A LaTeX package for preparing manuscripts for submissions to the Open Access journal "Enterprise Modelling and Information Systems Architectures – International Journal of Conceptual Modeling" (EMISAJ)

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1   Introduction

Enterprise Modelling and Information Systems Architectures – International Journal of Conceptual Modeling (EMISAJ, formerly abbreviated as EMISA) is a publisher-independent, peer-reviewed open access journal (`https://emisa-journal.org`). EMISAJ is published by the German Informatics Society (GI) and is a publication of its Special Interest Group (SIG) on Modelling Business Information Systems (SIG MoBIS) and its SIG on Design Methods for Information Systems (SIG EMISA). SIG MoBIS has sponsored the development of the EMISAJ LaTeX package currently maintained by Stefan Strecker (stefan.strecker@fernuni-hagen.de) and Martin Sievers (martin.sievers@schoenerpub lizieren.de). It is based on earlier funded work by Martin Leidig.

The EMISAJ LaTeX package is provided for preparing manuscripts for submission to EMISAJ, and for preparing accepted submissions for publication as well as for typesetting the final document by the editorial office. For EMISAJ, manuscripts are submitted online and accepted articles are published online at `https://emisa-journal.org` in the Portable Document Format (PDF) format. The EMISAJ editorial office is run (alongside many other tasks and projects) by the two Editors-in-Chief assisted by doctoral students. Editorial work at EMISAJ is best described as a volunteer effort for the scientific community. You can assist us by preparing your manuscript following the instructions and style guidelines described in this document: Your work will be published quicker with less (typographical) glitches and will have a professional appearance.

2   Installation

The EMISAJ LaTeX package consists of the document class `emisa.cls`, the biblatex bibliography style `emisa.bbx` and the biblatex citation style `emisa.cbx`.

The package also includes a quick-start template for authors (`emisa-author-template.tex`) and the present author instructions and style guidelines (`emisa.pdf`).

The preferred installation method of the canonical *release* version is through your TeX distribution's package installer (e. g. TeX Live's `tlmgr` or the MiKTeX Package Manager). For the latter you may need to first update (or synchronise) the package database. This type of installation is recommended in order to always get the latest *release* version automatically. The canonical release version of the package is also available from CTAN at http://www.ctan.org/pkg/emisa while the *current development* (i. e. most recent) version of the package with bug fixes and new features (relative to the release version) is available from the GitHub repository at https://github.com/gi-ev/emisa-latex-package.

If you prefer a manual installation (or want to install the latest development version), download the corresponding Zip archive from Github (the latest development version is always available as Zip archive at https://github.com/gi-ev/emisa-latex-package/archive/master.zip), uncompress it in the same directory (folder) in which the source files for the manuscript will be maintained, and then run `pdflatex emisa.dtx` twice, and start from `emisa-author-template.tex`.

3   Instructions and guidelines

This document provides instructions and style guidelines for authors. Follow the instructions and guidelines in the present document to set up your files, to type in your text, to format figures, tables, source code listings and algorithms, and to obtain a consistent visual appearance in accordance with the journal's style specifications. Before submitting your manuscript online to the journal's online submission system at https://emisa-journal.org, use these instructions and guidelines as a checklist. Note that these instructions are *not* intended as a general introduction to LaTeX2e and corresponding tools (see, for example, http://mirror.ctan.org/info/lshort/english/ for "The Not So Short Introduction to LaTeX2e—Or LaTeX2e in 157 minutes").

4   Preliminary remarks

The EMISAJ document class is derived from the standard LaTeX article class, and produces a customised two-column layout with bibliographic information about the manuscript in a multi-line page headline (including the name of the journal, volume and issue number, date of publication, short title as well as author names) on A4-sized paper. The EMISAJ class builds on a number of standard LaTeX packages. It is highly recommended to install the *full* set of LaTeX packages that come with your LaTeX distribution to make the required packages available to the EMISAJ package. Alternatively, missing packages may be installed via your TeX distribution's package manager or on-the-fly (if supported by your distribution).

The production process at the EMISAJ editorial office is based entirely on LaTeX, and runs pdfLaTeX and `biber` to produce the final proof and publication-ready PDF of an article. The `biblatex` package is used to typeset citations and references in conjunction with the `biber` tool. Make sure to use `biber` rather than `bibtex` to process your bibliography data base file(s). Most TeX editors have an option to easily switch to `biber`. The production tool chain at the editorial office requires that all text files of an article

are provided in *UTF-8 file encoding*, and that all submitted files are provided with *lower case filenames only*. Do *not* use upper case characters in filenames at all and avoid non-ASCII characters in filenames.

Author template   The file `emisa-author-template.tex` provides a good starting point for manuscript preparation (if the EMISAJ package is available through your TEX distribution, the file is stored at `/doc/latex/emisa/` inside your TEX installation folder/directory. Just copy it to your working directory). It is also recommended to review the example of an article typeset with `emisa.cls` provided in Sec. 18.

5   Class Options

american, USenglish   American English is the language of choice for publishing in EMISAJ. The class option `american` is loaded by default to obtain the correct hyphenation for American English (as provided by the babel package). The option *may be* explicitly used with the EMISAJ class to exemplify the use of American English: `\documentclass[american]{emisa}`. Note that the csquotes package is loaded with settings to produce proper quotation marks for American English (see below).
Note that versions of this class prior to 2.2.0 used British English as standard language!

british, UKenglish   If you want to use British English instead, you can use the option `british` or `UKenglish`. The hyphenation patterns and quotation marks will be set accordingly.

referee, review   By default, a final version of the manuscript is typeset for online publication including the names and affiliations of authors. For reviewing purposes, the names and affiliations of the authors must be omitted using the document option `referee` or `review` to allow for the anonymous (i. e. double blind) peer-review process of EMISAJ. Example: `\documentclass[referee]{emisa}`. Make sure to set the document option `referee` or `review` before typesetting the final PDF intended for submission to the journal.

6   Author information

\author
\address   Each author is added using the macro `\author{⟨author name⟩}` followed by the corresponding address `\address{⟨author's address (line 1)⟩\\...(line 2)⟩\\...⟩}`. If you have multiple authors with the same address, please use `\address{⟨author's address⟩}` only for the first one and `\address[⟨letter of address⟩]{}` for all others. See `emisa-author-template.tex` for details.

\author*   There always has to be declared exactly one author as the corresponding author. This is indicated by using the starred version of the `\author` command: `\author*{⟨author's name⟩}{⟨email address⟩}`.

7   Title, subtitle, abstract, and keywords

\title
\subtitle
\abstract
\keywords   The mandatory title and optional subtitle of a manuscript are typeset using `\title{⟨title⟩}` and `\subtitle{⟨subtitle⟩}`. Note that the subtitle is indented. The abstract of the manuscript is typeset using `\abstract{⟨abstract⟩}`. Each manuscript should provide an abstract of about 200–400 words. Keywords describing the manuscript are typeset using `\keywords{⟨keywords⟩}` and are concatenated using the `\and` command. At least three keywords should be provided.

8   Additional information on the first (title) page

\acknowledgements   Acknowledgements, for example, of collaborators, funding agencies etc. may be added using \acknowledgements{⟨*acknowledgements*⟩}. The acknowledgements are typeset in a footnote on the first page below the corresponding author's email address.

\authornote   Additional information for reviewers and readers may be added in a footnote on the titlepage using \authornote{⟨*author note*⟩}. This is typically used for stating earlier publications (e. g. in conference proceedings) on which the present manuscript is based.

9   Style guidelines for regular text

▷ Manuscripts should *not* make use of outdated LaTeX commands such as \em, but rather use the LaTeX2e commands (e. g. \emph, \texttt).

▷ Do *not* make use of bold face (\textbf). Use \emph instead to typeset an important word in italics!

▷ Always use the tilde ~ to connect before \ref{⟨*label*⟩}, e. g., Sec.~\ref{label} rather than the problematic: Sec. \ref{label}.

▷ Always use the en-dash (--) for ranges – without spaces – e. g., 17--34. The hyphen (-) should only be used for compound words or hyphenation.

▷ Do *not* write abbreviations such as e.g. but use the macros provided by the EMISAJ class (see below). Add punctuation when necessary, for example, write , \ie, to achieve the correct punctuation for "id est" (i. e.) rather than , i.e., which introduces two problems: A missing spacing after the first full stop and a wrong spacing after the second full stop.

▷ Follow the journal's style specification with respect to predefined text styles:

     ○ Use SMALLCAPS for names of open-source projects, products and companies etc., e. g., \textsc{eclipse} to produce ECLIPSE. *Pay attention to lower case spelling*.

\meta   ○ Use non-proportional font for language concepts, meta types, meta classes etc., i. e., \texttt{AbstractGoalType} to produce AbstractGoalType, or use the predefined macro \meta{⟨*metatype*⟩}, e. g., \meta{AbstractGoalType}.

\type   ○ Use the sans-serif font face for type-level concepts etc., e. g., \textsf{Goal} to produce Goal when referring to a Goal type, or use the predefined macro \type{⟨*type*⟩}, e. g., \type{Goal}.

10   Abbreviations and initialisms

\eg,\ie,\cf,\etal   To achieve consistent typesetting of common abbreviations, macros are predefined by the EMISAJ class. These macros should *consistently* being used instead of writing the plain version. For example use \eg rather than e.g.,. The macros take care of spacing within and after the abbreviations.

▷ \eg for e. g.

▷ \ie for i. e.

▷ \cf for cf.

▷ \etal for et al.

\emisaabbrv If you miss any frequently used abbreviation for your article, you can easily add it using `\emisaabbrv{⟨\abbreviation_macro⟩}{⟨text⟩}` in the preamble of your article.

\OMG,\BPM,\BPMN,\UML In addition to common abbreviations, further initialisms are provided by the class for convenience and for a consistent visual appearance. Note that the class uses SMALLCAPS for typesetting initialisms. The list of predefined initialisms comprises:

▷ `\OMG` for OMG (Object Management Group).
▷ `\BPM` for BPM (Business Process Management).
▷ `\BPMN` for BPMN (Business Process Model and Notation).
▷ `\UML` for UML (Unified Modelling Language).

\emisainitialism You can add your own initialisms by stating `\emisainitialism{⟨\initialism_macro⟩}{⟨text⟩}` in the preamble.

11 Quotation marks

\enquote It is *highly recommended* to use the `\enquote{⟨quotation⟩}` command to produce correct quotation marks. Note that the command can be nested and will produce correct primary and secondary quotation marks in American English (or British English – depending on the chosen class option), for example `\enquote{A quote \enquote{within a quote}}`. For other quotation macros and environment please consult the csquotes documentation [8].

Alternatively (but not recommended), the correct Unicode characters for the quotation marks in American (British) English can be used. See Wikipedia's entry for "quotation mark" for further information.

12 Citations and references

\parencite
\textcite
\cite The EMISAJ journal uses its own author-year citation style predefined for the biblatex package (emisa.cbx), and its own style for formatting entries in the list of references (emisa.bbx). Consult the biblatex package documentation [4] for an introduction to the citation commands. It is important to use the citation commands properly to follow the journal's style specifications.

▷ `\parencite` is used for citing in parentheses (usually at the end of a sentence). In most cases, page numbers should be provided. Example: `\ldots{} is known \parencite[5]{Knuth1986}` produces ". . . is known (Knuth 1986, p. 5)". Also use `\parencite` to produce a prefix within parentheses, e. g. `\ldots{} is known \parencite[for a justification, see][5]{Knuth1986}` produces ". . . is known (for a justification, see Knuth 1986, p. 5)".
▷ `\textcite` allows for using the cited work as a subject in the grammatical structure of a sentence. Example: `\textcite{Knuth1986} states that ...` produces "Knuth (1986) states that . . .". Additionally, page numbers and further information can be provided, see the biblatex package documentation.
▷ `\cite` is used for typesetting the citation without parentheses, and is typically used within parentheses. Example: `(see \cite{Knuth1986})` produces "(see Knuth 1986)". This variant is the least used and should be used with care.

Important note. *Make sure to format the bibliographic entries consistently!* Do not mix abbreviated first names with unabbreviated first names, as for example

```
@ARTICLE{key1, author = {{van der Weiden}, J. W. P.} ...
```

```
@ARTICLE{key2, author = {{van der Weiden}, Jan W. P.} ...
```

if both entries refer to the same author. This will lead to unexpected results with respect to the label generation of the citation. Make sure to always abbreviate author first names and to always use use curly brackets around multi-word last names, e.g. `{van der Weiden}, J. W. P.` in the bibentries.

13 Figures

All line-drawings must be provided as vector graphics (*not* bitmap graphics) in PDF format and all other (non-schematic) figures (e.g. screenshots) must be provided in PDF, JPEG or PNG format in a proper (high) resolution for the intended size of the rendered image to avoid pixelation due to low resolution; bitmap graphics shown in full page width in the submission should at least be of a resolution of two (2) megapixels or at least 1920 pixels wide.

14 Tables

tabular Tables can be added using the standard notation, i.e. using `tabular` inside the floating environment `table` (see Listing 1). However, the standard column parameters p, l, c and r are often not sufficient to provide a table with an exact width, e.g. the text width.

Listing 1: An example for a standard table using `tabular`

```
\begin{table}
\small % or \footnotesize if needed at all
\centering % if needed
\caption{Add the caption here}
%\label{tab:unique-label} % alternatively after \end{tabular}
\begin{tabular}{p{3cm}lcr}
\toprule
A column 3cm wide and with possible line breaks &
\midrule
A column set flush-left with no line breaks &
A column set centred  with no line breaks &
A column set flush right with no line breaks \\
\bottomrule
\end{tabular}
\label{tab:unique-label}
\end{table}
```

tabularx Therefore the EMISAJ class loads the package tabularx by default. It defines an additional column parameter X, which has to be used for at least one column. In addition the standard `tabular` environment is substituted by `tabularx` which has two mandatory arguments, namely the total width of the table and the definition for the columns.

Listing 2 shows two typical examples for the application of `tabularx`. If you just mark one column with the parameter X, all other columns (i. e. columns with parameters p, l, c or r) are set the usual way. The remaining width (width given as first argument to `tabularx` minus used width of all "non-X-columns") is then assigned to the X column. To get a table two columns wide, please use `\textwidth` as the table's width.

Listing 2: An example for a table using the package tabularx for exactly one X column

```
...
\begin{tabularx}{\textwidth}{Xll}
This a column with possibly long text passages,
so that line breaking is necessary and automatically
applied by the X column & This column is set ragged right and gets as
    wide as its contents &
Another column \\
...
\end{tabularx}
...
```

A second frequently used scenario is the need for columns with equal width, but without having to calculate the value manually. For a much more comfortable solution one can assign the X parameter to all such columns.

Listing 3: An example for a table using the package tabularx and more than one X column

```
...
\begin{tabularx}{\textwidth}{p{3cm}XXX}
This a column with possibly long text passages,
so that line breaking is necessary and automatically
applied to get a box 3cm wide &
This column and the remaining two all have the same width, namely
(\textwidth-3cm)/3. &
...
\end{tabularx}
...
```

Additional information can be obtained from the package's documentation [19].

For nicer tables you should get rid of any vertical lines between the columns. Instead you can use the macros provided by booktabs (preloaded by EMISAJ) for horizontal lines of different width. Just replace the first standard `\hline` by `\toprule`, the last one by `\bottomrule` and all other by `\midrule`. There is even an alternative for `\cline` called `\cmidrule`. The example from Listing 3 then looks like:

Listing 4: An example for a table using the packages tabularx and booktabs

```
...
\begin{tabularx}{\textwidth}{p{3cm}XXX}
\toprule
Table header 1 & table header 2 & table header 3\\
\midrule
This a column with possibly long text passages,
so that line breaking is necessary and automatically
applied to get a box 3cm wide &
This column and the remaining two all have the same width, namely
(\textwidth-3cm)/3. &
...
\bottomrule
\end{tabularx}
...
```

Have a look at the package's documentation [5] for more details.

15   Source code listings

sourcecode
java

For marking up source code listings, the EMISAJ class uses the listings package (see the package documentation [15] for further information), and provides two customised LATEX environments: sourcecode and java. The java environment should be used to format source code listings in the Java programming language, and the sourcecode environment should be used to format source code in any other programming language. You can add the name of the programming language and other parameters known to listings like caption or label as an optional argument.

Note that the source code in either case is typeset verbatim, i. e., the author must arrange the input LATEX source code according to the intended output. Also note that the two environments have been predefined to always produce a two-column listing positioned at the top of the page. Listing 5 illustrates the use of both environments.

Listing 5: Example for the java and sourcecode environments

```
\begin{java}[caption={A hello world example},label={hw-java}]
public class HelloWorld
{
   public static void main (String[] args)
   {
      // Output Hello World!
      System.out.println("Hello World!");
   }
}
\end{java}

\begin{sourcecode}[language=R]
  hello <- function( name ) {
```

8

```
      sprintf( "Hello, %s", name );
  }
\end{sourcecode}
```

16 Pseudo-code and algorithms

algorithm Apart from source code you might want to add pseudo code examples or algorithms. In contrast to
algorithmic the source code examples above EMISAJ does not define its own environments for that. Instead we
recommend using the bundle algorithms consisting of the two packages algorithm and algorithmic. Typical
parts like loops, if-clauses or statements all have their own macro. See Listing 6 for an example.

Listing 6: Example for a pseudocode presented within the `algorithmic` environment

```
\begin{algorithmic}[1]
\REQUIRE $n \geq 0$
\ENSURE $y = x^n$
\STATE $y \leftarrow 1$
\STATE $X \leftarrow x$
\STATE $N \leftarrow n$
\WHILE{$N \neq 0$}
\IF{$N$ is even}
\STATE $X \leftarrow X \times X$
\STATE $N \leftarrow N / 2$
\ELSE[$N$ is odd]
\STATE $y \leftarrow y\times X$
\STATE $N \leftarrow N - 1$
\ENDIF
\ENDWHILE
\end{algorithmic}
```

results in

Require: $n \geq 0$
Ensure: $y = x^n$
1: $y \leftarrow 1$
2: $X \leftarrow x$
3: $N \leftarrow n$
4: **while** $N \neq 0$ **do**
5:    **if** N is even **then**
6:      $X \leftarrow X \times X$
7:      $N \leftarrow N/2$
8:    **else** $\{N$ is odd$\}$
9:      $y \leftarrow y \times X$
10:      $N \leftarrow N - 1$
11:    **end if**
12: **end while**

If you want your algorithm to be a floating object, you can surround it with `algorithm`:

```
\begin{algorithm}
\caption{Calculate $y = x^n$}
\label{alg1}
\begin{algorithmic}
...
\end{algorithmic}
\end{algorithm}
```

For more details, please have a look at the documentation [2].

17 Commands for use by the editorial office staff only

\editor	Enter the corresponding editor (or editorial board member) for the article, in the format "first letter of the first name fullstop tilde last name". Example: `\editor{A.~Smith}` , `\editor{A.~Smith and B.~Meyer}`
\received	Enter the date of initial reception of the manuscript by the editorial office in the following format. Example: `\received{31~March 2014}`
\accepted	Enter the date of the acceptance decision of the manuscript and the number of review rounds in the following format. Example: `\accepted[3]{10~January 2016}`
\volume	Enter the number of the volume in which the article is published. Example: `\volume{11}`
\issue	Enter the issue number and issue year of the article. Format example: `\issue{1}{2016}`
\specialissuetitle	Enter the title of the Special Issue to which the article belongs if any. Note that the prefix "Special Issue on" is added automatically. Example: `\specialissuetitle{Multilevel Modelling}`
	Note that volume, issue number and issue date and, optionally, the title of the special issue appear in the multiline page headline of the article.
\CCBYNCSAFour \CCBYNCSAThree	If an article is licensed under a Creative Commons BY-NC-SA 4.0 or 3.0 licence, the reference to the licence can be automatically displayed at the end of the article by adding `\CCBYNCSAFour` and `\CCBYNCSAThree`, respectively.
\license,\licence	Alternatively, enter a license text using the `\license` (or `\licence`) commands. Example: `\license{This work is licensed under LPPL 1.3c.}`

18 Example file for both, authors and editorial office

```
% Use the option [draft] to mark overfull lines.
\documentclass[american]{emisa}
% The following package imports are recommended, but not obligatory;
% take a look into their respective manuals if you want to how they can
    be used:
\usepackage{amsmath,amssymb,mathtools}
```

```latex
\usepackage{algorithmic,algorithm}
% Additional package imports go here:
% The document begins here:
\begin{document}
% Optionally, set the style for typesetting source code listings.
% \lstset{language=Java} % see listings package
% Take note of the following article environment!
\begin{article}{%
% Enter your bibliography database file here. Make sure to use
% UTF-8 character encoding in the bibliography data bases,
% and add the .bib extension for the biblatex package!
\bibliography{emisa.bib}
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% For editorial office only: Start
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% Add editorial meta data to appear in the multiline page headline.
\editor{Enter corresponding editor here}
\received{Enter date of manuscript reception here}
\accepted[1]{Enter number of review rounds and date of acceptance here.}
\volume{11} % volume number
\issue{1}{31~Jan~2016} % issue number and issue date
\specialissuetitle{Title of special issue if publication belongs to a
    special issue}
% Add license information at end of article, either
\CCBYNCSAFour % or \CCBYNCSAThree or \license
\license{Enter your license text here}
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% For editorial office only: End
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% Enter bibliographic meta data about publication
\title[Insert shorttitle for page headline]{Enter full title here}
\subtitle{Enter subtitle here, or leave empty}
\author*{FirstName LastName of corresponding author}{email@address.org}
\address{Enter affiliation of first (corresponding) author here.  Note
    that only the starred version of author* accepts a second argument
    requiring an email address for the corresponding author.}
\author{FirstName LastName}
\address{Enter affiliation of second and further authors here. Add
    further authors following this scheme.}
% Enter abstract, keywords, acknowledgements, author note
\abstract{Enter abstract here}
\keywords{Enter at a minimum three keywords here. Keyword1 \and Keyword2
     \and Keyword3}
\acknowledgements{Enter acknowledgements here.}
\authornote{If your submission is based on a prior publication and
    revises / extends this work, enter a corresponding note here (This
    work is based on ...) but DO NOT cite the prior work during the
    reviewing process. INSTEAD provide full citations of all prior
    publications to the editors during the submission process (use the
```

```latex
    text field in the online submission system).}
% Take note of the following closing bracket!
}


\section{Introduction}\label{sec:introduction}
Enter your text here.


\subsection{Subsection title}\label{sec:somelabel}
% Example of a single-column figure (spanning only a single column).
% You can add an optional argument to influence the float placement,
% which is htbp by default.
\begin{figure}
\centering
\includegraphics[width=\columnwidth]{<filename>}
\caption{Enter your single-column figure caption here.}
\label{fig:unique-label}
\end{figure}


% Example of a double-column figure (spanning both columns)
\begin{figure*}[htb]
\centering
\includegraphics[width=\textwidth]{<filename>}
\caption{Enter your double-column figure caption here.}
\label{fig:unique-label}
\end{figure*}


% Example of a double-column table. Tables should NOT be typeset in a
    single column!
% Note the use of \toprule, \midrule, and \bottomrule!
% DO NOT use vertical rules in tables!
\begin{table*}[tb]
\centering
\caption{Enter your table caption above the table here.}
\begin{tabular}{llllll}
\toprule
column head1 & column head2 & column head3 & column head4 & column head5
    & column head6\\
\midrule
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
\bottomrule
\end{tabular}
\label{tab:unique-label}
\end{table*}


% Example of a double-column source code listing.
```

```latex
\begin{java}[caption={Enter your double-column listing caption here.},%
                label={lst:helloworld}]
/**
 * The HelloWorldApp class implements an application that
 * simply prints "Hello World!" to standard output.
 */
class HelloWorldApp {
    public static void main(String[] args) {
        System.out.println("Hello World!"); // Display the string.
    }
}
\end{java}

% Example of a pseudo-code with algorithmic.
\begin{algorithmic}
\WHILE{$r > kRadius/2$}
\STATE $r \leftarrow r-1$
\STATE $a \leftarrow \sqrt{kernel[0][r]}/(kRadius-r)$;
\IF{$a < sqrtSlope$}
\STATE $sqrtSlope \leftarrow a$
\ELSE
\STATE break
\ENDIF
\ENDWHILE
\end{algorithmic}

% Formatting the bibliographic data base:
% Please make sure to properly enter all data for each entry
% in the bibliographic database (.bib).
% Pay special attention to formatting names and page numbers,
% see the following example:
%@ARTICLE{key1,
%  author = {{van der Aalst}, W. M. P.
%  and {van Hee}, K. M.
%  and {van Werf}, J. M.
%  and Verdonk, M.},
%  title = {{Auditing 2.0: Using
%  Process Mining to Support
%  Tomorrow's Auditor}},
%  journal = {Computer},
%  year = {2010},
%  volume = {43},
%  pages = {90--93},
%  number = {3}
%}
\printbibliography
\end{article}
\end{document}
```

References

[1] Package afterpage: Execute command after the next page break. 19.2.2

[2] Package algorithms: A suite of tools for typesetting algorithms in pseudo-code. 16

[3] Package babel: Multilingual support for Plain TeX or LaTeX. 19.2

[4] Package biblatex: Bibliographies in LaTeX using BibTeX for sorting only. 12, 19.2.1

[5] Package booktabs: Publication quality tables in LaTeX. 14

[6] Package calc: Simple arithmetic in LaTeX commands. 19.2.2

[7] Package caption: Customising captions in floating environments. 19.2

[8] Package csquotes: Context sensitive quotation facilities. 11, 19.2.1

[9] Package environ: A new interface for environments in LaTeX. 19.2.2

[10] Package eso-pic: Add picture commands (or backgrounds) to every page. 19.2.2, 19.9.3

[11] Package float: Improved interface for floating objects. 19.2

[12] Package geometry: Flexible and complete interface to document dimensions. 19.2.2

[13] Package graphicx: Enhanced support for graphics. 19.2.1

[14] Package hyperref: Extensive support for hypertext in LaTeX. 19.3

[15] Typeset source code listings using LaTeX. 15

[16] Package microtype: An interface to the micro-typographic features of pdfTeX. 19.2

[17] Package paralist: Enumerate and itemize within paragraphs. 19.2.2

[18] The LaTeX 2ε Sources. 19.10

[19] Package tabularx: Tabulars with adjustable-width columns. 14

[20] Package textcomp: LaTeX support for the Text Companion fonts. 19.2

[21] Package twoopt: Definitions with two optional arguments. 19.2.2

[22] Package xcolor: Driver-independent color extensions for LaTeX and pdfLaTeX. 19.2.1

[23] Package xspace: Define commands that appear not to eat spaces. 19.2.2

19 Implementation

Here, the code of the LaTeX class emisa begins.

```
1 ⟨∗class⟩
```

19.1 Options

\@clearglobaloption   We need a macro to remove options from the global to avoid side-effects

```
2 \def\@clearglobaloption#1{%
3   \def\@tempa{#1}%
4   \def\@tempb{\@gobble}%
5   \@for\next:=\@classoptionslist\do
6     {\ifx\next\@tempa
7        \message{Cleared  option \next\space from global list}%
8      \else
9        \edef\@tempb{\@tempb,\next}%
10     \fi}%
11   \let\@classoptionslist\@tempb
12   \expandafter\ifx\@tempb\@gobble
13     \let\@classoptionslist\@empty
14   \fi}
```

british option

UKenglish option

```
15 \DeclareOption{british}{%
16     \PassOptionsToPackage{british}{babel}
17     \PassOptionsToPackage{english=british}{csquotes}
18     \@clearglobaloption{british}}
19 \DeclareOption{UKenglish}{%
20     \PassOptionsToPackage{british}{babel}
21     \PassOptionsToPackage{english=british}{csquotes}
22     \@clearglobaloption{british}}
```

american option

USenglish option

```
23 \DeclareOption{american}{%
24     \PassOptionsToPackage{american}{babel}
25     \PassOptionsToPackage{english=american}{csquotes}
26     \@clearglobaloption{american}}
27 \DeclareOption{USenglish}{%
28     \PassOptionsToPackage{american}{babel}
29     \PassOptionsToPackage{english=american}{csquotes}
30     \@clearglobaloption{american}}
```

draft option

final option

@draft switch

If the user requests draft we mark any overfull boxes. There is more interesting stuff to be added to this option; one could think of altered running titles or watermarks, for example.

As this option is handed along the package chain it might have other effects, too.

```
31 \newif\if@draft
```

15

```
32  \DeclareOption{draft}{%
33    \@drafttrue
34    \overfullrule 10pt
35  }%
36  \DeclareOption{final}{%
37    \@draftfalse
38    \overfullrule\z@
39  }%
```

referee option
noreferee option
review option
noreview option
@referee switch

The options `referee` and `review` switch to *referee mode*. In referee mode some information at the titlepage are removed in order to allow an anonymous submission.

```
40  \newif\if@referee
41  \DeclareOption{referee}{\@refereetrue}
42  \DeclareOption{noreferee}{\@refereefalse}
43  \DeclareOption{review}{\@refereetrue}
44  \DeclareOption{noreview}{\@refereefalse}
```

cleveref option
nocleveref option
@usecleveref switch

```
45  \newif\if@usecleveref
46  \DeclareOption{cleveref}{\@useclevereftrue}
47  \DeclareOption{nocleveref}{\@useclevereffalse}
```

cover option
nocover option
\coveron
\coveroff
@cover switch

Switches cover production on or off. If `cover` is given then the four cover pages (outer and inner pages of front and back, respectively) are produced and added to the document.

```
48  \newif\if@cover
49  \def\coveron{\@covertrue}
50  \def\coveroff{\@coverfalse}
51  \DeclareOption{cover}{\coveron}
52  \DeclareOption{nocover}{\coveroff}

53  \newif\if@microtype
54  \@microtypetrue
55  \DeclareOption{nomicrotype}{\@microtypefalse}
```

Completing option handling, by now unprocessed option are handed over to the base class article and the class options list is processed from the left to the right.

```
56  \PassOptionsToClass{a4paper,twoside,11pt}{article}%
57  \DeclareOption*{\PassOptionsToClass{\CurrentOption}{article}}%
58  \ExecuteOptions{american,final,noreferee,nocover,cleveref,oneside,openany}%
59  \ProcessOptions*\relax%
```

19.2   Loading the base class and packages

This class is build upon the LaTeX standard class article.

```
60  \LoadClass{article}[2001/06/01]%

61  \RequirePackage[utf8]{inputenc}%
```

This loads font definitions for text and mathematics. The package allows the user to select font encodings, and for each encoding provides an interface to 'font-encoding-specific' commands for each font. Its most powerful effect is to enable hyphenation to operate on texts containing any character in the font. It is distributed as part of the LaTeX 2$_\varepsilon$ distribution.

```
62 \RequirePackage[T1]{fontenc}%
```

Since many PostScript fonts only implement a subset of the TS1 encoding which contains text symbols for use with the T1-encoded text fonts, many commands only produce black blobs of ink. The textcomp package is supplied as a part of the LaTeX base distribution to resolve the resulting problems [20].

```
63 \RequirePackage[full]{textcomp}%
```

The microtype package provides a LaTeX interface to the micro-typographic extensions of pdfTeX: most prominently, character protrusion and font expansion, furthermore the adjustment of interword spacing and additional kerning, as well as hyphenatable letterspacing (tracking) and the possibility to disable all or selected ligatures [16]. It allows to apply these features to customisable sets of fonts, and to configure all micro-typographic aspects of the fonts in a straight-forward and flexible way. Settings for various fonts are provided.

```
64 \if@microtype
65     \RequirePackage[final,tracking=smallcaps,expansion=alltext,protrusion=true]{microtype}%
66     \SetTracking{encoding=*,shape=sc}{50}%
67 \else
68     \ClassWarning{emisa}{Package `microtype' not loaded!%
69         \MessageBreak Output will differ from final result in the journal!%
70         \MessageBreak Please consult the documentation, if you%
71         \MessageBreak get an error when loading microtype}
72 \fi%
```

babel is a package providing an environment in which documents can be typeset in a language other than US English, or in more than one language [3].

```
73 \RequirePackage{babel}%
```

This style option improves the interface for defining floating objects such as figures and tables in LaTeX [11]. It adds the notion of a 'float style' that governs appearance of floats. New kinds of floats may be defined using a \newfloat command analogous to \newtheorem. This style option also incorporates the functionality of David Carlisle's style option here, giving floating environments a [H] option which means *Put it here!* (as opposed to the standard [h] option which means *Put it here if possible, or otherwise at the next page if no alternative position is specified.*).

```
74 \RequirePackage{float}
```

The caption package gives the user the possibility to control the look & feel of the captions from floating environments like figure and table. Furthermore it does similar to the caption stuff coming from other packages (like the longtable or supertabular package) [7].

For more information on that see the english, russian, or german user documentation.

```
75 \RequirePackage[font={small}]{caption}
```

19.2.1 Colour and graphics

`graphicx` as part of the graphics package provides a key-value interface for optional arguments to the `\includegraphics` command [13].

```
76 \RequirePackage{graphicx}%
```

The package xcolor is a color extension for LATEX and pdfLATEX that provides easy driver-independent access to several kinds of colors, tints, shades, tones, and mixes of arbitrary colors by means of color expressions [22].

```
77 \RequirePackage[fixinclude,table]{xcolor}%
```

The biblatex package [4] is a complete reimplementation of the bibliographic facilities provided by LATEX in conjunction with BIBTEX. It redesigns the way in which LATEX interacts with BibTeX at a fairly fundamental level. With biblatex, BIBTEX is only used to sort the bibliography and to generate labels. Instead of being implemented in BIBTEX's style files, the formatting of the bibliography is entirely controlled by TEX macros. Good working knowledge in LATEX should be sufficient to design new bibliography and citation styles. There is no need to learn BIBTEX's postfix stack language. Just like the bibliography styles, all citation commands may be freely (re)defined.

Apart from the features unique to biblatex, the package also incorporates core features of the following packages: babelbib, backref, bibtopic, bibunits, chapterbib, cite, citeref, inlinebib, mlbib, multibib, natbib, splitbib. There are also some conceptual parallels to the amsrefs package. The biblatex package supports split bibliographies, multiple bibliographies within one document, and separate lists of bibliographic shorthands. Bibliographies may be subdivided into parts (by chapter, by section, etc.) and/or segmented by topics (by type, by keyword, etc.). The package is fully localized and can interface with the babel package.

This package requires e-TEX and the etoolbox package. Installing the csquotes package is recommended.

```
78 \RequirePackage{etoolbox}%
```

We use it with these options:

`style=emisa` sets the base name of the bibliography and citation format files; thus we use `emisa.bbx` and `emisa.cbx` that are defined below.

`natbib=true` enables the use of natbib citation commands with biblatex.

`maxcitenames=3` Author lists with more than two entries are abbreviated with "et al.". Note that in the bibliography listing author lists won't be shortened at all.[1]

`terseinits` If Initials are given with (false) or without (true) punctuation and whitespace.

`isbn=false` In bibliographies, no ISBNS, . . .

`url=false` . . . no URLs, . . .

`doi=false` . . . no DOIs, . . .

`eprint=false` . . . and no ePrint marks are displayed.

`dashed=false` Identical author entries of consecutive bibliography entries don't get replaced by a dash (beginning with the second one).

---

[1]That is, they *will* be shortened if there are more than 999 authors. That should occur not that often, though.

```
79  \RequirePackage[%
80      style=emisa,%
81      natbib=true,%
82      backend=biber,%
83  ]{biblatex}

84  \ExecuteBibliographyOptions{%
85      maxcitenames=2,%
86      maxbibnames=999,%
87      terseinits=false,%
88      isbn=false,%
89      url=true,%
90      doi=false,%
91      eprint=false,%
92      dashed=false,%
93      bibencoding=inputenc,%
94      sorting=anyt,%
95      hyperref=true,%
96      uniquename=minfull,%
97      uniquelist=false%
98  }%
```

This package provides advanced facilities for inline and display quotations [8]. Quotation marks are switched automatically if quotations are nested and can adjust to the current language. There are additional facilities designed to cope with the more specific demands of academic writing, especially in the humanities and the social sciences. All quote styles as well as the optional active quotes are freely configurable.

```
99  \RequirePackage[autostyle=once]{csquotes}
```

19.2.2 Helpers

twoopt provides commands to define macros with *two* optional parameters. This package is part of the *Oberdiek* bundle [21].

```
100  \RequirePackage{twoopt}%
```

environ provides a new method of defining environments [9].

```
101  \RequirePackage{environ}%
```

paralist provides a few new list environments. Itemized and enumerated lists can be typesetted within paragraphs, as paragraphs and in a compact version. Most environments have optional arguments to format the labels. Additionally, the LaTeX environments itemize and enumerate can be extended to use a similar optional argument [17].

The options' meanings are as follows:

neveradjust   The width of the labels is never adjusted, not even for environments where you defined the labels manually using the optional argument.

defblank   The two environments inparablank and asparablank will be defined.

flushright   The labels in the four lists mentioned above are set flush right.

```
102  \RequirePackage[neveradjust,defblank,flushright]{paralist}%
```

We make the traditional list environments equal the compact ones so there is no visual difference and they are both modifiable easily.

```
103  \let\itemize\compactitem
104  \let\enditemize\endcompactitem
105  \let\enumerate\compactenum
106  \let\endenumerate\endcompactenum
107  \let\description\compactdesc
108  \let\enddescription\endcompactdesc
```

These macros are imported from paralist, setting standard enumeration marks and list indentations.

```
109  \setdefaultenum{1.}{a)}{i.}{A}%
110  \setdefaultleftmargin{1em}{0.9em}{0.7em}{0.5em}{0.4em}{0.3em}%
111  \setlength{\plitemsep}{3\p@}%
112  \setlength{\pltopsep}{6\p@}
```

afterpage implements a command that causes the commands specified in its argument to be expanded after the current page is output [1].

The xspace package provides a single command that looks at what comes after it in the command stream, and decides whether to insert a space to replace one "eaten" by the TeX command decoder. The decision is based on what came after any space, not on whether there was a space (which is unknowable): so if the next thing proves to be punctuation, the chances are there was no space, but if it's a letter, there's probably a need for space [23].

calc adds infix expressions to perform arithmetic on the arguments of the LATEX commands \setcounter, \addtocounter, \setlength, and \addtolength [6].

All three packages are part of the tools bundle in the LATEX required distribution.

```
113  \RequirePackage{afterpage,xspace,calc}%
```

geometry provides an easy and flexible user interface to customize page layout, implementing auto-centering and auto-balancing mechanisms so that the users have only to give the least description for the page layout [12].

An important feature is the package's ability to communicate the paper size it's set up to the output (whether via DVI \specials or via direct interaction with pdfLATEX).

```
114  \RequirePackage{geometry}%
```

eso-pic adds one or more user commands to LATEX's shipout actions, making it easy to add some picture commands to any and every page at absolute positions [10].

```
115  \RequirePackage{eso-pic}%

116  \RequirePackage{placeins}%
```

19.2.3 Scripts, fonts, and maps

```
117 \RequirePackage{newtxtext}
118 \RequirePackage{amsmath}
119 \RequirePackage{amssymb}
120 \RequirePackage{newtxmath}
121 \RequirePackage[zerostyle=b,straightquotes]{newtxtt}
122 \if@microtype
123     \UseMicrotypeSet[protrusion]{basicmath} % disable protrusion for tt fonts
124 \fi%
```

To make figures and ligatures searchable when using pdfTeX ≥ 1.40, glyph-to-unicode translation must be enabled. The default table `glyphtounicode.tex` contains mappings from glyph names to corresponding unicode for embedded fonts. It covers the AGL (Adobe Glyph List), names from `texglyphlist.txt` (part of lcdf-typetools) and `zapfdingbats.txt`, plus a few exceptions.

```
125 \InputIfFileExists{glyphtounicode}%
126     {\ClassInfo{emisa}{Reading file `glyphtounicode.tex`}
127      \pdfgentounicode=1}%
128 {\ClassWarning{emisa}{Couldn't find file `glyphtounicode.tex`}}%

129     \RequirePackage{booktabs}
130     \RequirePackage{listings}
131     \lstset{basicstyle=\ttfamily\small}
132     \lstnewenvironment{java}[1][]
133         {\lstset{language=Java,float=*htbp,#1}}
134         {}
135     \lstnewenvironment{java*}[1][]
136         {\lstset{language=Java,float=htbp,#1}}
137         {}
138     \lstnewenvironment{sourcecode}[1][]
139         {\lstset{float=*htbp,#1}}
140         {}
141     \lstnewenvironment{sourcecode*}[1][]
142         {\lstset{float=htbp,#1}}
143         {}
144     \RequirePackage[amsmath,standard,hyperref]{ntheorem}
```

19.3 Hypertext

The hyperref package [14] has to loaded as late as feasible so it can intercept changes to standard macros by other packages.

```
145 \RequirePackage{url}
146 \urlstyle{same}
147 \RequirePackage[%
148   colorlinks,
149   breaklinks,
150   pdfview=Fit,
151   bookmarksopen,
152   bookmarksnumbered,
```

```
153    linkcolor=black,
154    anchorcolor=black,
155    citecolor=black,
156    filecolor=black,
157    urlcolor=black,
158    hyperfootnotes=false
159    ]{hyperref}%
160 \if@usecleveref%
161    \RequirePackage[capitalise,nameinlink]{cleveref}
162    \crefname{section}{Sec.}{Sec.}
163    \Crefname{section}{Sec.}{Sec.}
164    \crefname{figure}{\figurename}{\figurename}
165    \Crefname{figure}{\figurename}{\figurename}
166    \crefname{listing}{\lstlistingname}{\lstlistingname}
167    \Crefname{listing}{\lstlistingname}{\lstlistingname}
168    \crefname{table}{\tablename}{\tablename}
169    \Crefname{table}{\tablename}{\tablename}
170 \fi%

171 \RequirePackage[%
172    type={CC},%
173    modifier={by-nc-sa},%
174    version={4.0}%
175 ]{doclicense}
```

19.4 Tools

\@ifempty \
\@ifarg \
\@ifnoarg

These determinate if an argument ist empty (or not) and to act consequently. An argument is ‚empty‘, iff it contains nothing or just whitespace. All three macros first test their first argument. If it is empty \@ifempty then executes the second one, otherwise the third one. \@ifnoarg und \@ifarg execute their respective second argument iff the the first one is (not) empty.

Syntax:

\@ifempty{⟨*arg*⟩}{⟨*Action_if_empty*⟩}{⟨*Action_if_not_empty*⟩}

\@ifnoarg{⟨*arg*⟩}{⟨*Action_if_empty*⟩}

\@ifarg{⟨*arg*⟩}{⟨*Action_if_not_empty*⟩}

```
176 \begingroup
177    \catcode`\Z=3
178    \long\gdef\@M@T@#1#2Z#3#4#5\@nil{#4}
179    \long\gdef\@ifempty#1{\@M@T@#1ZZ\@secondoftwo\@firstoftwo\@nil}
180    \long\gdef\@ifarg#1{\@M@T@#1ZZ\@firstofone\@gobble\@nil}
181    \long\gdef\@ifnoarg#1{\@M@T@#1ZZ\@gobble\@firstofone\@nil}
182 \endgroup
```

19.5 Basic page layout

The geometry options using the keyval ($\langle key\rangle = \langle value\rangle$) interface can be set either in the optional argument to the `\usepackage` command, or in the argument of the `\geometry` macro. In either case, the argument consists of a list of comma-separated keyval options. `\geometry` acts cumulative; so multiple use just appends options to the list.

```
183 \geometry{%
184   a4paper,%
185   portrait,%
186   twoside,%
187   ignoreall,%
188   hcentering,%
189   textwidth      = 162.5mm,%
190   textheight     = 220mm,%
191   heightrounded,%
192   columnsep      = 12.5mm,%
193   top            = 47mm,%
194   headheight     = 16mm,%
195   headsep        = 13mm,%
196   marginparwidth = 15mm,%
197   marginparsep   = 5mm,%
198   footskip       = 16mm%
199   }%
200 \marginparpush 5mm%

201 \AtBeginDocument{\baselineskip=13.6pt plus 0.5pt}%

202 \parindent=4mm%

203 \smallskipamount=.5\baselineskip
204 \medskipamount=2\smallskipamount
205 \bigskipamount=2\medskipamount

206 \flushbottom

207 \abovedisplayskip=.5\baselineskip plus .33\baselineskip
208                               minus .33\baselineskip
209 \belowdisplayskip=\abovedisplayskip
210 \abovedisplayshortskip= 0pt plus .33\baselineskip
211 \belowdisplayshortskip=.5\baselineskip plus .33\baselineskip
212                               minus .33\baselineskip
```

19.6 Scripts

`\pageheadfont`   Assigning scripts to text elements.
`\pagenumfont`   Page head and foot:
`\pagefootfont`

```
213 \def\pageheadfont{\normalfont}%
214 \def\pagenumfont{\pageheadfont\bfseries}%
215 \def\pagefootfont{\pageheadfont}%
```

\authorfont	The elements of the article titles:
\titlefont	
\subtitlefont	
\abstractfont	

```
216 \def\authorfont{\normalfont\Large}%
217 \def\titlefont{\normalfont\bfseries\LARGE\boldmath}%
218 \def\subtitlefont{\normalfont\bfseries\Large\boldmath}%
219 \def\abstractfont{\normalfont\itshape}%
```

\affiliationfont	The elements of the affiliation box:
\affiliationauthorfont	
\affiliationaddressfont	
\affiliationemailfont	

```
220 \def\affiliationfont{\normalfont}
221 \def\affiliationauthorfont{\bfseries}
222 \def\affiliationaddressfont{\mdseries}
223 \def\affiliationemailfont{\mdseries}%
```

\sectionfont	Section headlines:
\sec@font	
\para@font	

```
224 \def\sectionfont{%
225    \normalfont
226    \bfseries
227    \boldmath}%
228 \def\sec@font{\sectionfont\large}%
229 \def\para@font{\sectionfont}%
```

\captionfont	Captions:

```
230 \def\captionfont{\normalfont\small\itshape}
```

19.7 Colours

These are the colour definitions for a couple of elements.

coverbgcolor color	The colours of the cover background (near 25% grey) and cover text (such as headlines, near 75% grey):
covertextcolor color	

```
231 \definecolor{coverbgcolor}{cmyk}{0.15,0.1,0.09,0}%
232 \definecolor{covertextcolor}{cmyk}{0.77,0.76,0.70,0.61}%
```

headtextcolor color	These are the colours of the grey elements in column titles (50% grey) and of the frame and the background
boxframecolor color	of text boxes like that one used in \editorialboard (100% grey = black and 20% grey, respectively).
boxbgcolor color	

```
233 \definecolor{headtextcolor}{gray}{0.5}%
234 \definecolor{boxframecolor}{gray}{1}%
235 \definecolor{boxbgcolor}{gray}{0.8}%
```

19.8 Double line spacing

\displayskipstretch	
\setdisplayskipstretch	

```
236 \newcommand{\displayskipstretch}{\baselinestretch}
237 \newcommand{\setdisplayskipstretch}[1]{\def\displayskipstretch{#1}}
```

<dl>
<dt>\setstretch</dt>
<dd>Line space commands.</dd>
</dl>

```
238 \newcommand{\setstretch}[1]{%
239   \def\baselinestretch{#1}%
240   \@currsize
241 }
```

<dl>
<dt>\@setsize</dt>
<dd>Modification of the LaTeX command \@setsize. Stretch the baseline before calculating the strut size. This improves spacing below tabular environments etc., probably.</dd>
</dl>

The meanings of the arguments to \@setsize appear to be (whatever these may signify):

Syntax:

\@setsize{⟨*current size*⟩}{⟨*font baselineskip*⟩}{⟨*ignored (!)*⟩}{⟨*font size*⟩}

Note that \@setsize (in modern LaTeX, \@setfontsize, which is called by \@setsize) seems to be the only place in purely modern LaTeX where \@currsize is set, and ltxguide.cls seems to be the only file in the LaTeX base distribution that uses it.

```
242 \def\@setsize#1#2#3#4{%
243   \@nomath#1%
244   \let\@currsize#1%
245   \baselineskip #2%
246   \baselineskip=\baselinestretch\baselineskip
247   \parskip=\baselinestretch\parskip
248   \setbox\strutbox \hbox{%
249     \vrule height.7\baselineskip
250            depth.3\baselineskip
251            width\z@}%
252   \skip\footins=\baselinestretch\skip\footins
253   \normalbaselineskip\baselineskip#3#4}
```

Fix up spacing before and after displayed math (arraystretch seems to do a fine job for inside LaTeX displayed math, since array and eqnarray seem to be affected as expected).

```
254 \everydisplay\expandafter{%
255   \the\everydisplay
256   \abovedisplayskip     \displayskipstretch\abovedisplayskip
257   \belowdisplayskip     \displayskipstretch\belowdisplayskip
258   \abovedisplayshortskip \displayskipstretch\abovedisplayshortskip
259   \belowdisplayshortskip \displayskipstretch\belowdisplayshortskip
260 }
```

19.9 Document markup

19.9.1 Declaring issue data

The following macros save their argument(s) to internal variables for later usage:

\journalname The journal name.

```
261 \def\journalname#1{\@bsphack\def\@journalname{#1}\@esphack}%
262 \journalname{Enterprise Modelling and Information Systems Architectures}%
```

\journalsubtitle The journal's subtitle.

```
263 \def\journalsubtitle#1{\@bsphack\def\@journalsubtitle{#1}\@esphack}%
264 \journalsubtitle{International Journal of Conceptual Modeling}%
```

\issn The International Standard Serial Number (ISSN) is the standardized international code which allows the identification of any serial publication, including electronic serials, independently of its country of publication, of its language or alphabet, of its frequency, medium, etc.; see the ISSN web site.

Here we have two of them, one for print and one for online issues.

```
265 \long\def\issn#1{\@bsphack\long\def\@issn{#1}\@esphack}%
266 \issn{%ISSN 1860-6059 (Print)\par
267       ISSN 1866-3621 (Online)}%
```

\volume Volume number.

```
268 \def\volume#1{\@bsphack\def\@volume{#1}\@esphack}%
269 \volume{\textcolor{red}{0}}%
```

\issue Issue number and date.

```
270 \def\issue#1#2{\@bsphack
271   \def\@issue{#1}%
272   \def\@issuedate{#2}%
273   \@esphack}%
274 \issue{\textcolor{red}{0}}{\textcolor{red}{month 0000}}%
```

\specialissuetitle If the current issue is a *special issue*, the respective title goes here.
\specialissuetitle*
\specialissuetitleprefix

```
275 \def\specialissuetitle{\@ifstar\@sspit\@spit}%
276 \newcommand{\@spit}[2][]{%
277   \@bsphack
278   \@ifempty{#2}%
279     {\let\@specialissuetitle\relax}%
280     {\@ifempty{#1}%
281       {\def\@specialissuetitle{\@specialissuetitleprefix#2}}%
282       {\def\@specialissuetitle{#1\space#2}}}%
283   \@esphack}%
284 \newcommand{\@sspit}[2][]{%
285   \@bsphack
286   \@ifempty{#2}%
287     {\let\@specialissuetitle\relax}%
288     {\def\@specialissuetitle{#2}}%
289   \@esphack}%
290 \newcommand{\specialissuetitleprefix}[1]{%
291   \@bsphack
292   \@ifempty{#1}%
293       {\let\@specialissuetitleprefix\relax}%
```

```
294        {\def\@specialissuetitleprefix{#1\space}}%
295     \@esphack}%
296 \specialissuetitle{}%
297 \specialissuetitleprefix{Special Issue on}%
```

\copyrightyear
\copyrightholder

Copyright owner and year.

```
298 \def\copyrightyear#1{\@bsphack\def\@copyrightyear{#1}\@esphack}%
299 \copyrightyear{\the\year}%
300 \def\copyrightholder#1{\@bsphack\def\@copyrightholder{#1}\@esphack}%
301 \copyrightholder{\textcolor{red}{\copyright{}holder}}%
```

\title

Title, subtitle, and author information for the current article.

\subtitle
\author

These macros are a bit special as they accept up to *two* optional arguments together with the obligatory one. The optional arguments are for the running-title (*short*) and the table-of-contents (*ToC*) versions, respectively, of the main entry, if there is any:

Syntax:

\title[⟨*short_title*⟩][⟨*ToC_title*⟩]{⟨*title*⟩}
\subtitle[⟨*short_subtitle*⟩][⟨*ToC_subtitle*⟩]{⟨*subtitle*⟩}
\author[⟨*short_author*⟩][⟨*ToC_author*⟩]{⟨*author*⟩}

If *no* optional argument is given the obligatory argument will appear in all the respective places.

If *one* optional argument is given then its' value replaces both the *short* and the *ToC* entries.

If *two* optional arguments are given then the value of the first one becomes the *short* headline (et al.) entry, and the second one is reproduced in the table of contents.

If *both* optional arguments are given but the first one is left empty then the *short* entry defaults also to the main value, and only the *ToC* entry is changed.

```
302 \renewcommandtwoopt*{\title}[3][][]{%
303     \@bsphack
304     \def\@title{#3}%
305     \@ifempty{#1}{\def\@shorttitle{\@title}}{\def\@shorttitle{#1}}%
306             \@ifempty{#2}{\def\@toctitle{\@shorttitle}}{\def\@toctitle{#2}}%
307     \@esphack}%
308 \newcommandtwoopt*{\subtitle}[3][][]{%
309     \@bsphack
310     \def\@subtitle{#3}%
311     \@ifempty{#1}{\def\@shortsubtitle{\@subtitle}}{\def\@shortsubtitle{#1}}%
312     \@ifempty{#2}{\def\@tocsubtitle{\@shortsubtitle}}{\def\@tocsubtitle{#2}}%
313     \@esphack}%
314 \def\email#1{%
315     \ifx\@email\@empty
316         \def\@email{#1}
317     \else
318         \ClassError{emisa}{There can only be one corresponding author!}{}
319     \fi}%
320 \renewcommand{\author}{\@ifstar{\@authorstar}{\@authornostar}}
```

```latex
321 \newcommand*{\@authornostar}[1]{%
322   \@bsphack
323   \if@referee
324     \def\@authors{}%
325     \def\@shortauthors{}
326   \else
327       \gdef\@address@sep{}%
328       \ifx\@authors\@empty
329         \protected@xdef\@authors{#1}
330         \protected@xappto\@shortauthors{#1}
331       \else
332         \protected@xappto\@authors{,\space #1}
333         \protected@xappto\@shortauthors{,\space #1}
334       \fi%
335   \fi
336   \@esphack}%
337 \newcommandtwoopt*{\@authorstar}[3][][]{%
338     \@bsphack
339     \if@referee
340       \def\@authors{}%
341       \def\@shortauthors{}%
342       \def\@tocauthors{}%
343       \def\@email{}%
344     \else
345       \gdef\@address@sep{}%
346       \ifx\@authors\@empty
347         \protected@xdef\@authors{#3\textsuperscript{*,}}
348         \protected@xappto\@shortauthors{#3}
349       \else
350         \protected@xappto\@authors{,\space #3\textsuperscript{*,}}
351         \protected@xappto\@shortauthors{,\space #3}
352       \fi%
353       \@ifempty{#1}{\def\@shortauthor{\@shortauthors}}{\def\@shortauthor{#1}}%
354       \@ifempty{#2}{\def\@tocauthor{\@shortauthors}}{\def\@tocauthor{#2}}%
355     \fi
356     \@esphack
357     \@ifnextchar\bgroup\email{\ClassError{emisa}{Please provide an email address for the correspo
358 \newcommand{\keywords}[1]{
359   \@bsphack
360   \def\and{\unskip\ \textbullet\ }%
361   \def\@keywords{#1}%
362   \@esphack}%
363 \newcommand{\authornote}[1]{
364   \@bsphack
365   \if@referee
366     \def\@authornote{}%
367   \else
368     \def\@authornote{#1}%
369   \fi%
```

```latex
370     \@esphack}%
371 \newcommand{\editor}[1]{
372     \@bsphack
373     \def\@articleinfo@name{#1}%
374     \@esphack}%
375 \newcommand{\received}[1]{
376     \@bsphack
377     \def\@articleinfo@rdate{#1}%
378     \@esphack}%
379 \newcommand{\accepted}[2][]{
380     \@bsphack
381     \def\@articleinfo@rounds{#1}
382     \def\@articleinfo@adate{#2}%
383     \@esphack}%
384 \newcommand{\doitext}{DOI:}
385 \newcommand*{\outdoi}{%
386   \begingroup
387   \lccode`\~=`\#\relax
388   \lowercase{\def~{\#}}%
389   \lccode`\~=`\_\relax
390   \lowercase{\def~{\_}}%
391   \lccode`\~=`\<\relax
392   \lowercase{\def~{\textless}}%
393   \lccode`\~=`\>\relax
394   \lowercase{\def~{\textgreater}}%
395   \lccode`\~=0\relax
396   \catcode`\#=\active
397   \catcode`\_=\active
398   \catcode`\<=\active
399   \catcode`\>=\active
400   \@outdoi
401 }
402 \def\@outdoi#1{%
403   \let\#\relax
404   \let\_\relax
405   \let\textless\relax
406   \let\textgreater\relax
407   \edef\x{\toks0={{#1}}}%
408   \x
409   \edef\#{\@percentchar23}%
410   \edef\_{_}%
411   \edef\textless{\@percentchar3C}% instead of {\string<} for Apple
412   \edef\textgreater{\@percentchar3E}% instead of {\string>} for Apple
413   \edef\x{\toks1={\noexpand\href{http://dx.doi.org/#1}}}%
414   \x
415   \edef\x{\endgroup\doitext\the\toks1 \the\toks0}%
416   \x
417 }
418 \newcommand*{\doi}[1]{
```

29

```latex
    \@bsphack
    \def\@doi{#1}
    \@esphack}%
\newcommand{\acknowledgements}[1]{
    \@bsphack
    \def\@acknowledgements{#1}
    \@esphack}%
\newif\if@licenseset
\newcommand{\licence}[1]{%
    \@bsphack
    \def\@licence{#1}
    \@esphack}%
\let\license\licence
\newcommand{\CCBYNCSAThree}{%
    \@licensesettrue%
    \def\doclicense@type{CC}%
    \def\doclicense@modifier@uppercase{BY-NC-SA}%
    \def\doclicense@versionUsed{3.0}%
}%
\newcommand{\CCBYNCSAFour}{%
    \@licensesettrue%
    \def\doclicense@type{CC}%
    \def\doclicense@modifier@uppercase{BY-NC-SA}%
    \def\doclicense@versionUsed{4.0}%
}%
\newcounter{addresses}
\renewcommand{\theaddresses}{\alph{addresses}}
\newcommand{\address}[2][]{%
  \@bsphack
  \if@referee
     \def\@addresses@list{}
  \else
     \@ifempty{#2}{%
        \@ifempty{#1}{}{%
            \protected@xappto\@authors{\textsuperscript{\@address@sep #1}}
            \gdef\address@sep{,}%
     }}{%
            \stepcounter{addresses}
            \protected@xappto\@authors{\textsuperscript{\@address@sep\theaddresses}}
            \gdef\@address@sep{,}%
            \ifx\@addresses@list\@empty
                \protected@xdef\@addresses@list{\textsuperscript{\theaddresses}\ #2}
            \else
                \protected@xappto\@addresses@list{\newline\textsuperscript{\theaddresses}\ #2}
            \fi}
  \fi
  \@esphack}%
\title{}%
\subtitle{}%
```

```
468 \author{}%
469 \address{}
470 \keywords{}%
471 \authornote{}%
472 \editor{}%
473 \received{}%
474 \accepted{}%
475 \doi{}%
476 \licence{}
477 \acknowledgements{}%
478 \def\abstract#1{\@bsphack\def\@abstract{#1}\@esphack}%
479 \abstract{}%
480 \def\@authors{}
481 \def\@shortauthor{}
482 \def\@shortauthors{}
483 \def\@tocauthor{}
484 \def\@tocauthors{}
485 \def\@email{}
486 \def\@addresses@list{}
```

\abstract   This accepts the abstract text.

```
487 \def\abstract#1{\@bsphack\def\@abstract{#1}\@esphack}%
488 \abstract{}%
```

\outputarticleappendix   The `articleappendix` and `articleappendix*` environments collect the material given within them
\@articleappendix   inside an `article` environment. The collected material is accumulated and output at the article's
\@wrap@articleappendix   very end. The basic form `articleappendix` begins a new page per instance while the starred form
articleappendix   `articleappendix*` does not. Each appendix is wrapped into its own group so things remain local.
articleappendix*

```
489 \DeclareRobustCommand{\outputarticleappendix}{%
490   {%
491     \appendix
492 \@articleappendix
493 \global\let\@articleappendix\relax
494   }%
495 }%
496 \long\def\@wrap@articleappendix#1{\gappto{\@articleappendix}{{#1}}}
497 \newenvironment{articleappendix}{%
498   \gappto{\@articleappendix}{\clearpage}%
499   \Collect@Body\@wrap@articleappendix}{}
500 \newenvironment{articleappendix*}{%
501   \Collect@Body\@wrap@articleappendix}{}
502 \let\@articleappendix\relax

503 \def\@makefnmark{\textsu{\@thefnmark}\ }%
504 \renewcommand\@makefntext[1]{%
505     \parindent 1em%
506     \noindent%
507     \@makefnmark#1}%
```

19.9.2 Page styles

This is the standard page style:

Page Head: three lines of text, \textwidth wide and aligned to the inner and outer text body borders, respectively, each above a black horizontal line at full sheet width. The text entries comprise:

Line 1, inner side:

> ▷ left pages: journal's subtitle;
>
> ▷ right pages: journal name.

outer side: no text.

Line 2, inner side: volume/number/issue date, text colour is 50 % grey;

outer side: no text.

Line 3, inner side:

> ▷ left pages: section name;
>
> ▷ common right pages: author's name(s);
>
> ▷ editorial content, both sides: section or category name;

text colour is 50 % grey;

outer side: page number in bold type, coloured black, shifted by an amount of \headpageoffset to the outer edge of the page.

Page foot: Mostly empty; sometimes in editorial content sections it shows a black horizontal line from the outer text edge to the inner sheet edge (spine).

\headwidth \headmargin — Basic lengths for head and foot elements. \headwidth is the overall width of the headbox equalling the page width plus a bleed of three millimeters. It is logically restricted to \textwidth by substracting \headmargin at both sides.

\bleed — *Bleed* is a printing term that refers to printing beyond the edge of the sheet after trimming. The \bleed is a measure describing the (small) amount of space by which objects on the border of your document will extend. Please note that this length is not added automatically, but has to be added manually.

\footrulewidth — The width of the foot rule. As it is drawn asymmetrically (running from the outer text edge to the spine) it has to be a bit smaller than the head box.

\headfootruleheight — This is the width of all lines in head and foot.

```
508 \newlength{\headwidth}%
509 \newlength{\bleed}%
510 \newlength{\headmargin}%
511 \newlength{\footrulewidth}%
512 \newlength{\headfootruleheight}%
513 \setlength{\bleed}{3mm}%
514 \setlength{\headfootruleheight}{0.4mm}%
```

We want to be able to change \bleed in the preamble so we delay the calculations until \begin{document}.

```
515 \AtBeginDocument{%
516   \setlength{\headwidth}{\paperwidth+2\bleed}%
517   \setlength{\headmargin}{0.5\headwidth-0.5\textwidth}%
518   \setlength{\footrulewidth}{0.5\headwidth+0.5\textwidth}}%
```

\headbox   The main formatting routine for the running head is a `tabular*` environment.

```
519 \newcommand{\headbox}[8]{\bgroup%
520   \setstretch{1}%
521   \reset@font\pageheadfont
522   \tabcolsep\z@
523   \arrayrulewidth\headfootruleheight
524   \hskip-\headmargin
525   \begin{tabular*}{\headwidth}[b]%
526     {@{\rule{\headmargin}{\z@}}%
527     >{\rule[-1.25mm]{\z@}{5mm-\arrayrulewidth}}%
528     l@{\extracolsep{\textwidth minus 1fill}}r%
529     @{\rule{\headmargin}{\z@}}}
530     #1 & #2\\
531     \hline
532     #3 & #4\\
533     \hline
534     #5 & #6\\
535     \hline
536     #7 & #8\\
537   \end{tabular*}%
538   \hskip-\headmargin
539   \egroup
540 }%
```

\theheadvolume   These macros are used to assemble the page head, . . .
\headpageoffset
\theoddheadpage
\theevenheadpage

```
541 \newcommand{\theheadvolume}{%
542   \begingroup%
543   \hypersetup{urlcolor=headtextcolor}%
544   \textcolor{headtextcolor}{%
545     Vol.\,\@volume, No.\,\@issue\ (\@issuedate).%
546     \ifx\@doi\@empty\else\ \outdoi{\@doi}\fi}%
547   \endgroup}%
548 \newlength{\headpageoffset}%
549 \setlength{\headpageoffset}{10mm}%
550 \def\theoddheadpage{%
551   \rlap{\makebox[\headpageoffset][r]{\pagenumfont\thepage}}}%
552 \def\theevenheadpage{%
553   \llap{\makebox[\headpageoffset][l]{\pagenumfont\thepage}}}%
```

@footrule switch   . . . and these are for the page foot.
\footruleoff
\footruleon
\footrule

```
554 \newif\if@footrule%
555 \def\footruleoff{\global\@footrulefalse}%
556 \def\footruleon{\global\@footruletrue}%
557 \def\footrule#1{%
558   \if@footrule
559     \makebox[\textwidth][#1]{%
560       \reset@font
561       \rule[\headfootruleheight]{\footrulewidth}{\headfootruleheight}%
```

```
562        }\fi}%
```

\headmarkstyle Sets the content marks in the running titles.
\markhead
\markarticle
\markeditorial

```
563  \def\headmarkstyle#1{\@bsphack
564    \def\@headmarkstyle{#1}%
565    \@esphack}%
566  \headmarkstyle{\color{headtextcolor}}%
567  \def\markhead#1#2{\@bsphack
568    \gdef\@evenmark{#1}%
569    \gdef\@oddmark{#2}%
570    \@esphack}%
571  \def\markarticle{\markhead{\@shortauthor}{\@shorttitle}}%
572  \def\markeditorial{\markhead{\@shorttitle}{\@shorttitle}}%
```

\ps@emisa Finally that all being thrown together gives the basic page style.

```
573  \def\ps@emisa{%
574    \def\@oddhead{%
575      \headbox{\@journalname}{}%
576              {\theheadvolume}{}%
577              {{\@headmarkstyle\@oddmark}}{\theoddheadpage}%
578              {\ifx\@specialissuetitle\relax\else\textcolor{headtextcolor}{\@specialissuetitle}\fi}
579    }%
580    \def\@evenhead{%
581      \headbox{}{\@journalsubtitle}%
582              {}{\theheadvolume}%
583              {\theevenheadpage}{{\@headmarkstyle\@evenmark}}%
584              {}{\ifx\@specialissuetitle\relax\else\textcolor{headtextcolor}{\@specialissuetitle}\:
585    }%
586    \let\@oddmark\relax
587    \let\@evenmark\relax
588    \def\@oddfoot{\footrule{r}}%
589    \def\@evenfoot{\footrule{l}}%
590  }%
```

\ps@emisaarticle We have two minimally different page styles:
\ps@emisaeditorial

▷ \ps@emisaarticle for author-named articles, showing the author's names on the left and the article title on the right side;

▷ \ps@emisaeditorial for editorial material, showing the the article title on both sides.

```
591  \def\ps@emisaarticle{%
592    \ps@emisa
593    \markarticle
594    \footruleoff
595  }%

596  \def\ps@emisaeditorial{%
597    \ps@emisa
598    \markeditorial
599    \footruleon
```

```
600  }%

601  \AtEndOfClass{\pagestyle{emisa}}%
```

19.9.3 Cover and advertisement pages

\basecoverfont
\covervolumefont
\covertitlefont

These are the font and size definitions for cover pages. We are using the sansserif script from the Libertine package, called *Linux Biolinum*, in two different sizes with the title font being bold.

```
602  \def\basecoverfont{\normalfont\sffamily}%
603  \def\covervolumefont{%
604      \basecoverfont\fontsize{6mm}{6mm}\selectfont}%
605  \def\covertitlefont{%
606      \basecoverfont\bfseries\fontsize{11mm}{16.5mm}\selectfont}%
```

\coverIbgname
\coverIVbgname
\sigmobislogoname
\gislogoname

These are names for background graphics and logos. As these are subject to be changed from time to time these adjustments are put into the base config file, too.

```
607  \def\coverIbgname{U1_bg}%
608  \def\coverIVbgname{U4_bg}%
609  \def\sigmobislogoname{SIG-MOBIS-logo-300}%
610  \def\sigEMISAlogoname{EMISA-Logo-svg}%
611  \def\gislogoname{GIS-logo_with_text-300}%
```

\AtPageDeadCenter
\page@empty

\AtPageDeadCenter centers its argument horizontally and vertically around the geometric page center. This macro is to be used inside some eso-pic ShipoutPicture.

```
612  \newcommand{\AtPageDeadCenter}[1]{%
613      \AtPageCenter{\makebox[\z@][c]{%
614          \raisebox{-0.5\totalheight}[\z@][\z@]{#1}}}%
615  }%
616  \def\page@empty{\relax}%
```

\pagebg

Background color for one whole page plus bleed.

```
617  \newcommand{\pagebg}[1]{%
618      \AtPageDeadCenter{%
619          \textcolor{#1}{\rule{\paperwidth+2\bleed}{\paperheight+2\bleed}}}}%
```

\thispagebackground

\thispagebackground put its obligatory argument into the background of the running page. If there is a non-empty optional argument it will be interpreted as the style of this page (using \thispagestyle).

```
620  \newcommand{\thispagebackground}[2][]{%
621      \@ifarg{#1}{\thispagestyle{#1}}%
622      \AddToShipoutPicture*{%
623          \unitlength 1mm\relax%
624          {#2}%
625  }}%
```

\picturepage \picturepage additionally empties and flushes the running page, thus producing a picture-only page.

```
626 \newcommand{\picturepage}[2][empty]{%
627   \thispagebackground[#1]{#2}%
628   \null\clearpage
629 }%
```

\inputpagegraphic This loads a picture file to generate a picture-only page from.

```
630 \newcommandtwoopt*{\inputpagegraphic}[3][empty][]{%
631   \thispagebackground[#1]{\includegraphics[width=\paperwidth,#2]{#3}}%
632   \null\clearpage
633 }%
```

\coverpage \coverpage is a special form of the \picturepage:

```
634 \newcommand{\coverpage}[2][]{%
635   \@ifarg{#1}{\setcounter{page}{#1}}%
636   \picturepage{#2}%
637 }%
```

\thecovervolumeline These represent the
\thecovertitle
```
638 \newcommand{\thecovervolumeline}{%
639   \parbox[t]{130mm}{%
640     \raggedright
641     \color{covertextcolor}\covervolumefont%
642     Volume\space\@volume
643     \enspace\rule[-1mm]{0.5mm}{6mm}\enspace
644     No.\,\@issue\space\textbf{\@issuedate}\\[3mm]%
645     \@specialissuetitle
646   }%
647 }%
648 \def\thecovertitle{%
649   \parbox[t][30mm][s]{174mm}{%
650     \color{covertextcolor}%
651     \covertitlefont
652     \raggedright\@journalname\par
653     \vskip8mm
654     \covervolumefont
655     \raggedleft
656     \textbf{An International Electronic Journal\,}}}}
```

\sigmobispage This macro holds the complete announcement page on the *GI-SIG-MoBIS portal* to be published on the third cover page (backcover, inside).

\sigmobispage holds just the contents of the SIG-Mobis ad. It produces a box with an outer width of *zero points* and a height as specified by the inner minipage environment. When used as an advertising page it has to be *centered horizontally and vertically* in the page area. This is achieved most easily by using the \AtPageDeadCenter utility macro (see section 19.9.3) from eso-pic [10].

```
657 \def\sigmobispage{%
658   \makebox[\z@][c]{%
```

```
659     \begin{minipage}[c][260mm][s]{\textwidth}
660       \sigmobispagehead
661       \medskip
662
663       The GI-SIG-MoBIS portal provides numerous resources on enterprise
664       modelling research, such as a full-text digital library, a
665       bibliography, conference announcements, a glossary and evaluation
666       reports.  It is intended to establish the premier forum for an
667       international community in enterprise modelling.  The new version
668       is based on a Content Management System allowing authorized users
669       to conveniently upload content.  A \BibTeX{} interface allows for
670       conveniently integrating bibliographic data.  Information about
671       this journal, such as guidelines for authors, tables of content
672       and full-text access to articles (for GI-SIG-MobIS members only)
673       are also available on the~portal.
674       \par
675       \medskip
676
677       \begin{center}
678         \includegraphics{GI-SIG-MOBIS_portal}
679       \end{center}
680
681       \medskip
682
683       GI encourages everybody who wants to participate in the
684       evolution of this community knowledge base to contribute to any of
685     the categories covered by the portal. Please contact Michael He\ss{}
686     (\href{mailto:m.hess@uni-duisburg-essen.de}{m.hess@uni-duisburg-essen.de})
687     for further~information.
688
689       \vfill
690
691       \sigmobispagefoot
692     \end{minipage}%
693   }%
694 }
```

\sigmobispagehead Elements of \sigmobispage.
\sigmobispagefoot
\sigmobispagerule
```
695 \def\sigmobispagerule#1{%
696 \parbox[c][23mm][s]{\linewidth}{%
697   \centering
698   \textcolor{gray}{\rule{.92\linewidth}{1mm}}%
699   \par\vfill
700   \raisebox{-.4\height}[.5\totalheight][.5\totalheight]{\huge#1}%
701   \par\vfill
702   \textcolor{gray}{\rule{.92\linewidth}{1mm}}}\par}%
703 \def\sigmobispagehead{\sigmobispagerule{SIG-MoBIS Portal}}
704 \def\sigmobispagefoot{\sigmobispagerule{http://wi-mobis.gi-ev.de/}}
```

Each of these prepares one of the cover pages.

```
705  \def\coverI#1{\@ifempty{#1}%
706      {\let\@coverI\relax}%
707      {\def\@coverI{\coverpage[-2]{#1}}}}%
708  \def\coverII#1{\@ifempty{#1}%
709      {\let\@coverII\relax}%
710      {\def\@coverII{\coverpage[-1]{#1}}}}%
711  \def\coverIII#1{\@ifempty{#1}%
712      {\let\@coverIII\relax}%
713      {\def\@coverIII{\coverpage{#1}}}}%
714  \def\coverIV#1{\@ifempty{#1}%
715      {\let\@coverIV\relax}%
716      {\def\@coverIV{\coverpage{#1}}}}%
```

So we prepare the four cover pages.

```
717  \coverI{%
718    \pagebg{coverbgcolor}%
719    \AtPageUpperLeft{%
720      \raisebox{-\totalheight}{\includegraphics{\coverIbgname}}}%
721    \AtPageUpperLeft{\put(17,-28){\mbox{%
722      \includegraphics[height=19mm]{\sigmobislogoname}%
723      \hspace{5mm}%
724      \includegraphics[height=14.75mm]{\sigEMISAlogoname}%
725      }}%
726    }%
727    \AtPageLowerLeft{\put(166,9){\includegraphics{\gislogoname}}}%
728    \AtPageLowerLeft{\put(17,44){\thecovervolumeline}}%
729    \AtTextLowerLeft{\put(-28,36){\framebox(200,62)[c]{}}}%
730    \AtPageLowerLeft{\put(17,112){\thecovertitle}}%
731  }%
732  \coverII{\page@empty}%
733  \coverIII{\AtPageCenter{\sigmobispage}}%
734  \coverIV{%
735    \pagebg{coverbgcolor}%
736    \AtPageLowerLeft{%
737      \raisebox{167mm}{\includegraphics{\coverIVbgname}}}%
738    \AtPageLowerLeft{%
739      \put(6,9){\parbox[b]{10cm}{\raggedright\large\sffamily\@issn}}}%
740    \AtPageLowerLeft{%
741      \put(166,9){\includegraphics{GIS-logo_with_text-300}}}%
742  }%
743  \if@cover
744    \AtBeginDocument{%
745      \@coverI\@coverII
746      \setcounter{page}{1}%
747    }%
748    \AtEndDocument{%
749      \@coverIII\@coverIV
```

```
750     }%
751 \fi
```

\graphicspath The picture files used above have to be found. Normally they should be somewhere on the TEX $PATH, probably in the same directory where EMISAJ is situated. As least as we are in Beta state one might put them into the local subdirectory figs_base/; we provide for that by including the following line in the config file.

```
752 \graphicspath{{/figs_base/},{./figs_base/}}
```

19.9.4 Formatting common articles

\c@article The article and editorialcontent environments maintain their own (common) counter. Although it is not referenced anywhere at the moment of writing it is used to reset a couple of other counters with every new one of those environments.

```
753 \newcounter{article}%
754 \@addtoreset{section}{article}%
755 \@addtoreset{footnote}{article}%
756 \@addtoreset{figure}{article}%
757 \@addtoreset{table}{article}%
```

article This encapsulates each article.

```
758 \newenvironment{article}[1]{%
759   \clearpage
760   \refstepcounter{article}%
761   \pagestyle{emisaarticle}%
762   \col@number=\tw@\relax
763   #1\relax
764   \l@article
```

Every article is its own bibliographical unit.

```
765   \begin{refsection}%
766   \maketitle
767   \ignorespaces
768 }{%
769   \end{refsection}%
770   \outputarticleappendix\FloatBarrier\par%
771   \vspace{\baselineskip}%
772   \noindent\ignorespaces
773   \if@licenseset
774     \edef\doclicenseURL{%
775       \doclicense@baseUrlCC/%
776       licenses/%
777       \doclicense@modifier/%
778       \doclicense@versionUsed\doclicense@UrlLangPart%
779     }
780     \begin{minipage}{\columnwidth}
781     \parbox[t]{\dimexpr 0.975\columnwidth-\doclicense@imagewidth\relax}{\vskip 0pt\raggedright\f
```

```
782        \doclicense@lang@thisDoc\space
783        \href{\doclicenseURL}{\doclicenseLongType\space\enquote{\doclicense@longName}}%
784        \doclicense@lang@word@license.}%
785      \hfill%
786      \parbox[t]{\doclicense@imagewidth}{\vskip 0pt\doclicenseImage}%
787      \end{minipage}%
788    \else
789      \ifx\@licence\@empty\relax\else\par\noindent\@licence\fi%
790    \fi%
791    \onecolumn
792    \ignorespacesafterend}%
```

19.9.5 Formatting editorial content

\edit@setup   This adjusts the basic page makeup for editorial material.

```
793 \newcommandtwoopt{\edit@setup}[3][][]{%
794   \title[#1][#2]{#3}
795   \pagestyle{emisaeditorial}
```

Here, section titles are a bit larger than otherwise.

```
796   \def\sec@font{\sectionfont\Large}%
797   \def\para@font{\sectionfont}%
798   \setcounter{section}{0}%
799 }%
```

editorialcontent   This encapsulates editorial content entries.

```
800 \newenvironment{editorialcontent}[1]{%
801   \onecolumn
802   \refstepcounter{article}%
803   \edit@setup{#1}%
804   \l@editorialcontent
805   \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
```

Every `editorialcontent` is its own bibliographical unit.

```
806   \begin{refsection}%
807   \ignorespaces
808   }{%
809   \end{refsection}%
810   \onecolumn
811   \ignorespacesafterend}%
```

19.9.6 Standard editorial content environments

Several types of standardized editorial contents.

editorial   This encapsulates editorials.
\editorialname
```
812 \def\editorialname{Editorial Preface}%
```

```
813 \newenvironment{editorial}[1][\editorialname]{%
814     \clearpage
815     \edit@setup{#1}%
816     \twocolumn[{\raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}}]%
817     \l@editorialcontent
```

Every `editorial` is its own bibliographical unit.

```
818     \begin{refsection}%
819     \ignorespaces
820     }{%
821     \end{refsection}%
822     \onecolumn
823     \ignorespacesafterend}%
```

cfp   Call for papers.

\cfpname

```
824 \def\cfpname{Call for Papers}%
825 \newenvironment{cfp}[1][\cfpname]%
826   {\editorialcontent{#1}}%
827   {\endeditorialcontent}%
```

\imprint   Imprint.

\imprintname
\imprintbody

```
828 \newcommandtwoopt{\imprint}[2][\@imprintname][\@imprintbody]{%
829     \onecolumn
830     \edit@setup[#1]{\@journalname}%
831     \l@editorialcontent
832     \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
833     \ignorespaces
834     #2
835     \onecolumn\ignorespacesafterend}%
836 \def\imprintname#1{\@bsphack\def\@imprintname{#1}\@esphack}%
837 \long\def\imprintbody#1{\@bsphack\def\@imprintbody{#1}\@esphack}%

838 \imprintname{Imprint}%
839 \imprintbody{%
840     The journal \emph{\@journalname} is the official journal of the
841     Special Interest Group on Modelling Business Information Systems
842     within the German Informatics Society (GI-SIG MoBIS).
843
844     The journal Enterprise Modelling and Information Systems
845     Architectures is intended to provide a forum for those who prefer a
846     design-oriented approach.  As the official journal of the German
847     Informatics Society (GI-SIG-MoBIS), it is dedicated to promote the
848     study and application of languages and methods for enterprise
849     modelling -- bridging the gap between theoretical foundations and
850     real world requirements.  The journal is not only aimed at
851     researchers and students in Information Systems and Computer
852     Science, but also at information systems professionals in industry,
853     commerce and public administration who are interested in innovative
854     and inspiring concepts.
```

```
855
856    The journal's editorial board consists of scholars and practitioners
857    who are renowned experts on various aspects of developing, analysing
858    and deploying enterprise models.  Besides Information Systems, they
859    cover various fields of Computer Science.
860
861    \section*{Subscription Information}
862
863    The journal is distributed free of charge for members of the
864    GI-SIG-MoBIS. Membership can be acquired through the German
865    Informatics Society (http://www.gi-ev.de/verein/mitgliedschaft/).
866    Single issues, priced at EUR\,25 each (plus shipment), can be ordered
867    online (http://www.fg-mobis.gi-ev.de/).}
```

\editorialboard   Outputs the Editorial Board page.

\editorialboardname   Sets the name of the Editorial Board for use in the table of contents and in \editorialboard.

\editorialboardbody   Sets the contents of the Editorial Board for use in \editorialboard.

The vertical size of the Editorial Board will exceed page height if there are more than about 48 name entries and/or other material. To prevent that the grey box is scaled down to a height of \editorialboxmaxheight if its natural size is bigger than that.

```
868 \newsavebox{\@editorial@box}%
869 \newlength{\editorialboxmaxheight}%
870 \setlength{\editorialboxmaxheight}{\textheight+10mm}%
871 \newcommandtwoopt{\editorialboard}[2]%
872  [\@editorialboardname][\@editorialboardbody]{%
873   \clearpage
874   \edit@setup[#1]{#1}%
875   \l@editorialcontent
876   \savebox{\@editorial@box}{%
877     \vbox{\centering%
878   \fboxsep=5mm
879   \fcolorbox{boxframecolor}{boxbgcolor}{%
880 \begin{minipage}[t]{110mm}
881   \raggedright
882   #2
883 \end{minipage}}\\*
884 }%
885   }%
886   \raisebox{15mm-\totalheight}[5mm][0mm]{\makebox[\textwidth][c]{%
887     \ifdim\ht\@editorial@box>\editorialboxmaxheight
888   \resizebox{!}{\editorialboxmaxheight}{\usebox{\@editorial@box}}%
889 \else
890   \usebox{\@editorial@box}%
891 \fi
892   }}\\*
893   \raisebox{-\textheight}[0mm][0mm]{\makebox[\textwidth][l]{%
894   \parbox[t]{\textwidth}{\raggedleft\bfseries\@issn}%
```

```latex
895 }}%
896   \onecolumn\ignorespacesafterend
897 }%
898 \def\editorialboardname#1{%
899   \@bsphack\def\@editorialboardname{#1}\@esphack}%
900 \long\def\editorialboardbody#1{%
901   \@bsphack\def\@editorialboardbody{#1}\@esphack}%

902 \editorialboardname{Editorial Board}%
903 \editorialboardbody{%
904   \section*{\@title}\vskip1mm
905   {\Large Editors in Chief\\[1mm]}
906   Ulrich Frank, University of Duisburg-Essen\\
907   Manfred Reichert, Ulm University\\[1mm]
908   {\Large Associate Editors\\[1mm]}
909   Wil van der Aalst, Eindhoven University of Technology\\
910   Witold Abramowicz, Poznan University of Economics\\
911   Colin Atkinson, University of Mannheim\\
912   J\"org Becker, University of M\"unster\\
913   J\"org Desel, University of Hagen\\
914   Werner Esswein, Dresden University of Technology\\
915   Fernand Feltz, Centre de Recherche Public Gabriel Lippmann\\
916   Andreas Gadatsch, Bonn-Rhine-Sieg University of Applied Sciences\\
917   Martin Glinz, University of Zurich\\
918   Norbert Gronau, University of Potsdam\\
919   Wilhelm Hasselbring, University of Kiel\\
920   Brian Henderson-Sellers, University of Technology, Sydney\\
921   Stefan Jablonski, University of Bayreuth\\
922   Manfred Jeusfeld, Tilburg University\\
923   Reinhard Jung, University of St.\,Gallen\\
924   Dimitris Karagiannis, University of Vienna\\
925   John Krogstie, University of Trondheim\\
926   Thomas K\"uhne, Victoria University of Wellington\\
927   Frank Leymann, University of Stuttgart\\
928   Stephen W. Liddle, Brigham Young University\\
929   Peter Loos, Johannes Gutenberg-University of Mainz\\
930   Oscar Pastor L\'opez, Universidad Polit\`ecnica de Val\`encia\\
931   Heinrich C. Mayr, University of Klagenfurt\\
932   Jan Mendling, Vienna University of Economics and Business\\
933   Markus N\"uttgens, University of Hamburg\\
934   Andreas Oberweis, University of Karlsruhe\\
935   Erich Ortner, Darmstadt University of Technology\\
936   Erik Proper, Radboud University Nijmegen\\
937   Michael Rebstock, University of Applied Sciences Darmstadt\\
938   Stefanie Rinderle-Ma, University of Vienna\\
939   Michael Rosemann, Queensland University of Technology\\
940   Matti Rossi, Aalto University\\
941   Elmar J. Sinz, University of Bamberg\\
942   Friedrich Steimann, University of Hagen\\
943   Stefan Strecker, University of Hagen\\
```

```
944    Bernhard Thalheim, University of Kiel\\
945    Oliver Thomas, University of Osnabr\"uck\\
946    Juha-Pekka Tolvanen, University of Jyv\"askyl\"a\\
947    Klaus Turowski, University of Augsburg\\
948    Gottfried Vossen, University of M\"unster\\
949    Mathias Weske, University of Potsdam\\
950    Robert Winter, University of St.\,Gallen\\
951    Heinz Z\"ullighoven, University of Hamburg}%
```

\guidelines   Guidelines for Authors.

\guidelinesname
\guidelinesbody

```
952  \newcommandtwoopt{\guidelines}[2]%
953  [\@guidelinesname][\@guidelinesbody]{%
954    \onecolumn
955    \edit@setup{#1}%
956    \l@editorialcontent
957    \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
958    \ignorespaces
959    #2
960    \onecolumn\ignorespacesafterend}%
961  \def\guidelinesname#1{%
962    \@bsphack\def\@guidelinesname{#1}\@esphack}%
963  \long\def\guidelinesbody#1{%
964    \@bsphack\def\@guidelinesbody{#1}\@esphack}%

965  \guidelinesname{Guidelines for Authors}%
966  \guidelinesbody{%
967    The journal serves to publish results of innovative research on all
968    facets of creating and analysing enterprise models and information
969    systems architectures.  For research papers, it is required to
970    satisfy academic standards in terms of originality, level of
971    abstraction and justification of results.  Experience reports serve
972    to describe and analyse success stories as well as practical
973    obstacles and resulting research challenges.  Topics covered by the
974    journal include, but are not restricted to the following subjects:
975    \begin{itemize}
976      \item  Languages and Methods for Enterprise Modelling
977      \item  Reusable Domain Models (Reference Models)
978      \item  Analysis and Design Patterns
979      \item  Modelling of Business Processes and Workflows
980      \item  Process-Oriented System Architectures
981      \item  Component-Oriented System Architectures
982      \item  Conceptual Modelling for Component-Oriented Design
983      \item  Ontologies for Enterprise Modelling
984      \item  Modelling for Enterprise Application Integration
985      \item  Modelling for Data Warehouses
986      \item  Modelling to support Knowledge Management
987      \item  Model-Driven Development
988      \item  Aspect-Oriented Design
989      \item  Agile Methods for Enterprise Modelling
```

44

```
 990    \end{itemize}
 991    Authors are asked for electronic submissions, which have to be sent
 992    to the editor in chief as e-mail attachment.  In case of multiple
 993    authors, it is required to name one author who acts as contact
 994    person.  The submission should include a cover page with the paper's
 995    title and the names, affiliations and e-mail addresses of all
 996    authors.  The first page of the paper starts with the title and does
 997    not carry the authors' names.  A manuscript must be either in MS
 998    Word or PDF format.  It should not exceed 5.000 words -- this
 999    includes an abstract of around 150 words.
1000
1001    Submitted papers will be reviewed within no more than two months.
1002    The review process is double blind.  Authors who submit a manuscript
1003    guarantee that it has not been published elsewhere, nor is intended
1004    to be published elsewhere.  Papers that were accepted for
1005    publication must be written according to the style defined for the
1006    journal.  A comprehensive description as well as a corresponding
1007    Word template is provided on the web portal of the GI-SIG-MobIS
1008    (http://www.fg-mobis.gi-ev.de/).}
```

19.9.7 Making the title

\maketitle This takes a couple of prerequisites, then looks if we are in one- or twocolumn mode and finally outputs the information accordingly.

```
1009 \def\maketitle{%
1010    \begingroup
1011    \let\footnoterule\relax
1012    \let\footnote\thanks
1013    \let\thefootnote\relax
1014    \def\@makefnmark{\textsuperscript{\@thefnmark}}%
1015    \ifnum\col@number=\@ne
1016       \@maketitle
1017    \else
1018       \twocolumn[\@maketitle]%
1019    \fi
1020    \global\@topnum\z@
1021    \@thanks
1022    \endgroup
1023    \setcounter{footnote}{0}%
1024 }%
```

\@maketitle This assembles and outputs the article title.

```
1025 \def\@maketitle{%
1026    \bgroup
1027    \normalfont
1028    \pretolerance=9999
1029    \parskip\z@
1030    \parindent\z@
```

```
1031    \if!\@title!
1032    \else
1033    {\raggedright
1034        \titlefont\ignorespaces
1035        \strut\@title\strut\par}%
1036    \vskip2mm\relax
1037    \fi
1038 \if!\@subtitle!
1039 \vskip5mm\relax
1040 \else
1041    {\makebox[\textwidth][r]{%
1042      \begin{minipage}{\textwidth-15mm}
1043          \raggedright
1044          \subtitlefont\ignorespaces
1045          \strut\@subtitle\strut
1046        \end{minipage}}%
1047        \par}%
1048    \vskip5mm\relax
1049 \fi
1050 \if!\@authors!
1051 \else
1052 {\raggedright
1053  \authorfont\ignorespaces
1054  \strut\@authors
1055  \ifx\@email\@empty
1056      \ClassError{emisa}{There has to be one corresponding author!}{Please use \string\author* a
1057  \else
1058      \ignorespaces\makebox[0pt][l]{\footnote{*~Corresponding author.\newline E-mail.\ \url{\@ema
1059  \fi%
1060  \ifx\@acknowledgements\@empty
1061  \else
1062      \ignorespaces\makebox[0pt][l]{\footnote{\@acknowledgements}}%
1063  \fi%
1064  \strut\par}%
1065 \vskip2mm\relax
1066 \fi
1067 \if!\@addresses@list!
1068 \else
1069    {\raggedright
1070     \footnotesize\ignorespaces
1071     \strut\@addresses@list\strut\par}%
1072    \vskip8mm\relax
1073 \fi
1074 \if!\@authornote!
1075 \else
1076    \let\thefootnote\relax
1077    \ignorespaces\makebox[0pt][l]{\footnote{Note: \@authornote}}%
1078 \fi
1079 \if!\@abstract!
```

```latex
1080    \else
1081     {\abstractfont\ignorespaces
1082      \strut\textup{Abstract.\ }\@abstract\strut\par}%
1083      \vskip5mm\relax
1084    \fi
1085    \if!\@keywords!
1086      \vskip3mm\relax
1087    \else
1088     {\raggedright
1089      \ignorespaces
1090      \strut Keywords.\ \@keywords\strut\par}
1091      \vskip3mm\relax
1092    \fi
1093    \if!\@articleinfo@name!
1094      \if!\@articleinfo@rdate!
1095        \if!\@articleinfo@adate!
1096          \vskip\baselineskip\relax
1097        \fi
1098      \fi
1099    \else
1100     {\raggedright
1101      \small
1102      \ignorespaces
1103      \strut Communicated by\ \@articleinfo@name.%
1104      \if!\@articleinfo@rdate!%
1105      \else
1106          \space Received\ \@articleinfo@rdate.%
1107      \fi%
1108      \if!\@articleinfo@adate!%
1109      \else
1110          \space Accepted\ %
1111          \if!\@articleinfo@rounds!%
1112          \else%
1113            \ifnum\@articleinfo@rounds=1
1114                after \@articleinfo@rounds{} revision\space%
1115            \else
1116                after \@articleinfo@rounds{} revisions\space%
1117            \fi%
1118          \fi%
1119          on \@articleinfo@adate.
1120      \fi%
1121      \strut\par}
1122      \vskip5mm\relax
1123    \fi
1124    \egroup
1125 }
```

19.9.8 Sectioning

\@sect   This internal macro facilitates the representation of unstarred sectioning commands using `\@startsection`.

Syntax:

\@sect{⟨*#1: name*⟩}{⟨*#2: level*⟩}
    {⟨*#3: indent*⟩}{⟨*#4: beforeskip*⟩}{⟨*#5: afterskip*⟩}
    {⟨*#6: style*⟩}[⟨*#7: toc-heading*⟩]{⟨*#8: heading*⟩}

Here is the meaning of all these parameters:

⟨***name***⟩   The name of the current sectioning level, e.g., «subsection».

⟨***level***⟩   The level number, describing the hierarchical depth of the current sectioning level named in – e.g., chapter = 1, section = 2, etc. This is used namely in the tabel of contents.

⟨***indent***⟩   The indentation of the heading, relative to the left margin. Positive values shift the heading to the right («inward»), negative values to the left («outward»).

⟨***beforeskip***⟩   The absolute value represents the space to leave above the heading. If the value is negative, the first paragraph indent following the heading is suppressed.

⟨***afterskip***⟩   If positive, then the section heading is typeset on its own line and the value determines the amount of vertical space to leave below the heading. If negative, then the section heading is typeset run-in and the absolute value determines the amount of horizontal space to leave between the heading and the following text.

⟨***style***⟩   Commands to set the output style. Since he June 1996 release of LaTeX 2_ε the *last* command in this argument may be a command such as `\MakeUppercase` or `\fbox` that takes an argument. The section heading will be supplied as the argument to this command. So setting this to, say, «`\bfseries\MakeUppercase`» would produce bold, uppercase headings.

⟨***toc-heading***⟩   The optional string to be output in the table of contents (toc). If not given, the value from ⟨*heading*⟩ is used.

⟨***heading***⟩   The heading text to be output in the text body.

These parameters are used also in more high-level sectioning macros upto the familiar user level commands defined below.

```
1126  \def\@sect#1#2#3#4#5#6[#7]#8{%
1127    \ifnum #2>\c@secnumdepth
1128      \let\@svsec\@empty
1129    \else
1130      \refstepcounter{#1}%
```

Since `\@seccntformat` might end with an improper `\hskip` which is scanning forward for `plus` or `minus` we end the definition of `\@svsec` with `\relax` as a precaution.

```
1131      \protected@edef\@svsec{\@seccntformat{#1}}%
1132    \fi
1133    \@tempskipa #5\relax
1134    \ifdim \@tempskipa>\z@
```

If afterskip is positive, then its value denotes the amount of vertical skip to leave below the heading:

```
1135      \begingroup
1136        #6{\noindent%
```

```
1137        \@hangfrom{\hskip #3\relax\@svsec}%
1138          \raggedright
1139          \interlinepenalty\@M
1140          \strut#8\strut
1141          \@@par}%
1142      \endgroup
1143      \csname #1mark\endcsname{#7}%
1144      \addcontentsline{toc}{#1}{%
1145        \ifnum #2>\c@secnumdepth \else
1146          \protect\numberline{\csname the#1\endcsname}%
1147        \fi
1148        #7}%
1149    \else
```

If afterskip is negative, the its absolute value indicates the amount of horizontal skip to leave to the right of the run-in heading.

```
1150      \def\@svsechd{%
1151        #6{\hskip #3\relax
1152        \@svsec #8}%
1153        \csname #1mark\endcsname{#7}%
1154        \addcontentsline{toc}{#1}{%
1155          \ifnum #2>\c@secnumdepth \else
1156            \protect\numberline{\csname the#1\endcsname}%
1157          \fi
1158          #7}}%
1159    \fi
1160    \@xsect{#5}}
```

\@ssect   The mechanism is very similar for *starred* sectioning commands, but there are few parameters.

Syntax:

\@ssect{⟨*#1: indent*⟩}{⟨*#2: beforeskip*⟩}{⟨*#3: afterskip*⟩}
   {⟨*#4: style*⟩}{⟨*#5: heading*⟩}

See also the list on p. .

```
1161  \def\@ssect#1#2#3#4#5{%
1162    \@tempskipa #3\relax
1163    \ifdim \@tempskipa>\z@
1164      \begingroup
1165        #4{\noindent%
1166          \hskip #1\relax
1167          \noindent%
1168          \parbox[t]{\linewidth}{%
1169            \raggedright\interlinepenalty\@M#5\strut}\@@par}%
1170      \endgroup
1171    \else
1172      \def\@svsechd{#4{\hskip #1\relax #5}}%
1173    \fi
1174    \@xsect{#3}}
```

`\@seccntformat` This formats the counters (including any whitespace) of sectioning headers.

```
1175 \def\@seccntformat#1{%
1176   \csname the#1\endcsname%
1177   \relax\ \ }%
```

`\section` These are the sectioning commands, all being built on top of `\@startsection`.

Syntax:

`\@startsection{⟨#1: name⟩}{⟨#2: level⟩}`
  `{⟨#3: indent⟩}{⟨#4: beforeskip⟩}{⟨#5: afterskip⟩}`
  `{⟨#6: style⟩}`

See also the list on p. .

All the user level sectioning commands are defined using `\@startsection`.

Normally the corresponding section level counter is incremented and printed out; the exact output is determined by the definition of the corresponding `\the...` macro. Additionally, the command uses the counter `secnumdepth` to determine the highest section level to be numbered at all. If an asterisk (*) follows the command, then the corresponding section level counter is *not* used and *no* [⟨*altheading*⟩] argument is allowed.

```
1178 \def\section{\@startsection{section}%
1179   {1}{\z@}%
1180   {-1\baselineskip plus -2mm minus -2mm}%
1181   {.5\baselineskip plus .25\baselineskip minus .125\baselineskip}%
1182   {\sec@font}}%
```

`\subsection`

```
1183 \def\subsection{\@startsection{subsection}%
1184   {2}{\z@}%
1185   {-3mm plus -2mm minus -1.5mm}%
1186   {.25\baselineskip  plus .125\baselineskip minus .125\baselineskip}%
1187   {\sec@font}}%
```

`\subsubsection`

```
1188 \def\subsubsection{\@startsection{subsubsection}%
1189   {3}{\z@}%
1190   {-3mm plus -2mm minus -1mm}%
1191   {1sp}%
1192   {\sec@font}}%
```

`\paragraph`

```
1193 \def\paragraph{\@startsection{paragraph}%
1194   {4}{\z@}%
1195   {-1.5mm plus -1mm minus -0.75mm}%
1196   {1sp}%
1197   {\para@font}}%
```

`\subparagraph`

```
1198 \def\subparagraph{\@startsection{subparagraph}%
1199   {5}{\z@}%
1200   {-1.5mm}%
1201   {-1em}%
1202   {\para@font}}%
```

19.9.9 The table of contents

`\tableofcontents` This typesets the table of contents (ToC). First the page style is set and the title line is typeset, . . .

```
1203 \def\tableofcontents{%
1204   \onecolumn
1205   \pagestyle{emisaeditorial}%
1206   \footruleon
1207   \title{Table of Contents}%
1208   \null
1209   \vskip10mm
1210   \maketitle
1211   \vskip15mm
1212   \bgroup
```

. . . then, after some more adjustments, the entries are read from ⟨*jobname*⟩`.toc` using `\@starttoc{toc}` and output.

```
1213     \parindent\z@
1214     \parskip\z@
1215     \@starttoc{toc}%
1216   \egroup
1217   \onecolumn
1218   }
```

`\l@article` These two routines output content lines to the ToC.
`\l@editorialcontent`

```
1219 \newcommand*\l@article{%
1220   \if!\@subtitle!
1221     \addtocentry{\@tocauthor}{\thepage}{\@toctitle}%
1222   \else
1223     \addtocentry{\@tocauthor}{\thepage}{\@toctitle\ --\ \@tocsubtitle}%
1224   \fi}%
1225 \newcommand*\l@editorialcontent{%
1226   \addtocentry{\@toctitle}{\thepage}{}}%
```

`\addtocentry` `\addtocentry` adds an entry using the typical EMISAJ layout to the contents listing of choice (default: ToC).

```
1227 \newcommand*\addtocentry[4][toc]{%
1228   \addtocontents{#1}{\string\emisa@tocentry{#2}{#3}{#4}}}%
```

\emisa@tocentry typesets that entry.

```
1229 \newcommand{\emisa@tocentry}[3]{%
1230   \makebox[\textwidth][l]{%
1231     \parbox[t]{72.5mm-\@pnumwidth}{\raggedright\textbf{#1}}%
1232     \makebox[\@pnumwidth][r]{\textbf{#2}}%
1233     \hfill
1234     \parbox[t]{85mm}{\raggedright#3}}%
1235   \vspace{3mm}}%
```

The output of ToC entries of level -1 (\part) and above is suppressed.

```
1236 \setcounter{tocdepth}{-2}
```

19.9.10 A few abbreviations

\ie   Macros for a couple of abbreviations used quite frequently.
\eg
\cf
```
1237 \newcommand*{\emisa@abbrv}[1]{#1\@\xspace}
```
\etal
```
1238 \newcommand*{\emisaabbrv}[2]{\gdef#1{\emisa@abbrv{#2}}}
```
\emisa@abbrv
```
1239 \newcommand*{\emisa@initialism}[1]{\textsc{#1}\xspace}
```
\emisaabbrv
```
1240 \newcommand*{\emisainitialism}[2]{\gdef#1{\emisa@initialism{#2}}}
```
\emisa@initialism
```
1241 \newcommand*{\ie}{\emisa@abbrv{i.\,e.}}
```
\emisainitialism
```
1242 \newcommand*{\eg}{\emisa@abbrv{e.\,g.}}
```
\OMG
```
1243 \newcommand*{\cf}{\emisa@abbrv{cf.}}
```
\BPM
```
1244 \newcommand*{\etal}{\emisa@abbrv{et~al.}}
```
\BPMN
```
1245 \newcommand*{\OMG}{\emisa@initialism{omg}}
```
\UML
```
1246 \newcommand*{\BPM}{\emisa@initialism{bpm}}
1247 \newcommand*{\BPMN}{\emisa@initialism{bpmn}}
1248 \newcommand*{\UML}{\emisa@initialism{uml}}
```

19.9.11 Other macros defined by EMISAJ

\meta Macros for convience
\type
```
1249 \newcommand{\meta}[1]{{\ttfamily\small #1}} % designate a meta type (meta class)
1250 \newcommand{\type}[1]{\textsf{#1}} % designate a type (class)
```

19.10 Bibliographies

The infrastructure for that is already present in LaTeX [18, ltbibl.dtx] so we have to tinker with just a couple of things.

\bibliography biblatex defines this macro in a way that it prescribes the bibliography data base(s) globally for the whole of the document. As we need a means to use different bibliography data bases with different articles, we redefine \bibliography such that it (1) works globally (biblatex style), when used in the preamble; (2) works locally in the document body (as defined here); and (3) appends locally to any globally given bibliography data base(s).

Point 1 is met simply by postponing the redefinition until \begin{document}. That way we have the unchanged behaviour in the preamble and the new one after that.

Points 2 and 3 lead to redefining this macro the same way as it was (in principle; see the original definition in biblatex.sty) but limited to a local scope.

```
1251 \def\@tempa#1\do\addbibresource#2\nil{%
1252     \ifx\relax#2\relax
1253     \else
1254     \def\@tempa##1\do\addbibresource##2\nil{\def\@preamblecmds{##1##2}}%
1255     \expandafter\@tempa\@preamblecmds\nil
1256     \fi
1257 }
1258 \expandafter\@tempa\@preamblecmds\do\addbibresource\nil
1259 \AfterEndPreamble{%
1260     \DeclareRobustCommand{\bibliography}[1]{%
1261         \addbibresource{#1}}%
1262 }%

1263 \renewcommand{\fps@figure}{htbp}
1264 \renewcommand{\fps@table}{htbp}
1265 \tolerance 1414
1266 \hbadness 1414
1267 \emergencystretch 1.5em
1268 \hfuzz 0.3pt
1269 \widowpenalty=10000
1270 \displaywidowpenalty=10000
1271 \clubpenalty=5000
1272 \interfootnotelinepenalty=9999
1273 \brokenpenalty=2000
1274 \vfuzz \hfuzz
```

Here, the generation of the main class module is paused by the first tag (there are more pieces below); instead, generating a few biblatex-related code files starts with the second tag.

```
1275 ⟨/class⟩
1276 ⟨*biblatex⟩
```

19.10.1 The EMISAJ bibliography style

A biblatex *bibliography style* is a set of macros used to output the entries in the bibliography. Bibliography styles are defined in files with the suffix bbx. The selected one is loaded at the end of the biblatex package.

Here we produce the EMISAJ bibliography style by the not so very surprising name emisa.bbx. This file will be generated on installation from the following code lines between the <*bbx> and </bbx> meta-tags.

```
1277 ⟨*bbx⟩
```

We start by declaring the file name and date.

```
1278 \ProvidesFile{emisa.bbx}[2016/07/18 2.1.1 EMISA bibliography style]
```

The EMISAJ bibliography style is built on top of the standard style `authoryear.bbx` being loaded here
. . .

<div style="margin-left:2em">

1279   \RequireBibliographyStyle{authoryear}

</div>

. . . to be expanded and modified in the following.

\bibitemlabel   The macro `\bibitemlabel` represents the formatting of the `\bibitem` labels.

<div style="margin-left:2em">

1280   \newcommand*{\bibitemlabel}[1]{%

1281   \normalfont #1}

</div>

thebibliography   The implementation of the `thebibliography` environment typically makes use of the generic list environment. First a few length registers needed internally are adjusted. Note the infix notation used in some declarations facilitated by the calc package.

<div style="margin-left:2em">

1282   \defbibenvironment{bibliography}

1283   {\list{}%

1284   {\setlength{\labelwidth}{\z@}%

1285   \setlength{\leftmargin}{\z@}%

1286   \setlength{\itemindent}{-\leftmargin}%

1287   \setlength{\itemsep}{.5\baselineskip\@plus.2\baselineskip\@minus.2\baselineskip}%

1288   \setlength{\parsep}{\bibparsep}%

</div>

In the bibliography listings we want the name lists not to be abbreviated. Well, a name list containing more than 999 names *will* be abbreviated nevertheless; but then, having a name list *this* long might be a problem in itsself.

<div style="margin-left:2em">

1289   }%

1290   \let\makelabel\bibitemlabel

</div>

Adjusting short lines in small paragraphs can be rather hard, so some tolerance is added here.

<div style="margin-left:2em">

1291   \tolerance 9999

1292   \emergencystretch 3em

1293   \hfuzz .5\p@

1294   \vfuzz\hfuzz

</div>

This is setting the normal (non-infinite) value of `\clubpenalty` for the whole of this environment, so we must reset its stored value also.

<div style="margin-left:2em">

1295   \clubpenalty 4000

1296   \@clubpenalty\clubpenalty

1297   \widowpenalty 4000

</div>

This causes a «.» (period) not to produce an end-of-sentence space.

<div style="margin-left:2em">

1298   \sfcode`\.\@m

</div>

Inside the bibliography we want no «and» in author lists.

<div style="margin-left:2em">

1299   \renewcommand*{\finalnamedelim}{\addcomma\space}%

1300   }%

1301   {%

</div>

An empty `thebibliography` environment will cause a warning.

<div style="margin-left:2em">

1302   \def\@noitemerr{\@latex@warning{Empty `thebibliography' environment}}%

1303   \endlist}

</div>

```
1304    {\item}
```

Formatting commands: punctuation and spacing, blocks and units   The following code is taken from `biblatex.def` and modified at several places (see comments). These are some basic and/or generic macros and might be superseded afterwards by definitions taken from `standard.cbx` or `authoryear.cbx`.

The major segments of a bibliography entry are ‚Äòblocks' and ‚Äòunits'. A block is the larger segment of the two, a unit is shorter or at most equal in length. For example, the values of fields such as title or note usually form a unit which is separated from subsequent data by a period or a comma. A block may comprise several fields which are treated as separate units, for example publisher, location, and year. An entry is segmented by inserting `\newblock` and `\newunit` commands at suitable places and `\finentry` at the very end. The actual printed output of these is defined in the corresponding `\...punct` macros.

The following commands add punctuation marks but automatically prevent doubling and remove preceding whitespace. Note that the behavior described below is the package default which is adjustable using `\DeclarePunctuationPairs`. Just the commands used in EMISAJ are discussed here.

\addperiod adds a period unless it is preceded by an abbreviation dot or any other punctuation mark. This command may also be used to turn a previously inserted abbreviation dot into a period, for example at the end of a sentence.

\addcomma adds a comma unless it is preceded by another comma, a semicolon, a colon, or a period.

\addcolon adds a colon unless it is preceded by a comma, a semicolon, another colon, or a period.

\isdot turns a previously inserted literal period into an abbreviation dot. In contrast to `\adddot`, nothing is inserted if this command is not preceded by a period.

The following macros insert space.

\addspace adds a breakable interword space.

\addhighpenspace adds a space penalized by the value of the `highnamepenalty` counter which holds a penalty affecting line-breaking in names; please refer to the biblatex manual for explanation. The counter is initialized to `\hyphenpenalty` at load-time. Higher values lower the number of linebreaks and vice versa. The traditional BiBTeXbehavior (no linebreaks at highnamepenalty breakpoints) is reached by setting it to ‚Äòinfinite' ($\geq 10\,000$).

\addlowpenspace adds a space penalized by the value of the `lownamepenalty` counter, similar to `highnamepenalty`. The counter is initialized to 0.5 `\hyphenpenalty` at load-time.

`\newunitpunct`   The separator inserted between "‘units'" in the sense explained above. Here, the definition is just a space.

```
1305  \renewcommand*{\newunitpunct}{\space}
```

`\finentrypunct`   This inserts the punctuation printed at the very end of every bibliography entry. Here it is simply nothing.

```
1306  \renewcommand*{\finentrypunct}{\relax}
```

`\bibsetup` is a generic hook controlling the (low-level) layout of the bibliography and the list of shorthands. The default definition should work fine in most cases.

```
1307  \renewcommand*{\bibsetup}{%
1308    \interlinepenalty=5000\relax
```

```
1309    \widowpenalty=10000\relax
1310    \clubpenalty=10000\relax
1311    \biburlsetup
1312    \flushbottom
1313    \frenchspacing
1314    \sloppy}
```

The penalties above are not specific to biblatex but low-level TeX features.

▷ \interlinepenalty is the penalty assigned to page breaks within a paragraph (i. e., in this case, a bibliography entry);

▷ \clubpenalty is an additional penalty assigned to page breaks after the first line of a paragraph;

▷ \widowpenalty is an additional penalty assigned to page breaks before the last line of a paragraph.

Note that the value 10000 means «infinite» as far as TeX is concerned. Setting some penalty to 10000 will unconditionally suppress the respective breakpoint.

The net effect of the above settings is as follows. Breaking a bibliography entry across pages is discouraged, but not suppressed altogether. If a bibliography entry spans less than four lines, TeX will always keep it on one page. If it spans four or more lines, it may be broken across pages, provided that there are at least two lines on the page before and after the break.

These penalties should normally be used in conjunction with \raggedbottom. If you don't like that and remove \raggedbottom from the definition of \bibsetup, make sure to provide some stretchability between bibliography entries by setting \bibitemsep to a suitable value, e.g.:

\setlength{\bibitemsep}{0.5\baselineskip plus 0.5\baselineskip}

\biburlsetup   This is some local setup in order to use \url properly.

To ease the job of folding long URLs into narrow columns the following code allows linebreaks after numbers as a last resort. The macro also allows breaks after hyphens and adjusts \Urlmuskip to add some stretchability to URL strings.

```
1315  \renewcommand*{\biburlsetup}{%
1316    \Urlmuskip=0mu plus 2mu\relax
1317    \mathchardef\UrlBreakPenalty=200\relax
1318    \mathchardef\UrlBigBreakPenalty=100\relax
1319    \mathchardef\UrlEmergencyPenalty=9000\relax
1320    \appto\UrlSpecials{%
1321      \do\0{\mathchar`\0\penalty\UrlEmergencyPenalty}%
1322      \do\1{\mathchar`\1\penalty\UrlEmergencyPenalty}%
1323      \do\2{\mathchar`\2\penalty\UrlEmergencyPenalty}%
1324      \do\3{\mathchar`\3\penalty\UrlEmergencyPenalty}%
1325      \do\4{\mathchar`\4\penalty\UrlEmergencyPenalty}%
1326      \do\5{\mathchar`\5\penalty\UrlEmergencyPenalty}%
1327      \do\6{\mathchar`\6\penalty\UrlEmergencyPenalty}%
1328      \do\7{\mathchar`\7\penalty\UrlEmergencyPenalty}%
1329      \do\8{\mathchar`\8\penalty\UrlEmergencyPenalty}%
1330      \do\9{\mathchar`\9\penalty\UrlEmergencyPenalty}}%
1331    \def\UrlBreaks{%
```

```
1332    \do\.\do\@\do\/\do\\\do\!\do\_\do\|\do\;\do\>\do\]\do\)\do\}%
1333    \do\,\do\?\do\'\do\+\do\=\do\#\do\$\do\&\do\*\do\^\do\"}%
1334  \def\UrlBigBreaks{\do\:\do\-}%
```

URLs are typeset in sans-serif script.

```
1335  \def\UrlFont{\sffamily}%
1336  }
```

For further details please see the documentation of the url package as well as the comments inside `url.sty`.

Miscellaneous field formatting directives   This subsection introduces biblatex commands and utility macros used to define the formatting directives required by the data commands.

The following list shows a few frequently used ones; those more rarely used are described below.

\DeclareFieldFormat[⟨entry type⟩]{⟨format⟩}{⟨code⟩} defines the formatting code given in ⟨*code*⟩ to be executed by \printfield on processing the field ⟨*format*⟩. The value of the field will be passed to ⟨*code*⟩ as its first and only argument. If an ⟨*entry type*⟩ is specified, the format is specific to that type; otherwise it applies to all entry types defined. The name of the field currently being processed is available in \currentfield.

\DeclareFieldAlias[⟨entry type⟩]{⟨alias⟩}[⟨format entry type⟩]{⟨format⟩} declares ⟨*alias*⟩ to be an alias of the field format ⟨*format*⟩. If an ⟨*entry type*⟩ is specified, the alias is specific to that type. The ⟨*format entry type*⟩ is the entry type of the backend format. This is only required when declaring an alias of a type specific formatting directive.

\bibstring[⟨wrapper⟩]{⟨key⟩} prints the bibliography string identified by ⟨*key*⟩. The string will be capitalized as required. Depending on the abbreviate package option, \bibstring prints the short or the long version of the string. If bibliography strings are nested, i.e., if \bibstring is used in another string, it will behave like \bibxstring. If the ⟨*wrapper*⟩ argument is given, the string is passed to the ⟨*wrapper*⟩ for formatting. This is intended for font commands such as \emph.

\bibcpstring[⟨wrapper⟩]{⟨key⟩} Similar to \bibstring but the string is always capitalized.

\bibxstring{⟨key⟩} is a simplified but expandable version of \bibstring. Note that this variant does not capitalize automatically, nor does it hook into the punctuation tracker. It is intended for special cases in which strings are nested or an expanded bibliography string is required in a test.

The citetitle format is used to output the title field in citations.

```
1337 \DeclareFieldFormat{citetitle}{#1}
1338 \DeclareFieldFormat[article]{citetitle}{#1\isdot}
1339 \DeclareFieldFormat[inbook]{citetitle}{#1\isdot}
1340 \DeclareFieldFormat[incollection]{citetitle}{#1\isdot}
1341 \DeclareFieldFormat[inproceedings]{citetitle}{#1\isdot}
1342 \DeclareFieldFormat[patent]{citetitle}{#1\isdot}
1343 \DeclareFieldFormat[thesis]{citetitle}{#1\isdot}
1344 \DeclareFieldFormat[unpublished]{citetitle}{#1\isdot}
```

The following field formats are used for output in bibliographies.

```
1345 \DeclareFieldFormat{booktitle}{#1\isdot}
1346 \DeclareFieldFormat{journaltitle}{#1}
1347 \DeclareFieldFormat{issuetitle}{#1}
```

```
1348  \DeclareFieldFormat{maintitle}{#1}
1349  \DeclareFieldFormat{title}{#1}
1350  \DeclareFieldFormat[article]{title}{#1\isdot}
1351  \DeclareFieldFormat[inbook]{title}{#1\isdot}
1352  \DeclareFieldFormat[incollection]{title}{#1\isdot}
1353  \DeclareFieldFormat[inproceedings]{title}{#1\isdot}
1354  \DeclareFieldFormat[patent]{title}{#1\isdot}
1355  \DeclareFieldFormat[thesis]{title}{#1\isdot}
1356  \DeclareFieldFormat[unpublished]{title}{#1\isdot}
1357  \DeclareFieldFormat{url}{\url{#1}}
1358  \DeclareFieldFormat{urldate}{\bibstring{urlseen}\addcolon\space#1}
1359  \DeclareFieldAlias[misc]{note}{urldate}
1360  \DeclareFieldAlias[report]{note}{urldate}
1361  \DeclareFieldAlias[thesis]{note}{urldate}
1362  \DeclareFieldFormat{version}{\bibcpstring{version}~#1}
1363  \DeclareFieldFormat{volume}{\bibcpstring{volume}~#1}
1364  \DeclareFieldFormat{volumes}{#1~\bibcpstring{volumes}}
```

Formatting names and name lists   The following code morsels are taken from `biblatex.def` and modified.

The section employs special biblatex commands to (re)define or use macros in bibliography and citation styles.

\newbibmacro{⟨*name*⟩}[⟨*arguments*⟩][⟨*optional*⟩]{⟨*definition*⟩} defines a macro to be executed via \usebibmacro later. The syntax and argument handling of this command is very similar to \newcommand except that

▷ ⟨*name*⟩ may contain characters such as numbers and punctuation marks but no backslash, and

▷ \newbibmacro issues just a warning message if the macro is already defined, then falls back to \renewbibmacro.

\renewbibmacro{⟨*name*⟩}[⟨*arguments*⟩][⟨*optional*⟩]{⟨*definition*⟩} is similar to \newbibmacro but redefines ⟨*name*⟩. If the macro is undefined, \renewbibmacro issues a warning message and falls back to \newbibmacro.

\usebibmacro{⟨*name*⟩} executes the biblatex macro ⟨*name*⟩, as defined with \newbibmacro. If the macro takes any arguments, they are simply appended after ⟨*name*⟩. \usebibmacro is robust.

This declares the output format of name lists to be used by \printnames.

Please note: We have to check the biblatex version, since there has been an incompatible change for version 3.3 from 2016/03/03

```
1365  \@ifpackagelater{biblatex}{2016/03/03}%
```

Now for the latest versions

```
1366  {%
1367      \DeclareNameFormat{emisa:names}{%
1368          \nameparts{#1}%
1369          \usebibmacro{name:family-giveninit}%
1370              {\namepartfamily}%
```

```
1371            {\namepartgiveni}%
1372            {\namepartprefix}%
1373            {\namepartsuffix}%
1374        \usebibmacro{name:andothers}}%
1375 }%
```

and now for the older versions All the formatting directives for name lists get the following «arguments»:

#1 = last name

#2 = last name (initials)

#3 = first name

#4 = first name (initials)

#5 = name prefix, a.k.a. 'von part'

#6 = name prefix (initials)

#7 = name affix, a.k.a. 'junior part'

#8 = name affix (initials)

```
1376 {%
1377    \DeclareNameFormat{emisa:names}{%
1378    \usebibmacro{name:last-firstinit}{#1}{#4}{#5}{#7}%
1379    \usebibmacro{name:andothers}}%
1380 }%
```

This bibmacro formats the names of authors, editors or translators.

Again we check for the biblatex version. This could be neglected for this macro. However, it is clearer and maybe better for future development.

```
1381 \@ifpackagelater{biblatex}{2016/03/03}%
```

Now for the latest versions

```
1382 {%
1383 \newbibmacro*{name:family-giveninit}[4]{%
1384    \usebibmacro{name:delim}{#2#3#1}%
1385    \usebibmacro{name:hook}{#2#3#1}%
```

Formatting: name prefix ('von part'), . . .

```
1386    \ifdefvoid{#3}{}{%
1387       \mkbibnameprefix{#3}%\isdot
1388       \ifprefchar% replaces \ifpunctmark{'}%
1389       {}%
1390       {\ifuseprefix{\addhighpenspace}{\addlowpenspace}}}%
```

. . . last name . . .

```
1391    \mkbibnamefamily{#1}\addhighpenspace%
```

. . . name affix ('junior part'), . . .

```
1392    \ifdefvoid{#4}{}{\addlowpenspace\mkbibnameaffix{#4}\addlowpenspace}%
```

... and first name (initials).

```
1393     \ifdefvoid{#2}{}{\mkbibnamegiven{#2}\isdot}%
1394     }%
1395 }%
```

and now for the older versions

```
1396 {%
1397     \newbibmacro*{name:last-firstinit}[4]{%
1398     \usebibmacro{name:delim}{#2#3#1}%
1399     \usebibmacro{name:hook}{#2#3#1}%
```

Formatting: name prefix ('von part'), ...

```
1400     \ifblank{#3}{}{%
1401         \mkbibnameprefix{#3}%\isdot
1402         \ifpunctmark{'}%
1403             {}
1404             {\ifuseprefix{\addhighpenspace}{\addlowpenspace}}}%
```

... last name ...

```
1405     \mkbibnamelast{#1}\addhighpenspace%
```

... name affix ('junior part'), ...

```
1406     \ifblank{#4}{}{\addlowpenspace\mkbibnameaffix{#4}\addlowpenspace}%
```

... and first name (initials).

```
1407     \ifblank{#2}{}{\mkbibnamefirst{#2}\isdot}%
1408 }%
1409 }%
```

in: bibmacro   This outputs the «in:» tag, as in bibliography entries for proceedings, collections, edited books and so on.

```
1410 \renewbibmacro*{in:}{%
1411     \printtext{%
1412         \bibcpstring{in}%
1413         \intitlepunct}}
```

Generic bibliography macros   In this subsection the generic bibmacros outputting the typical name fields in bibliographies are customised.

author bibmacro

```
1414 \renewbibmacro*{author}{%
1415     \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
1416         {\printnames{author}%
1417         \iffieldundef{authortype}
1418             {}
1419             {\setunit{\addspace}%
1420 \usebibmacro{authorstrg}}}
1421         {}}
```

```
1422 \renewbibmacro*{editor}{%
1423   \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
1424     {\printnames{editor}%
1425      \setunit{\addspace}%
1426      \usebibmacro{editorstrg}%
1427      \clearname{editor}}
1428     {}}
```

```
1429 \renewbibmacro*{editor+others}{%
1430   \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
1431     {\printnames[emisa:names]{editor}%
1432      \setunit{\addspace}%
1433      \usebibmacro{editor+othersstrg}%
1434     \clearname{editor}}
1435     {}}
```

```
1436 \renewbibmacro*{translator}{%
1437   \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
1438     {\printnames{translator}%
1439      \setunit{\addspace}%
1440      \usebibmacro{translatorstrg}%
1441      \clearname{translator}}
1442     {}}
```

```
1443 \renewbibmacro*{translator+others}{%
1444   \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
1445     {\printnames{translator}%
1446      \setunit{\addspace}%
1447      \usebibmacro{translator+othersstrg}%
1448      \clearname{translator}}
1449     {}}
```

```
1450 \renewbibmacro*{editor+othersstrg}{%
1451   \iffieldundef{editortype}
1452     {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
1453        {\def\abx@tempa{editors}}
1454        {\def\abx@tempa{editor}}}
1455     {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
1456        {\edef\abx@tempa{\thefield{editortype}s}}
1457        {\edef\abx@tempa{\thefield{editortype}}}}%
1458   \let\abx@tempb=\empty
1459   \ifnamesequal{editor}{translator}
1460     {\appto\abx@tempa{tr}%
```

61

```
1461        \appto\abx@tempb{\clearname{translator}}}
1462      {}%
1463    \ifnamesequal{editor}{commentator}
1464      {\appto\abx@tempa{co}%
1465       \appto\abx@tempb{\clearname{commentator}}}
1466      {\ifnamesequal{editor}{annotator}
1467          {\appto\abx@tempa{an}%
1468 \appto\abx@tempb{\clearname{annotator}}}
1469          {}}%
1470    \ifnamesequal{editor}{introduction}
1471      {\appto\abx@tempa{in}%
1472       \appto\abx@tempb{\clearname{introduction}}}
1473      {\ifnamesequal{editor}{foreword}
1474          {\appto\abx@tempa{fo}%
1475 \appto\abx@tempb{\clearname{foreword}}}
1476          {\ifnamesequal{editor}{afterword}
1477              {\appto\abx@tempa{af}%
1478               \appto\abx@tempb{\clearname{afterword}}}
1479              {}}}%
1480    \ifbibxstring{\abx@tempa}
1481      {\bibstring[\mkbibparens]{\abx@tempa}%
1482       \abx@tempb}
1483      {\usebibmacro{editorstrg}}}%
```

emisa:url+urldate bibmacro

```
1484 \newbibmacro*{emisa:url+urldate}{%
1485   \iffieldundef{url}
1486      {\printfield{howpublished}}
1487      {\printfield{url}}
1488   \setunit*{\addperiod\space}\newblock
1489   \iffieldundef{urlyear}
1490      {\printfield{note}}
1491      {\printtext[urldate]{\printurldate}}}
```

emisa:url+type+version+urldate
bibmacro

```
1492 \newbibmacro*{emisa:url+type+version+urldate}{%
1493   \iffieldundef{url}%
1494      {\printfield{url}}
1495      {\printfield{howpublished}}%
1496   \setunit*{\addcomma\space}\newblock
1497   \printfield{type}%
1498   \setunit*{\addcomma\space}\newblock
1499   \printfield{version}%
1500   \setunit*{\addcomma\space}\newblock
1501   \iffieldundef{urlyear}
1502      {\printfield{note}}
1503      {\printtext[urldate]{\printurldate}}}
```

This is the end of the code taken (and modified) from `biblatex.def`.

Code from `standard.bbx`   The following code is taken from `standard.bbx` and modified at several places (see comments). This sections's definitions supersede those taken from `standard.cbx` and might in turn be superseded by the following code from `authoryear.bbx`.

finentry bibmacro

```
1504 \renewbibmacro*{finentry}{}%
```

article bibdriver

```
1505 \DeclareBibliographyDriver{article}{%
1506   \usebibmacro{bibindex}%
1507   \usebibmacro{begentry}%
1508   \usebibmacro{author/translator+others}%
1509   \setunit{\labelnamepunct}\newblock
1510   \usebibmacro{title}%
1511   \newunit
1512   \printlist{language}%
1513   \newunit\newblock
1514   \usebibmacro{bytranslator+others}%
1515   \newunit\newblock
1516   \printfield{version}%
1517   \setunit{\addperiod\space}%
1518   \usebibmacro{in:}%
1519   \usebibmacro{journal+issuetitle}%
1520   \newunit\newblock
1521   \usebibmacro{editor+others}%
1522   \newunit\newblock
1523   \usebibmacro{note+pages}%
1524   \newunit\newblock
1525   \iftoggle{bbx:isbn}
1526     {\printfield{issn}}
1527     {}%
1528   \newunit\newblock
1529   \usebibmacro{doi+eprint+url}%
1530   \newunit\newblock
1531   \usebibmacro{addendum+pubstate}%
1532   \newunit\newblock
1533   \usebibmacro{pageref}%
1534   \usebibmacro{finentry}}
```

book bibdriver

```
1535 \DeclareBibliographyDriver{book}{%
1536   \usebibmacro{bibindex}%
1537   \usebibmacro{begentry}%
1538   \usebibmacro{author/editor+others/translator+others}%
1539   \setunit{\labelnamepunct}\newblock
1540   \usebibmacro{maintitle+title}%
1541   \newunit
1542   \printlist{language}%
```

63

```
1543    \newunit\newblock
1544    \usebibmacro{editor+others}%
1545    \setunit{\addcomma\space}%
1546    \newblock
1547    \printfield{edition}%
1548    \setunit{\addperiod\space}%
1549    \newblock
1550    \usebibmacro{series+number}%
1551    \newunit
1552    \newblock
1553    \iffieldundef{maintitle}
1554      {\printfield{volume}%
1555       \printfield{part}}
1556      {}%
1557    \newunit
1558    \printfield{volumes}%
1559    \setunit{\addperiod\space}%
1560    \newblock
1561    \printfield{note}%
1562    \setunit{\addperiod\space}%
1563    \newblock
1564    \usebibmacro{publisher+location+date}%
1565    \newunit\newblock
1566    \usebibmacro{chapter+pages}%
1567    \newunit
1568    \printfield{pagetotal}%
1569    \newunit\newblock
1570    \iftoggle{bbx:isbn}
1571      {\printfield{isbn}}
1572      {}%
1573    \newunit\newblock
1574    \usebibmacro{doi+eprint+url}%
1575    \newunit\newblock
1576    \usebibmacro{addendum+pubstate}%
1577    \newunit\newblock
1578    \usebibmacro{pageref}%
1579    \usebibmacro{finentry}}
```

booklet bibdriver

```
1580  \DeclareBibliographyDriver{booklet}{%
1581    \usebibmacro{bibindex}%
1582    \usebibmacro{begentry}%
1583    \usebibmacro{author/editor+others/translator+others}%
1584    \setunit{\labelnamepunct}\newblock
1585    \usebibmacro{title}%
1586    \newunit
1587    \printlist{language}%
1588    \newunit\newblock
1589    \usebibmacro{editor+others}%
```

```
1590    \newunit\newblock
1591    \printfield{howpublished}%
1592    \newunit\newblock
1593    \printfield{type}%
1594    \newunit\newblock
1595    \printfield{note}%
1596    \newunit\newblock
1597    \usebibmacro{location+date}%
1598    \newunit\newblock
1599    \usebibmacro{chapter+pages}%
1600    \newunit
1601    \printfield{pagetotal}%
1602    \newunit\newblock
1603    \usebibmacro{doi+eprint+url}%
1604    \newunit\newblock
1605    \usebibmacro{addendum+pubstate}%
1606    \newunit\newblock
1607    \usebibmacro{pageref}%
1608    \usebibmacro{finentry}}
```

collection bibdriver

```
1609  \DeclareBibliographyDriver{collection}{%
1610    \usebibmacro{bibindex}%
1611    \usebibmacro{begentry}%
1612    \usebibmacro{editor+others}%
1613    \setunit{\labelnamepunct}\newblock
1614    \usebibmacro{maintitle+title}%
1615    \newunit
1616    \printlist{language}%
1617    \newunit\newblock
1618    \usebibmacro{editor+others}%
1619    \setunit{\addcomma\space}%
1620    \newblock
1621    \printfield{edition}%
1622    \setunit{\addperiod\space}%
1623    \newblock
1624    \usebibmacro{series+number}%
1625  \newunit
1626    \newblock
1627    \iffieldundef{maintitle}
1628      {\printfield{volume}%
1629       \printfield{part}}
1630      {}%
1631    \newunit
1632    \printfield{volumes}%
1633    \setunit{\addperiod\space}%
1634    \newblock
1635    \printfield{note}%
1636    \setunit{\addperiod\space}%
```

```
1637    \newblock
1638    \usebibmacro{publisher+location+date}%
1639    \newunit\newblock
1640    \usebibmacro{chapter+pages}%
1641    \newunit
1642    \printfield{pagetotal}%
1643    \newunit\newblock
1644    \iftoggle{bbx:isbn}
1645      {\printfield{isbn}}
1646      {}%
1647    \newunit\newblock
1648    \usebibmacro{doi+eprint+url}%
1649    \newunit\newblock
1650    \usebibmacro{addendum+pubstate}%
1651    \newunit\newblock
1652    \usebibmacro{pageref}%
1653    \usebibmacro{finentry}}
```

inbook bibdriver

```
1654  \DeclareBibliographyDriver{inbook}{%
1655    \usebibmacro{bibindex}%
1656    \usebibmacro{begentry}%
1657    \usebibmacro{author/translator+others}%
1658    \setunit{\labelnamepunct}\newblock
1659    \usebibmacro{title}%
1660    \newunit
1661    \printlist{language}%
1662    \newunit\newblock
1663    \usebibmacro{in:}%
1664    \usebibmacro{bybookauthor}%
1665    \newunit\newblock
1666    \usebibmacro{maintitle+booktitle}%
1667    \newunit\newblock
1668    \usebibmacro{editor+others}%
1669    \setunit{\addcomma\space}%
1670    \newblock
1671    \printfield{edition}%
1672    \newunit
1673    \iffieldundef{maintitle}
1674      {\printfield{volume}%
1675       \printfield{part}}
1676      {}%
1677    \newunit
1678    \printfield{volumes}%
1679    \newunit\newblock
1680    \usebibmacro{series+number}%
1681    \newunit\newblock
1682    \printfield{note}%
1683    \newunit\newblock
```

66

```
1684    \usebibmacro{publisher+location+date}%
1685    \newunit\newblock
1686    \usebibmacro{chapter+pages}%
1687    \newunit\newblock
1688    \iftoggle{bbx:isbn}
1689      {\printfield{isbn}}
1690      {}%
1691    \newunit\newblock
1692    \usebibmacro{doi+eprint+url}%
1693    \newunit\newblock
1694    \usebibmacro{addendum+pubstate}%
1695    \newunit\newblock
1696    \usebibmacro{pageref}%
1697    \usebibmacro{finentry}}
```

incollection bibdriver

```
1698  \DeclareBibliographyDriver{incollection}{%
1699    \usebibmacro{bibindex}%
1700    \usebibmacro{begentry}%
1701    \usebibmacro{author/translator+others}%
1702    \setunit{\labelnamepunct}\newblock
1703    \usebibmacro{title}%
1704    \setunit{\addcomma\space}%
1705    \printlist{language}%
```

Period after title, if any

```
1706    \setunit{\addperiod\space}%
1707    \usebibmacro{in:}%
1708    \usebibmacro{editor+others}%
1709    \setunit{\addspace}%
1710    \newblock
1711    \usebibmacro{byauthor}%
1712    \newblock
1713    \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
1714    \newblock
1715    \printfield{edition}%
1716    \setunit{\addperiod\space}%
1717    \newblock
1718    \usebibmacro{series+number}%
1719    \newunit
1720    \newblock
1721    \iffieldundef{maintitle}
1722      {\printfield{volume}%
1723       \printfield{part}}
1724      {}%
1725    \newunit
1726    \printfield{volumes}%
```

```
1727    \setunit{\addperiod\space}%
1728    \newblock
1729    \printfield{note}%
1730    \setunit{\addperiod\space}%
1731    \newblock
1732    \usebibmacro{publisher+location+date}%
1733    \setunit*{\addcomma\space}%
1734    \newblock
1735    \usebibmacro{chapter+pages}%
1736    \newunit\newblock
1737    \iftoggle{bbx:isbn}
1738      {\printfield{isbn}}
1739      {}%
1740    \newunit\newblock
1741    \usebibmacro{doi+eprint+url}%
1742    \newunit\newblock
1743    \usebibmacro{addendum+pubstate}%
1744    \newunit\newblock
1745    \usebibmacro{pageref}%
1746    \usebibmacro{finentry}}
```

inproceedings bibdriver

```
1747  \DeclareBibliographyDriver{inproceedings}{%
1748    \usebibmacro{bibindex}%
1749    \usebibmacro{begentry}%
1750    \usebibmacro{author/translator+others}%
1751    \setunit{\labelnamepunct}%
1752    \newblock
1753    \usebibmacro{title}%
1754    \setunit{\addcomma\space}%
1755    \printlist{language}%
1756    \newblock
1757    \usebibmacro{byauthor}%
```

Period after title, if any

```
1758    \setunit{\addperiod\space}%
1759    \usebibmacro{in:}%
1760    \usebibmacro{editor+others}%
1761    \setunit{\addspace}%
1762    \newblock
1763    \usebibmacro{byauthor}%
1764    \newblock
1765    \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
1766    \newblock
1767    \usebibmacro{event+venue+date}%
1768    \setunit{\addperiod\space}%
1769    \newblock
```

```
1770    \usebibmacro{series+number}%
1771    \newunit
1772    \newblock
1773    \iffieldundef{maintitle}
1774      {\printfield{volume}%
1775       \printfield{part}}
1776      {}%
1777    \newunit
1778    \printfield{volumes}%
1779    \setunit{\addperiod\space}%
1780    \newblock
1781    \printfield{note}%
1782    \setunit{\addperiod\space}%
1783    \newblock
1784    \printlist{organization}%
1785    \setunit{\addperiod\space}%
1786    \newblock
1787    \usebibmacro{publisher+location+date}%
1788    \setunit{\addcomma\space}%
1789    \newblock
1790    \usebibmacro{chapter+pages}%
1791    \newunit\newblock
1792    \iftoggle{bbx:isbn}
1793      {\printfield{isbn}}
1794      {}%
1795    \newunit\newblock
1796    \usebibmacro{doi+eprint+url}%
1797    \newunit\newblock
1798    \usebibmacro{addendum+pubstate}%
1799    \newunit\newblock
1800    \usebibmacro{pageref}%
1801    \usebibmacro{finentry}}
```

manual bibdriver

```
1802  \DeclareBibliographyDriver{manual}{%
1803    \usebibmacro{bibindex}%
1804    \usebibmacro{begentry}%
1805    \usebibmacro{author/editor}%
1806    \setunit{\labelnamepunct}\newblock
1807    \usebibmacro{title}%
1808    \newunit
1809    \printlist{language}%
1810    \newunit\newblock
1811    \usebibmacro{byeditor}%
1812    \setunit{\addcomma\space}%
1813    \newblock
1814    \printfield{edition}%
1815    \newunit\newblock
1816    \usebibmacro{series+number}%
```

```
1817    \newunit\newblock
1818    \printfield{type}%
1819    \newunit
1820    \printfield{version}%
1821    \newunit
1822    \printfield{note}%
1823    \newunit\newblock
1824    \printlist{organization}%
1825    \newunit
1826    \usebibmacro{publisher+location+date}%
1827    \newunit\newblock
1828    \usebibmacro{chapter+pages}%
1829    \newunit
1830    \printfield{pagetotal}%
1831    \newunit\newblock
1832    \iftoggle{bbx:isbn}
1833      {\printfield{isbn}}
1834      {}%
1835    \newunit\newblock
1836    \usebibmacro{doi+eprint+url}%
1837    \newunit\newblock
1838    \usebibmacro{addendum+pubstate}%
1839    \newunit\newblock
1840    \usebibmacro{pageref}%
1841    \usebibmacro{finentry}}
```

misc bibdriver

```
1842  \DeclareBibliographyDriver{misc}{%
1843    \usebibmacro{bibindex}%
1844    \usebibmacro{begentry}%
1845    \usebibmacro{author/editor+others/translator+others}%
1846    \setunit{\labelnamepunct}\newblock
1847    \usebibmacro{title}%
1848    \newunit
1849    \printlist{language}%
```

Period after title, if any

```
1850    \setunit{\addperiod\space}%
1851    \usebibmacro{emisa:url+urldate}%
1852    \usebibmacro{finentry}}
```

online bibdriver

```
1853  \DeclareBibliographyDriver{online}{%
1854    \usebibmacro{bibindex}%
1855    \usebibmacro{begentry}%
1856    \usebibmacro{author/editor+others/translator+others}%
1857    \setunit{\labelnamepunct}\newblock
1858    \usebibmacro{title}%
1859    \newunit
```

```
1860    \printlist{language}%
1861    \newunit\newblock
1862    \usebibmacro{editor+others}%
1863    \newunit\newblock
1864    \printfield{version}%
1865    \newunit
1866    \printfield{note}%
1867    \newunit\newblock
1868    \printlist{organization}%
1869    \newunit\newblock
1870    \usebibmacro{date}%
1871    \newunit\newblock
1872    \iftoggle{bbx:eprint}
1873      {\usebibmacro{eprint}}
1874      {}%
1875    \newunit\newblock
1876    \usebibmacro{url+urldate}%
1877    \newunit\newblock
1878    \usebibmacro{addendum+pubstate}%
1879    \newunit\newblock
1880    \usebibmacro{pageref}%
1881    \usebibmacro{finentry}}
```

patent bibdriver

```
1882  \DeclareBibliographyDriver{patent}{%
1883    \usebibmacro{bibindex}%
1884    \usebibmacro{begentry}%
1885    \usebibmacro{author}%
1886    \setunit{\labelnamepunct}\newblock
1887    \usebibmacro{title}%
1888    \newunit
1889    \printlist{language}%
1890    \newunit\newblock
1891    \printfield{type}%
1892    \setunit*{\addspace}%
1893    \printfield{number}%
1894    \iflistundef{location}
1895      {}
1896      {\setunit*{\addspace}%
1897       \printtext[parens]{%
1898         \printlist[][-\value{listtotal}]{location}}}%
1899    \newunit\newblock
1900    \usebibmacro{byholder}%
1901    \newunit\newblock
1902    \printfield{note}%
1903    \newunit\newblock
1904    \usebibmacro{date}%
1905    \newunit\newblock
1906    \iftoggle{bbx:url}
```

```
1907      {\usebibmacro{url+urldate}}
1908        {}%
1909    \newunit\newblock
1910    \usebibmacro{addendum+pubstate}%
1911    \newunit\newblock
1912    \usebibmacro{pageref}%
1913    \usebibmacro{finentry}}
```

periodical bibdriver

```
1914 \DeclareBibliographyDriver{periodical}{%
1915    \usebibmacro{bibindex}%
1916    \usebibmacro{begentry}%
1917    \usebibmacro{editor}%
1918    \setunit{\labelnamepunct}\newblock
1919    \usebibmacro{title+issuetitle}%
1920    \newunit
1921    \printlist{language}%
1922    \newunit\newblock
1923    \usebibmacro{byeditor}%
1924    \newunit\newblock
1925    \printfield{note}%
1926    \newunit\newblock
1927    \iftoggle{bbx:isbn}
1928      {\printfield{issn}}
1929        {}%
1930    \newunit\newblock
1931    \usebibmacro{doi+eprint+url}%
1932    \newunit\newblock
1933    \usebibmacro{addendum+pubstate}%
1934    \newunit\newblock
1935    \usebibmacro{pageref}%
1936    \usebibmacro{finentry}}
```

proceedings bibdriver

```
1937 \DeclareBibliographyDriver{proceedings}{%
1938    \usebibmacro{bibindex}%
1939    \usebibmacro{begentry}%
1940    \usebibmacro{editor+others}%
1941    \setunit{\labelnamepunct}\newblock
1942    \usebibmacro{maintitle+title}%
1943    \newunit
1944    \printlist{language}%
1945    \newunit\newblock
1946    \usebibmacro{event+venue+date}%
1947    \newunit\newblock
1948    \usebibmacro{editor+others}%
1949    \setunit{\addperiod\space}%
1950    \newblock
```

```
1951    \usebibmacro{series+number}%
1952    \newunit
1953    \newblock
1954    \iffieldundef{maintitle}
1955      {\printfield{volume}%
1956       \printfield{part}}
1957      {}%
1958    \newunit
1959    \printfield{volumes}%
1960    \setunit{\addperiod\space}%
1961    \newblock
1962    \printfield{note}%
1963    \setunit{\addperiod\space}%
1964    \newblock
1965    \printlist{organization}%
1966    \setunit{\addperiod\space}%
1967    \newblock
1968    \usebibmacro{publisher+location+date}%
1969    \newblock
1970    \usebibmacro{chapter+pages}%
1971    \newunit
1972    \printfield{pagetotal}%
1973    \newunit\newblock
1974    \iftoggle{bbx:isbn}
1975      {\printfield{isbn}}
1976      {}%
1977    \newunit\newblock
1978    \usebibmacro{doi+eprint+url}%
1979    \newunit\newblock
1980    \usebibmacro{addendum+pubstate}%
1981    \newunit\newblock
1982    \usebibmacro{pageref}%
1983    \usebibmacro{finentry}}
```

Technical reports

author
title
year
type
number
institution
address
url
note

report bibdriver

```
1984 \DeclareBibliographyDriver{report}{%
1985    \usebibmacro{bibindex}%
```

```
1986    \usebibmacro{begentry}%
1987    \usebibmacro{author}%
1988    \setunit{\labelnamepunct}\newblock
1989    \usebibmacro{title}%
1990    \setunit{\addperiod\space}%
1991    \printfield{type}%
1992    \newunit
1993    \printfield{number}%
1994    \setunit{\addperiod\space}%
1995    \printlist{institution}%
1996    \setunit*{\addperiod\space}\newblock
1997    \printlist{location}%
1998    \setunit*{\addperiod\space}\newblock
1999    \printfield{url}%
2000    \setunit*{\addperiod\space}\newblock
2001    \printfield{note}%
2002    \newunit\newblock
2003    \usebibmacro{finentry}}%
2004 \DeclareBibliographyAlias{techreport}{report}%
```

thesis bibdriver

```
2005 \DeclareBibliographyDriver{thesis}{%
2006    \usebibmacro{bibindex}%
2007    \usebibmacro{begentry}%
2008    \usebibmacro{author}%
2009    \setunit{\labelnamepunct}\newblock
2010    \usebibmacro{title}%
2011    \newunit
2012    \printlist{language}%
```

Period after title, if any

```
2013    \setunit{\addperiod\space}%
2014    \printfield{type}%
2015    \setunit*{\addcomma\space}%
2016    \usebibmacro{institution+location+date}%
2017    \setunit{\addperiod\space}%
2018    \usebibmacro{chapter+pages}%
2019    \newunit
2020    \printfield{pagetotal}%
2021    \newunit\newblock
2022    \printfield{url}%
2023    \setunit*{\addperiod\space}\newblock
2024    \printfield{note}%
2025    \newunit\newblock
2026    \usebibmacro{addendum+pubstate}%
2027    \newunit\newblock
2028    \usebibmacro{pageref}%
2029    \usebibmacro{finentry}}
```

```
2030 \DeclareBibliographyDriver{unpublished}{%
2031   \usebibmacro{bibindex}%
2032   \usebibmacro{begentry}%
2033   \usebibmacro{author}%
2034   \setunit{\labelnamepunct}\newblock
2035   \usebibmacro{title}%
2036   \newunit
2037   \printlist{language}%
2038   \newunit\newblock
2039   \printfield{howpublished}%
2040   \newunit\newblock
2041   \printfield{note}%
2042   \newunit\newblock
2043   \usebibmacro{date}%
2044   \newunit\newblock
2045   \iftoggle{bbx:url}
2046     {\usebibmacro{url+urldate}}
2047     {}%
2048   \newunit\newblock
2049   \usebibmacro{addendum+pubstate}%
2050   \newunit\newblock
2051   \usebibmacro{pageref}%
2052   \usebibmacro{finentry}}
```

```
2053 \renewbibmacro*{maintitle+booktitle}{%
2054   \iffieldundef{maintitle}
2055     {}
2056     {\usebibmacro{maintitle}%
2057      \addspace
2058      \newblock
2059      \iffieldundef{volume}
2060        {}
2061        {\printfield{volume}%
2062         \printfield{part}%
2063          \addspace
2064     }}%
2065   \usebibmacro{booktitle}%
2066   \newunit}
```

```
2067 \renewbibmacro*{journal+issuetitle}{%
2068   \usebibmacro{journal}%
2069   \setunit*{\addspace}%
2070   \iffieldundef{series}
2071     {}
2072     {\newunit
```

```
2073        \printfield{series}%
2074        \setunit{\addspace}}%
2075    \printfield{volume}%
2076    \printfield[parens]{number}%
2077    \setunit{\addcomma\space}%
2078    \printfield{eid}%
2079    \setunit{\addspace}%
2080    \usebibmacro{issue+date}%
2081    \setunit{\addcolon\space}%
2082    \usebibmacro{issue}%
2083    \newunit}
```

bibmacro
```
2084 \newbibmacro*{emisa:doi+eprint+url}{%
2085    \iftoggle{bbx:doi}
2086      {\printfield{doi}}
2087      {}%
2088    \newunit\newblock
2089    \iftoggle{bbx:eprint}
2090      {\usebibmacro{eprint}}
2091      {}%
2092    \newunit\newblock
2093    \iftoggle{bbx:url}
2094      {\usebibmacro{emisa:url+urldate}}
2095      {}}
```

This is the end of the code taken (and modified) from `standard.bbx`.

Code from `authoryear.bbx`   The following code is taken from `authoryear.bbx` and modified at several places (see comments). The macros in this subsection will supersede any previous definition by the same name(s).

author bibmacro

```
2096 \renewbibmacro*{author}{%
2097    \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
2098      {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
2099                   \NOT\iffirstonpage\AND
2100                   \(\NOT\boolean{bbx@inset}\OR
2101                   \iffieldequalstr{entrysetcount}{1}\)}
2102        {\bibnamedash}
2103        {\usebibmacro{bbx:savehash}%
2104         \printnames[emisa:names]{author}%
2105         \iffieldundef{authortype}
2106           {\setunit{\addspace}}
2107           {\setunit{\addcomma\space}%
2108            \usebibmacro{authorstrg}%
2109            \setunit{\addspace}}}%
2110      }{%
```

`\global\undef\bbx@lasthash`
2112   `\usebibmacro{labeltitle}%`
2113   `\setunit*{\addspace}}%`
2114 `\usebibmacro{date+extrayear}}`

bbx:editor bibmacro

2115 `\renewbibmacro*{bbx:editor}[1]{%`
2116   `\ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}`
2117   `{\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND`
2118   `\NOT\iffirstonpage\AND`
2119   `\(\NOT\boolean{bbx@inset}\OR`
2120   `\iffieldequalstr{entrysetcount}{1}\)}`
2121   `{\bibnamedash}`
2122   `{\printnames[emisa:names]{editor}%`
2123   `\setunit{\addcomma\space}%`
2124   `\usebibmacro{bbx:savehash}}%`
2125   `\usebibmacro{#1}%`
2126   `\clearname{editor}%`
2127   `\setunit{\addspace}%`
2128   `}{\global\undef\bbx@lasthash`
2129   `\usebibmacro{labeltitle}%`
2130   `\setunit*{\addspace}%`
2131   `}%`
2132 `%    \usebibmacro{date+extrayear}%`
2133   `}`

bbx:translator bibmacro

2134 `\renewbibmacro*{bbx:translator}[1]{%`
2135   `\ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}`
2136   `{\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND`
2137   `\NOT\iffirstonpage\AND`
2138 `\(\NOT\boolean{bbx@inset}\OR`
2139   `\iffieldequalstr{entrysetcount}{1}\)}`
2140   `{\bibnamedash}`
2141   `{\printnames[emisa:names]{translator}%`
2142 `\setunit{\addcomma\space}%`
2143 `\usebibmacro{bbx:savehash}}%`
2144   `\usebibmacro{translator+othersstrg}%`
2145   `\clearname{translator}%`
2146   `\setunit{\addspace}}%`
2147   `{\global\undef\bbx@lasthash`
2148   `\usebibmacro{labeltitle}%`
2149   `\setunit*{\addspace}}%`
2150   `\usebibmacro{date+extrayear}}`

publisher+location+date bibmacro

2151 `\renewbibmacro*{publisher+location+date}{%`
2152   `\printlist{publisher}%`

```
2153    \setunit*{\addcomma\space}%
2154    \printlist{location}%
2155    \newunit}
```

stitution+location+date
bibmacro

```
2156 \renewbibmacro*{institution+location+date}{%
2157    \printlist{institution}%
2158    \setunit*{\addcomma\space}%
2159    \printlist{location}%
2160    \newunit}
```

This is the end of the code taken (and modified) from `authoryear.bbx`.

Localization

```
2161 \DefineBibliographyStrings{english}{%
2162 urlseen = {Last Access},
2163 techreport = {},%
2164 }%

2165 \DefineBibliographyStrings{german}{%
2166 urlseen = {Letzter Zugriff},%
2167 techreport = {},%
2168 }%

2169 \DefineBibliographyStrings{ngerman}{%
2170 urlseen = {Letzter Zugriff},%
2171 techreport = {},%
2172 }%
```

Unlocalization

```
2173 % year/month/day
2174 \protected\def\mkbibdateiso#1#2#3{%
2175    \iffieldundef{#1}{}{%
2176       \thefield{#1}%
2177       \iffieldundef{#2}{}{-}}%
2178    \iffieldundef{#2}{}{%
2179       \mkdatezeros{\thefield{#2}}%
2180       \iffieldundef{#3}{}{-}}%
2181    \mkdatezeros{\thefield{#3}}%
2182 }%

2183 \DefineBibliographyExtras{english}{\let\mkbibdateshort\mkbibdateiso}%
2184 \DefineBibliographyExtras{german}{\let\mkbibdateshort\mkbibdateiso}%
2185 \DefineBibliographyExtras{ngerman}{\let\mkbibdateshort\mkbibdateiso}%
```

Here, the EMISAJ bibliography style file `emisa.bbx` ends.

```
2186 ⟨/bbx⟩
```

19.10.2 The EMISAJ citation style

A citation style is a set of commands such as \cite which print different types of citations. Such styles are defined in files with the suffix cbx. The biblatex package loads the selected citation style file at the end of the package. Note that a small repertory of frequently used macros shared by several of the standard citation styles is also included in biblatex.def. This file is loaded at the end of the package as well, prior to the selected citation style.

The EMISAJ citation style is defined in the file emisa.cbx which is generated from the following code lines between the <*cbx> and </cbx> meta-tags.

```
2187 ⟨∗cbx⟩
```

```
2188 \ProvidesFile{emisa.cbx}[2016/07/18 2.1.1 EMISA citation style]
2189 \RequireCitationStyle{authoryear-comp}
2190 \renewcommand*{\nameyeardelim}{\addspace}
```

\DeclareRangeChars configures the \ifnumerals and \ifpages tests. The setup will also affect \iffieldnums and \iffieldpages as well as \mkpageprefix and \mkpagetotal. The argument is an undelimited list of characters which are to be considered as range indicators. The regular version of this command replaces the current setting, the starred version appends its argument to the current list. The default setting is {~,;-+/}, so strings like '3–5', '35+', '8/9' and so on will be considered as a range.

Here we add the character f to enable ranges like "123f" and "456ff".

```
2191 \DeclareRangeChars*{f}
```

Here, the EMISAJ citation style file emisa.cbx ends.

```
2192 ⟨/cbx⟩
2193 ⟨/biblatex⟩
2194 ⟨∗class⟩
```

Here, the LaTeX class EMISAJ ends.

```
2195 ⟨/class⟩
```

19.11 Examples and templates

19.11.1 Document templates

Here we add a couple of small document templates to ease the creation of documents: emisa-article-template.tex for article authors and emisa-issue-template.tex for copy editors. Both are generated from the following piece.

```
2196 ⟨∗template⟩
2197 ⟨∗article⟩
2198 \documentclass[american]{emisa}
2199 %% You can use the following additional class options:
2200 %% referee, review -- Use for submission to peer-review process.
2201 %% draft -- mark overfull lines
2202 %% british, UKenglish -- British English hyphenation and quotation marks
2203 %% american, USenglish -- American English hyphenation and quotation marks
```

```
2204 ⟨/article⟩
2205 ⟨issue⟩\documentclass[final,cover]{emisa}
2206 ⟨∗article | issue⟩
2207 %% The following package imports are recommended, but not obligatory;
2208 %% you might want take a look into their respective manuals if you
2209 %% don't know what they do.
2210 \usepackage{amsmath,amssymb,mathtools}
2211 \usepackage{algorithmic,algorithm}
2212 %% Additional package imports go here:
2213 %% \usepackage{}
2214 ⟨/article | issue⟩
2215 ⟨∗issue⟩
2216 %% Insert here issue data:
2217 \volume{}% Volume No.
2218 \issue{}{}% Issue No. and Issue Date
2219 %% If there are any bibliography data bases to be used globally
2220 %% please indicate here:
2221 \bibliography{}
2222 %% Insert here any (relative or absolute) path to be searched for
2223 %% graphics files:
2224 \graphicspath{{./figs_base/},{}}
2225 %% Here you can alter the cover pages; e.g. this:
2226 %% \coverII{\AtPageDeadCenter{Something}}
2227 %% typesets the word "Something" centered on the inner side of the
2228 %% front sheet.
2229 %% You can also delete any cover pages at all by defining them empty,
2230 %% see below:
2231 \coverII{}
2232 %% This outputs the SIG-MOBIS page on the inner side of the back
2233 %% sheet:
2234 \coverIII{\AtPageCenter{\sigmobispage}}
2235 ⟨/issue⟩
2236 ⟨∗article | issue⟩
2237 %% Here, the normal text begins.
2238 \begin{document}
2239 ⟨/article | issue⟩
2240 ⟨∗issue⟩
2241 \tableofcontents
2242
2243 \begin{editorial}
2244 %% Please insert editorial text here.
2245
2246 \end{editorial}
2247 ⟨/issue⟩
2248 ⟨∗article | issue⟩
2249 \begin{article}{%
2250 %% Please declare the title elements of your article here.  Unused
2251 %% elements can either be deleted or commented out, or else just let
2252 %% empty.  In either case they are not typeset.
```

```
2253  %% If the option referee or review is given, all author tags, address,
2254  %% e-mail and acknowledgements will be likewise omitted.
2255    \title[Insert shorttitle for page headline]{Enter full title here}
2256    \subtitle{Enter subtitle here, or leave empty}
2257    \author*{FirstName LastName of corresponding author}{email@address.org}
2258    \address{Enter affiliation of first (corresponding) author here.  Note that only the starred ve
2259    %% Author with a different address
2260    \author{FirstName LastName}
2261    \address{Enter affiliation of second and further authors here. Add further authors following tl
2262    %% Author with an already used address
2263    \author{FirstName LastName}
2264    \address[Letter of already used address]{}
2265    %% Enter abstract, keywords, acknowledgements, authornotes
2266    \abstract{Enter abstract here}
2267    \keywords{Enter at a minimum three keywords here. Keyword1 \and Keyword2 \and Keyword3}
2268    \acknowledgements{Enter acknowledgements here.}
2269    \authornote{If your submission is based on a prior publication and revises / extends this work
2270    %% Please declare here the bibliography data base(s) you want to use
2271    %% in this article (make sure to add the file extension, e.g. .bib):
2272    \bibliography{}
2273    %% Take note of the following closing bracket!
2274    }
2275  ⟨/article | issue⟩
2276  ⟨∗issue⟩
2277    \editor{My self}
2278    \received{24 Octover 2014}
2279    \accepted[2]{1 November 2015}
2280    \doi{10.5073/EMISA.2011.11.1}
2281    \license{License information}
2282    %% or
2283    \CCBYNCSAThree
2284    %% or
2285    \CCBYNCSAFour
2286  ⟨/issue⟩
2287  ⟨∗article | issue⟩
2288  %% Please insert your article text here.
2289  \section{Introduction}
2290  \subsection{The research problem}
2291  %% Remember to provide a unique label for each section, table, figure, listing and algorithm for
2292  %%
2293  %% This directive typesets the bibliography.  To achieve this, one has
2294  %% to run the biber program on the corresponding auxiliary file
2295  %% generated in the previous LaTeX run; you can just use the job name
2296  %% (the name of this file without ".tex")", e.g.: biber emisa-author-template
2297  \printbibliography
2298  %
2299  \end{article}
2300  ⟨/article | issue⟩
2301  ⟨∗issue⟩
```

```
2302
2303  %% Please insert as much article environments here as are needed.
2304  \begin{article}{%
2305      \title{}
2306      \subtitle{}
2307      \author*{<Name>}{<Email address>}
2308      \address{address line 1\\address line 2}
2309      % Author with unique address
2310      \author{<Name>}
2311      \address{address line 1\\address line 2}
2312      % Author with the same address as another author
2313      \author{<Name>}
2314      \address[a]{}
2315      \abstract{<Insert abstract>}
2316      \keywords{Keyword 1 \and keyword 2 \and keyword 3}
2317      \authornote{This article extends an earlier conference paper, see ...}
2318      \acknowledgements{}
2319      \editor{My self}
2320      \received{24 Octover 2014}
2321      \accepted[2]{1 November 2015}
2322      \doi{10.5073/EMISA.2011.11.1}
2323      \bibliography{}
2324  }
2325
2326
2327  \printbibliography
2328  \end{article}
2329
2330  \begin{cfp}
2331  %% Please insert your Call for papers here.
2332  \end{cfp}
2333
2334  \imprint
2335  \editorialboard
2336  \guidelines
2337  ⟨/issue⟩
2338  ⟨article | issue⟩\end{document}
2339  ⟨/template⟩
```

Change History