1}}}}
265 \customizeMathJax{\newcommand{\tildehat}[1]{\mathord{\hat{\tilde{#1}}}}}
266 \converged \conv
267 \conting {\bf \{\{hattilde\}[1]\{\{hattilde\{\{hat\{\#1\}\}\}\}\}\}} 
268 \customizeMathJax{\newcommand{\hathat}[1]{\mathord{\hat{#1}}}})
269
270 \conting {\cdotB}{\mathord{\cdot}}}\}
271 \code{x2022}}) \\
272 \CustomizeMathJax{\newcommand{\circS}{\boldsymbol{\circ}}}
273 \CustomizeMathJax{\newcommand{\bulletSSS}{\bullet}}
274 \CustomizeMathJax{\newcommand{\bulletSS}{\mathord{\unicode{x025CF}}}}
275 \CustomizeMathJax{\newcommand{\bulletS}{\mathord{\unicode{x02B24}}}}
276 \CustomizeMathJax{\newcommand{\primeS}{\prime}}
278 \contine{MathJax{\newcommand{\invamp}{\mathbin{\unicode{x0214B}}}}}
      lwarp_mathjax.txt adds \left/\right support for delimiters.
{\tt 279 \ CustomizeMathJax{\newcommand{\Lbag}{\mathopen{\large\unicode{x027C5}}}}}
280 \continuous {\continuous 
281 \CustomizeMathJax{\newcommand{\circledless}{\mathrel{\unicode{x029C0}}}}
282 \CustomizeMathJax{\newcommand{\circledgtr}{\mathrel{\unicode{x029C1}}}}}
283 \CustomizeMathJax{\newcommand{\circledbslash}{\mathbin{\unicode{x029B8}}}}
284 \CustomizeMathJax{\newcommand{\lJoin}{\mathrel{\unicode{x22C9}}}}
285 \CustomizeMathJax{\newcommand{\rJoin}{\mathrel{\unicode{x22CA}}}}}
286 \CustomizeMathJax{\newcommand{\lrJoin}{\mathrel{\unicode{x2A1D}}}}
288 \customize MathJax {\newcommand {\lrtimes} {\mathrel {\unicode {x2A1D}}}} \\
290 \CustomizeMathJax{\newcommand{\nplus}{%
                        \label{two} $$\mathbf{t}_{\word}(x)=\frac{x02229}}\
292 }}
293 \CustomizeMathJax{\newcommand{\nsqsubset}{%
294
                         \mathrel{\LWRoverlaysymbols{/}{\unicode{x0228F}}}%
295 }}
296 \CustomizeMathJax{\newcommand{\nsqsupset}{%
```

```
297
           \mathrel{\LWRoverlaysymbols{/}{\unicode{x02290}}}%
298 }}
299 \CustomizeMathJax{\newcommand{\dasharrow}{\mathrel{\unicode{x021E2}}}}
{\tt 300 \ CustomizeMathJax{\newcommand{\leftsquigarrow}{\mbox{\mbox{\mbox{$100$}}}}}}
301 \CustomizeMathJax{\newcommand{\ntwoheadrightarrow}{\mathrel{\unicode{x02900}}}}
302 \CustomizeMathJax{\newcommand{\ntwoheadleftarrow}{\mathrel{\unicode{x02B34}}}}
303 \CustomizeMathJax{\newcommand{\boxast}{\mathbin{\unicode{x029C6}}}}
304 \costomizeMathJax{\newcommand{\boxbslash}{\mathbin{\unicode{x29C5}}}}
\label{lem:code} $305 \customizeMathJax{\newcommand{\boxbar}{\mathbin{\unicode{x025EB}}}} $$
306 \continuous AmathJax{\newcommand{\boxslash}{\mathbin{\unicode{x029C4}}}}
308 \CustomizeMathJax{\newcommand{\varclubsuit}{\mathord{\unicode{x02667}}}}
309 \CustomizeMathJax{\newcommand{\vardiamondsuit}{\mathord{\unicode{x02666}}}}
311 \CustomizeMathJax{\newcommand{\varspadesuit}{\mathord{\unicode{x02664}}}}
313 \CustomizeMathJax{\newcommand{\Nearrow}{\mathrel{\unicode{x021D7}}}}
314 \CustomizeMathJax{\newcommand{\Searrow}{\mathrel{\unicode{x021D8}}}}
315 \CustomizeMathJax{\newcommand{\Nwarrow}{\mathrel{\unicode{x021D6}}}}
316 \CustomizeMathJax{\newcommand{\Swarrow}{\mathrel{\unicode{x021D9}}}}
317 \CustomizeMathJax{\newcommand{\Top}{\mathord{\unicode{x02AEA}}}}
318 \CustomizeMathJax{\newcommand{\Bot}{\mathord{\unicode{x02AEB}}}}
320 \CustomizeMathJax{\newcommand{\leadstoext}{\mathrel{\unicode{xFF5E}}}}
322 \CustomizeMathJax{\newcommand{\sqcupplus}{%
           \mathbin{\LWRoverlaysymbols{+}{\unicode{x02294}}}%
323
324 }}
325 \CustomizeMathJax{\newcommand{\sqcapplus}{%
326
           \mathbin{\LWRoverlaysymbols{+}{\unicode{x02293}}}%
327 }}
328
329 \converged \conv
330 \CustomizeMathJax{\newcommand{\drb}{\mathopen{\unicode{x027E7}}}}
332 \CustomizeMathJax{\newcommand{\varg}{g}}
333 \CustomizeMathJax{\newcommand{\vary}{y}}
334 \CustomizeMathJax{\newcommand{\varv}{v}}
335 \CustomizeMathJax{\newcommand{\varw}{w}}
337 \times M^{\frac{1}{2}}
338 \CustomizeMathJax{\newcommand{\existsAlt}{\mathord{\unicode{x02203}}}}}
339 \CustomizeMathJax{\newcommand{\forallAlt}{\mathord{\unicode{x02200}}}}}
340 \CustomizeMathJax{\newcommand{\emptysetAlt}{\mathord{\unicode{x02205}}}}
342 \CustomizeMathJax{\newcommand{\uppartial}{%
           \mathord{\unicode{x02202}}%
344 }}% not upright
{\tt 346 \ CustomizeMathJax{\ let\ varmathbb\ mathbb}}
347 \CustomizeMathJax{\let\vmathbb\mathbb}
348 \CustomizeMathJax{\let\vvmathbb\mathbb}
350 \CustomizeMathJax{\let\smallprod\prod}
351 \CustomizeMathJax{\let\smallsum\sum}
352 \CustomizeMathJax{\let\smallcoprod\coprod}
354 \CustomizeMathJax{\newcommand{\openbox}{\mathord{\unicode{x25FD}}}}
355 \CustomizeMathJax{\let\textsquare\openbox}
```

```
356 \CustomizeMathJax{\let\varemptyset\emptyset}
357 %
358 % for newpxmath:
359 \CustomizeMathJax{\newcommand{\mathsterling}{\mathord{\unicode{x000A3}}}}
360 \CustomizeMathJax{\newcommand{\mathcent}{\mathord{\unicode{x000A2}}}}
361
362 \end{warpMathJax}
```

File 594 lwarp-common-mathjax-nonunicode.sty

§ 703 Package common-mathjax-nonunicode

(Emulates or patches code by Daniel Flipo, Michael Sharpe.)

lwarp-common-mathjax-nonunicod Common code used by newpxmath, newtxmath, newtxsf, kpfonts-otf for Math-(*Pkg*) Jax. These are symbols not found in UNICODE.

Factored from lwarp-common-mathjax-newpxtxmath.

for HTML output: 1 \ProvidesPackage{lwarp-common-mathjax-nonunicode}[2020/09/20]

For MATHJAX:

```
2 \LWR@origRequirePackage{lwarp-common-mathjax-overlaysymbols}
4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\mmapsto}{\mathrel{\unicode{x021A6}}}}
6 \CustomizeMathJax{\let\mmapstochar\mmapsto}
7 \CustomizeMathJax{\newcommand{\longmmapsto}{\mathrel{\unicode{x021A6}}}}
8 \CustomizeMathJax{\newcommand{\mmappedfrom}{\mathrel{\unicode{x021A4}}}}
9 \CustomizeMathJax{\let\mmappedfromchar\mmappedfrom}
10 \CustomizeMathJax{\newcommand{\longmmappedfrom}{\mathrel{\unicode{x021A4}}}}
11 \CustomizeMathJax{\let\mmapsfrom\mmappedfrom}% from kpfonts-otf
12 \CustomizeMathJax{\let\longmmapsfrom\longmmappedfrom}% from kpfonts-otf
14 \CustomizeMathJax{\newcommand{\Mmapsto}{\mathrel{\unicode{x02907}}}}
15 \CustomizeMathJax{\let\Mmapstochar\Mmapsto}
16 \CustomizeMathJax{\newcommand{\Longmmapsto}{\mathrel{\unicode{x027FE}}}}
17 \CustomizeMathJax{\newcommand{\Mmappedfrom}{\mathrel{\unicode{x02906}}}}
18 \CustomizeMathJax{\let\Mmappedfromchar\Mmappedfrom}
19 \CustomizeMathJax{\newcommand{\Longmmappedfrom}{\mathrel{\unicode{x027FD}}}}}
20 \CustomizeMathJax{\let\Mmapsfrom\Mmappedfrom}% from kpfonts-otf
21\CustomizeMathJax{\left\langle \cdot\right\} } from kpfonts-otf
22 %
23 \CustomizeMathJax{\newcommand{\boxright}{%
      \mathrel{\unicode{x025A1}\!\unicode{x02192}}%
24
25 }}
26 \CustomizeMathJax{\newcommand{\boxleft}{%
      \mathrel{\unicode{x02190}\!\unicode{x025A1}}%
28 }}
29 \CustomizeMathJax{\newcommand{\boxdotright}{%
      \mathrel{\unicode{x022A1}\!\unicode{x02192}}%
30
31 }}
32 \CustomizeMathJax{\newcommand{\boxdotleft}{%
      \mathrel{\unicode{x02190}\!\unicode{x022A1}}%
33
34 }}
35
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36 \CustomizeMathJax{\newcommand{\Diamondright}{%
      \mathrel{\unicode{x025C7}\!\unicode{x02192}}%
38 }}
{\tt 39 \ CustomizeMathJax{\ newcommand{\ Diamondleft}}{\tt f}}
      \mathrel{\unicode{x02190}\!\unicode{x025C7}}%
40
41 }}
42 \CustomizeMathJax{\newcommand{\Diamonddotright}{%
      43
44 }}
45 \CustomizeMathJax{\newcommand{\Diamonddotleft}{%
      \mathrel{\unicode{x02190}\!\unicode{x027D0}}%
46
47 }}
49 \CustomizeMathJax{\newcommand{\boxRight}{%
      \mathrel{\unicode{x025A1}\!\unicode{x021D2}}%
51 }}
52 \CustomizeMathJax{\newcommand{\boxLeft}{%
      \mathrel{\unicode{x021D0}\!\unicode{x025A1}}%
54 }}
55 \CustomizeMathJax{\newcommand{\boxdotRight}{%
      \mathrel{\unicode{x022A1}\!\unicode{x021D2}}%
56
57 }}
58 \CustomizeMathJax{\newcommand{\boxdotLeft}{%
      \mathrel{\unicode{x021D0}\!\unicode{x022A1}}%
60 }}
61
62 \CustomizeMathJax{\newcommand{\DiamondRight}{%
63
      \mathrel{\unicode{x025C7}\!\unicode{x021D2}}%
64 }}
\label{lem:command} $$ CustomizeMathJax{\newcommand{\DiamondLeft}}{\%} $$
      \mathrel{\unicode{x021D0}\!\unicode{x025C7}}%
66
67 }}
68 \CustomizeMathJax{\newcommand{\DiamonddotRight}{%
      \mathrel{\unicode{x027D0}\!\unicode{x021D2}}%
69
70 }}
71 \CustomizeMathJax{\newcommand{\DiamonddotLeft}{%
72
      \mathrel{\unicode{x021D0}\!\unicode{x027D0}}%
73 }}
74 \CustomizeMathJax{\newcommand{\Diamonddot}{\mathrel{\unicode{x027D0}}}}}
76 \CustomizeMathJax{\newcommand{\circleright}{%
      \mathrel{\unicode{x025CB}\!\unicode{x02192}}%
77
78 }}
79 \CustomizeMathJax{\newcommand{\circleleft}{%
      \mathrel{\unicode{x02190}\!\unicode{x025CB}}%
81 }}
82 \CustomizeMathJax{\newcommand{\circledotright}{%
83
      \mathbf{x02299}\
84 }}
85 \command{\circledotleft}{\%}
      \mathrel{\unicode{x02190}\!\unicode{x02299}}%
87 }}
88 \CustomizeMathJax{\let\circleddotright\circledotright}
89 \CustomizeMathJax{\let\circleddotleft\circledotleft}
91 \CustomizeMathJax{\newcommand{\multimapinv}{\mathrel{\unicode{x027DC}}}}}
92 \CustomizeMathJax{\newcommand{\multimapboth}{\mathrel{\unicode{x029DF}}}}}
93 \CustomizeMathJax{\newcommand{\multimapdot}{{\mathrel{-\!\bullet}}}}
94 \CustomizeMathJax{\newcommand{\multimapdotinv}{\mathrel{\bullet\!-}}}
95 \CustomizeMathJax{\newcommand{\multimapdotboth}{%
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\mathrel{{\bullet\!\!-\!\!\bullet}}%
  96
  97 }}
  98 \costomizeMathJax{\newcommand{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotbothA}{\multimapdotboth
  99 \costomize MathJax {\newcommand \{\multimapd ot both B\} \{\multimapd at hrel {\newcommand \{\multimapd ot both B\} \}} \} } \\
{\tt 101 \ Customize Math Jax \{ \ newcommand \{ \ multimap both vert \} \{ \% \} }
                           \label{thm:local} $$ \mathbf{voice}(x025CB)_{\underset}(x025CB)_{|}}% $$
102
103 }}
{\tt 104 \ CustomizeMathJax{\ newcommand{\ multimap dotbothvert}} \{\% }
                           \mathrel{\overset{\unicode{x025CF}}{\underset{\unicode{x025CF}}{|}}}%
106 }}
107 \CustomizeMathJax{\newcommand{\multimapdotbothBvert}{% bug in kpfonts-otf
                           \label{thm:local} $$ \mathbf{voicode}(x025CF)}_{\underset}_{\unicode}(x025CB)_{\{|\}}}_{\underset}_{\unicode}(x025CB)_{\{|\}}_{\underset}_{\unicode}(x025CB)_{\{|\}}_{\underset}_{\unicode}(x025CB)_{\{|\}}_{\underset}_{\unicode}(x025CB)_{\underset}_{\unicode}(x025CB)_{\underset}_{\unicode}(x025CB)_{\underset}_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{\unicode}(x025CB)_{
108
109 }}
110 \CustomizeMathJax{\newcommand{\multimapdotbothAvert}{% bug in kpfonts-otf
                           \label{thm:local} $$ \mathbf{voice}(x025CB)}_{\underset}(x025CF)_{|}}% $$
112 }}
113
114 \CustomizeMathJax{\newcommand{\bignplus}{%
                           115
117 \CustomizeMathJax{\let\bigcapplus\bignplus}
118 \CustomizeMathJax{\let\capplus\bignplus}% from kpfonts-otf
120 \CustomizeMathJax{\newcommand{\bigsqcapplus}{%
                           \mathop{\LWRoverlaysymbols{\unicode{xFF0B}}}\unicode{x2A05}}}
122 }}
123 \CustomizeMathJax{\let\sqcapplus\bigsqcapplus}% from kpfonts-otf
124
125 \CustomizeMathJax{\newcommand{\bigsqcupplus}{%
                           \mathop{\LWRoverlaysymbols{\unicode{xFF0B}}}{\unicode{x2A06}}}
126
127 }}
128 \CustomizeMathJax{\let\sqcupplus\bigsqcupplus}% from kpfonts-otf
130 \times 130 
131 \CustomizeMathJax{\newcommand{\parallelbackslant}{%
                           \mathrel{\unicode{x0005C}\!\!\unicode{x0005C}}%
132
133 }}
{\tt 136 \ Customize Math Jax \{ \ let \ eqq Colon \ \ for \ kp fonts-otf \ \ \ } \\
 138 \customizeMathJax{\newcommand{\colondash}{\mathrel{\unicode{x2237}-}}} \} 
140 \CustomizeMathJax{\newcommand{\colonapprox}{\mathrel{:\approx}}}
141 \CustomizeMathJax{\newcommand{\colonsim}{\mathrel{:\sim}}}
142 \CustomizeMathJax{\newcommand{\Colonapprox}{%
                           \mathrel{\unicode{x2237}\!\approx}%
144 }}
\mathrel{\unicode{x0297D}}%
149 }}% right fish tail
150 \CustomizeMathJax{\newcommand{\strictfi}{%
                           \mathrel{\unicode{x0297C}}%
152 }}% left fish tail
153 \CustomizeMathJax{\newcommand{\strictiff}{%
                          \mathrel{\unicode{x0297C}\!\!\unicode{x0297D}}%
155 }}% left/right fish tails
```

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157 \CustomizeMathJax{\newcommand{\circledwedge}{%
                 159 }}
160 \CustomizeMathJax{\newcommand{\circledvee}{%
                 162 }}
165 \CustomizeMathJax{\newcommand{\openJoin}{%
                \mathrel{\unicode{x2AA4}}%
167 }}% overlapping ><</pre>
168 \CustomizeMathJax{\newcommand{\opentimes}{%
                 \mathrel{\unicode{x2AA4}}%
170 }}% overlapping ><
174 \CustomizeMathJax{\newcommand{\lambdabar}{%
                 \label{lem:lambda} $$ \mathbf{LWRoverlaysymbols}{\raise\{.5ex\}{-}}{\lambda}} $$
176 }}
177
180 \CustomizeMathJax{\newcommand{\Wr}{%
                 \mathbf{x02240}\
182 }}
183
184 \CustomizeMathJax{\newcommand{\dashleftrightarrow}{%
                 \mathrel{\unicode{x021E0}\!\unicode{x021E2}}%
186 }}
187 \colone{likelight} Less the constant of 
189 \end{warpMathJax}
```

File 595 lwarp-common-mathjax-overlaysymbols.sty

§ 704 Package common-mathjax-overlaysymbols

```
lwarp-common-mathjax-overlaysymbodismon code used by a number of packages to overlay two symbols for MATHJAX. (Pkg)
```

}%

}%

\strut%

9 10

11

```
12 }}
13
14 \end{warpMathJax}
```

Change History

§ 705 **Chg Hist**

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General Index

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Troubleshooting Index

This index is a sorted reference of problems and solutions. In order to make it easier to locate a solution, the same issue may be addressed by more than one entry.

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