A LaTeX package for preparing manuscripts for submissions to the OA journal 'Enterprise Modelling and Information Systems Architectures – An International Journal' (EMISA)

Stefan Strecker (stefan.strecker@fernuni-hagen.de)
Martin Sievers (martin.sievers@schoenerpublizieren.de)

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1 Introduction

Enterprise Modelling and Information Systems Architectures – An International Journal (EMISA) is a publisher-independent, peer-reviewed open access journal (https://emisa-journal.org). EMISA 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 EMISA LaTeX package currently maintained by Stefan Strecker (stefan.strecker@fernuni-hagen.de) and Martin Sievers (martin.sievers@schoenerpublizieren.de).

The EMISA LaTeX package is provided for preparing manuscripts for submission to EMISA, and for preparing accepted submissions for publication as well as for typesetting the final document by the editorial office. Articles in EMISA are published online at https://emisa-journal.org (in the Portable Document Format or PDF format). The EMISA editorial office is run (alongside many other tasks and projects) by the two Editors-in-Chief assisted by doctoral students. Editorial work at EMISA 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 EMISA LaTeX package consists of the EMISA LaTeX 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 instructions `emisa.pdf`. The package is available from the COMPREHENSIVE TEX ARCHIVE NETWORK (CTAN, https://ctan.org) and should be available for installation through the respective TeX distribution's

package installer (e. g. TEXLive's TEXLive Utility). For a manual installation, run `pdflatex emisa.ins` and `pdflatex emisa.dtx` twice, and copy the resulting files to the same directory (folder) in which the source files for the manuscript will be maintained.

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 http://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, https://www.ctan.org/tex-archive/info/lshort/english/ for 'The Not So Short Introduction to LATEX2e—Or LATEX2e in 157 minutes').

4   Preliminary remarks

The EMISA 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 EMISA class builds on a number of standard LATEX packages available in distributions such as TEXLive and MikTEX. It is highly recommended to install the *full* set of packages to make the required packages available to the EMISA package. Alternatively, missing packages may be installed on-the-fly. The list of required packages for using the EMISA package is rather comprehensive (see `emisa.cls`) but the implementation has taken care to use only packages commonly included in TEX distributions such as TEXLive and MikTEX. Among the packages required by the EMISA class are geometry, newtxtext, newtxmath, newtxtt, ntheorem, amsthm, booktabs, tabularx (see `emisa.cls` for a comprehensive overview).

The production process at the EMISA 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). The production tool chain at the editorial UTF-8 office requires that all text files of an article are provided in *UTF-8 file encoding*.

5   Class Options

british   British English is the language of choice for publishing in EMISA. The class option 'british' is preloaded by default to obtain the correct hyphenation for British English (as provided by the babel package). The class option *may be* used with the EMISA class to exemplify the use of British English. Example:

\documentclass[british]{emisa}. This is the standard option. Note that the \csquotes package is loaded with settings to produce proper quotation marks in British English (see below).

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 are omitted using the document option referee or review to allow for the anonymous (i. e. double blind) peer-review process of EMISA. Example: \documentclass[referee]{emisa}. Make sure to use the document option referee or review before typesetting the final PDF intended for submission to the journal.

6 Author information

\author Each author is added using the macro \author{⟨*author name*⟩} followed by the corresponding address
\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 of those and \address[⟨*letter of address*⟩]{⟨⟩} for all others. See emisa-author-template.tex for details.

\author* Exactly one author must be declared as corresponding author stated by using the starred version of the \author command: \author*{⟨*author's name*⟩}{⟨*email address*⟩}.

7 Title, subtitle, abstract, and keywords

\title The mandatory title and optional subtitle of a manuscript are typeset using \title{⟨*title*⟩} and
\subtitle \subtitle{⟨*subtitle*⟩}. Note that the subtitle is indented. The abstract of the manuscript is typeset
\abstract using \abstract{⟨*abstract*⟩}. Each manuscript should provide an abstract of about 200–400 words.
\keywords Keywords describing the manuscript are typeset using \keywords{⟨*keywords*⟩} and are concatenated using the \and command. For example, \keywords{keyword1 \and keyword2}. 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 typset 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}`.

▷ Do *not* write abbreviations such as `e.g.` but use the macros provided by the EMISA class (see below). Add punctuation when necessary, for example, write `, \ie,` to achive 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*.

  ○ 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}`.

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

▷ `\eg` for e. g.

▷ `\ie` for i. e.

▷ `\cf` for cf.

▷ `\etal` for et al.

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

▷ `\OMG` for OMG (Object Managment Group).

▷ `\BPM` for BPM (Business Process Management).

▷ `\BPMN` for BPMN (Business Process Model and Notation).

▷ `\UML` for UML (Unified Modeling Language).

For proper spacing, add either angle brackets such as `\command{}` or append a backslash plus a space such as `\command\ ` (e. g. at the end of a sentence before the full stop use `\OMG{}.`).

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 British English, for example \enquote{A quote \enquote{within a quote}}. Alternatively (but not recommended), the correct Unicode characters can be used, i. e., Unicode 2018 and Unicode 2019 for the primary quotation marks, and Unicode 201C as well as Unicode 201D for the secondary quotation marks. or LaTeX command \lq for the opening primary quotation mark, and Unicode 2019 or LaTeX command \rq for the closing primary quotation mark.

12 Citations and references section

\parencite The EMISA journal uses its own author-year citation style predefined for the biblatex package
\textcite (emisa.cbx), and its own style for formatting entries in the list of references (emisa.bbx). Con-
\cite sult the biblatex package documentation 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.

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

tabularx XXX Add instructions for author here XXX

15 Source code listings

sourcecode
java

For marking up source code listings, the EMISA class uses the lstlistings package (see the package documentation for further information), and provides two customised LaTeX environments: \sourcecode and \java XXX Hier kenne ich die Befehle zur Erstellung der Befehlsform nicht, \env gibt es nicht XXX. 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. Note that the source code in either case is typset 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. An example illustrates the use of both environments:

XXX enter two examples here XXX

16 Pseudocode and algorithms

algorithm
algorithmcx

EMISA offers some environments for a comfortable integration of source code examples.

17 Example file

```
\documentclass[british]{emisa}

\usepackage{blindtext}
\usepackage{booktabs}

\begin{document}
\lstset{language=TeX}
\begin{article}{%
% Enter your bibliography database file here. Make sure to use UTF-8
    character encoding!
\bibliography{emisa.bib}
\title[Insert shorttitle for headlines here]{Enter full title here}
\subtitle{Enter subtitle here, or leave empty}
\author*{FirstName LastName}{email@address.org}
\address{Enter affiliation of first and corresponding author here.  Note
    that only the starred version of author* accepts a second argument
    providing an email address for the corresponding author.}
\author{FirstName LastName}
\address{Enter affiliation of second author here. Add further authors
    following the source code scheme.}

\abstract{Enter abstract here}
\keywords{Enter at a minimum three keywords here. Keyword1 \and Keyword2 \
    and Keyword3}
\acknowledgements{Enter acknowledgements here.}
```

```latex
\authornote{If your submission is based on a prior publication and revises /
    extends the prior work, enter a note on all prior publications with
    full citation.}
%, \eg this article extends an earlier conference publication published in
    the conference proceedings, see \cite{}.}
}

\section{Introduction}
\label{intro}
Enter your text here \parencite{Mittelbach.2004}. Remember to use \texttt{
    biber} instead of \texttt{bibtex} for processing the bibliography (.bib)
     file(s). \textcite{Mittelbach.2004} provide an introduction to \LaTeX{}
     which should be complemented by more recent readings (\ie certain parts
     of \cite{Mittelbach.2004} are probably outdated). Note the differences
    when using \verb|\parencite{}| or \verb|\textcite{}| or \verb|\cite{}|
    in the examples above. See Sec.~\ref{sec:bib} for advice on how to enter
     bibliographic data in the .bib file.

\section{Floating objects ('floats')}\label{sec:1}
Enter your text here.

\subsection{Subsection title}\label{sec:2}
Provide a unique label for each section, table, figure, listing and
    algorithm for referencing purposes (see, \eg, Sec.~\ref{sec:3} and Tab
    .~\ref{enter-a-unique-label-here}).

\subsection{Figures}\label{sec:3}
\begin{figure}[htbp]
\centering
\includegraphics[width=\columnwidth]{figure.pdf}
\caption{Enter your single-column figure caption here.}
\label{default}
\end{figure}

\begin{figure*}[htb]
\centering
\includegraphics[width=\textwidth]{figure.pdf}
\caption{Enter your double-column figure caption here.}
\label{default}
\end{figure*}

\blindtext

\subsection{Tables}\label{sec:tables}
Typeset tables as floats in double-columns using \verb|\begin{table*}|, see
    Tab.~\ref{tab:unique-label} for an example.

\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*}

%\blindtext[2]\ Lorem ipsum hoc nunc.\footnote{Use footnotes only when
    absolutely necessary.}

%\blindtext[1]

\section{Formatting the bibliography}\label{sec:bib}

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 Listing~\ref{lst:1} for an example (\cite{key1})
    formatted properly in the references section (use \verb|--| between page
     numbers and \verb|{}| around multiple word surnames!).

\begin{lstlisting}[float,caption={Enter your single-column listing caption
    here.},label={lst:1}]
@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}
}
\end{lstlisting}

\section{Source code listings}\label{sec:listings}
```

For typesetting source code listings, use the \verb|sourcecode|, \verb|java|
    or \verb|pseudocode| environments provided by the document class. All
    three environments are customized from the lstlistings package.

See Listing~\ref{lst:2} for an example of a double-column listing.

```
\begin{lstlisting}[float=*htbp,caption={Enter your double-column listing
    caption here. Note that the listing width is too wide. Correct by
    entering a newline before, \eg, 'Tomorrow'.},label={lst:2}]
@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}
}
\end{lstlisting}

%\blindtext[3]

\section{Formatting pseudocode}\label{sec:algorithm}
XXX Nutzung von algorithm-Umgebung illustrieren XXX

\printbibliography
\end{article}
\end{document}
```

References

[1] Package textcomp: LaTeX support for the Text Companion fonts. 18.2

[2] Package microtype: An interface to the micro-typographic features of pdfTeX. 18.2

[3] Package babel: Multilingual support for Plain TeX or LaTeX. 18.2

[4] Package float: Improved interface for floating objects. 18.2

[5] Package caption: Customising captions in floating environments. 18.2

[6] Package graphicx: Enhanced support for graphics. 18.2.1

[7] Package xcolor: Driver-independent color extensions for LaTeX and pdfLaTeX. 18.2.1

[8] Package biblatex: Bibliographies in LaTeX using BibTeX for sorting only. 18.2.1

[9] Package csquotes: Context sensitive quotation facilities. 18.2.1

[10] Package twoopt: Definitions with two optional arguments. 18.2.2

[11] Package environ: A new interface for environments in LaTeX. 18.2.2

[12] Package paralist: Enumerate and itemize within paragraphs. 18.2.2

[13] Package afterpage: Execute command after the next page break. 18.2.2

[14] Package xspace: Define commands that appear not to eat spaces. 18.2.2

[15] Package calc: Simple arithmetic in LaTeX commands. 18.2.2

[16] Package geometry: Flexible and complete interface to document dimensions. 18.2.2

[17] Package eso-pic: Add picture commands (or backgrounds) to every page. 18.2.2, 18.9.3

[18] Package hyperref: Extensive support for hypertext in LaTeX. 18.3

[19] The LaTeX 2_ε Sources. 18.10

18 Implementation

Here, the code of the LaTeX class emisa begins.

```
1 ⟨∗class⟩
```

18.1 Options

british option

```
2 \PassOptionsToPackage{british}{babel}
```

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.

```
3 \newif\if@draft
4 \DeclareOption{draft}{%
5   \@drafttrue
6   \overfullrule 10pt
7 }%
8 \DeclareOption{final}{%
9   \@draftfalse
10   \overfullrule\z@
11 }%
```

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.

```
12 \newif\if@referee
13 \DeclareOption{referee}{\@refereetrue}
14 \DeclareOption{noreferee}{\@refereefalse}
15 \DeclareOption{review}{\@refereetrue}
16 \DeclareOption{noreview}{\@refereefalse}
```

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.

```
17 \newif\if@cover
18 \def\coveron{\@covertrue}
19 \def\coveroff{\@coverfalse}
20 \DeclareOption{cover}{\coveron}
21 \DeclareOption{nocover}{\coveroff}

22 \newif\if@microtype
23 \@microtypetrue
24 \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.

```
25 \PassOptionsToClass{a4paper,twoside,11pt}{article}%
26 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{article}}%
27 \ExecuteOptions{final,noreferee,nocover,oneside,openany}%
28 \ProcessOptions*\relax%

29 \IfFileExists{latexrelease.sty}%
30     {\RequirePackage[latest]{latexrelease}}%
31     {\RequirePackage{fixltx2e}}%
```

18.2 Loading the base class and packages

This class is build upon the LATEX standard class article.

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

33 \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_ε distribution.

```
34 \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 [1].

```
35 \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 [2]. 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.

```
36 \if@microtype
37     \RequirePackage{microtype}%
38 \else
39     \ClassWarning{emisa}{Package 'microtype' not loaded!%
40         \MessageBreak Output will differ from final result in the journal!%
41         \MessageBreak Please consult the documentation, if you%
42         \MessageBreak get an error when loading microtype}
43 \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].

```
44 \RequirePackage{babel}%
```

This style option improves the interface for defining floating objects such as figures and tables in LaTeX [4]. 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.*).

```
45 \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) [5].

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

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

18.2.1 Colour and graphics

graphicx as part of the graphics package provides a key-value interface for optional arguments to the \includegraphics command [6].

```
47 \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 [7].

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

The biblatex package [8] 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.

```
49 \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).

```
50 \RequirePackage[%
51     style=emisa,%
52     natbib=true,%
53     backend=biber,%
54 ]{biblatex}

55 \ExecuteBibliographyOptions{%
56    maxcitenames=3,%
57    maxbibnames=999,%
58    terseinits=false,%
59    isbn=false,%
60    url=true,%
61    doi=false,%
62    eprint=false,%
63    dashed=false,%
64    bibencoding=inputenc,%
65    sorting=anyt,%
66    hyperref=true%
67 }%
```

This package provides advanced facilities for inline and display quotations [9]. 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.

```
68 \RequirePackage[babel=once,english=british]{csquotes}
```

18.2.2 Helpers

twoopt provides commands to define macros with *two* optional parameters. This package is part of the *Oberdiek* bundle [10].

```
69 \RequirePackage{twoopt}%
```

---

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

environ provides a new method of defining environments [11].

```
70 \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 [12].

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.

```
71 \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.

```
72 \let\itemize\compactitem
73 \let\enditemize\endcompactitem
74 \let\enumerate\compactenum
75 \let\endenumerate\endcompactenum
76 \let\description\compactdesc
77 \let\enddescription\endcompactdesc
```

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

```
78 \setdefaultenum{1.}{a)}{i.}{A}%
79 \setdefaultleftmargin{1em}{0.9em}{0.7em}{0.5em}{0.4em}{0.3em}%
80 \setlength{\plitemsep}{3\p@}%
81 \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 [13].

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 [14].

calc adds infix expressions to perform arithmetic on the arguments of the LaTeX commands \setcounter, \addtocounter, \setlength, and \addtolength [15].

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

```
82 \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 [16].

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).

```
83 \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 [17].

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

18.2.3 Scripts, fonts, and maps

```
85 \RequirePackage{newtxtext}
86 \RequirePackage{newtxmath}
87 \RequirePackage[zerostyle=b,straightquotes]{newtxtt}
88 \if@microtype
89     \UseMicrotypeSet[protrusion]{basicmath} % disable protrusion for tt fonts
90 \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.

```
91 \InputIfFileExists{glyphtounicode}%
92     {\ClassInfo{emisa}{Reading file 'glyphtounicode.tex'}
93      \pdfgentounicode=1}%
94     {\ClassWarning{emisa}{Couldn't find file 'glyphtounicode.tex'}}%

95     \RequirePackage{booktabs}
96     \RequirePackage{listings}
97     \lstset{basicstyle=\ttfamily\small}
98     \RequirePackage{amsmath}
99     \RequirePackage[amsmath,standard,hyperref]{ntheorem}
```

18.3 Hypertext

The hyperref package [18] has to loaded as late as feasible so it can intercept changes to standard macros by other packages.

```
100 \RequirePackage{url}
101 \urlstyle{same}
102 \RequirePackage[%
103   colorlinks,
104   breaklinks,
105   pdfview=Fit,
106   bookmarksopen,
107   bookmarksnumbered,
```

```
108    linkcolor=black,
109    anchorcolor=black,
110    citecolor=black,
111    filecolor=black,
112    urlcolor=black,
113    hyperfootnotes=false
114    ]{hyperref}%

115  \RequirePackage{doclicense}
```

18.4 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*⟩}

```
116  \begingroup
117    \catcode`\Z=3
118    \long\gdef\@M@T@#1#2Z#3#4#5\@nil{#4}
119    \long\gdef\@ifempty#1{\@M@T@#1ZZ\@secondoftwo\@firstoftwo\@nil}
120    \long\gdef\@ifarg#1{\@M@T@#1ZZ\@firstofone\@gobble\@nil}
121    \long\gdef\@ifnoarg#1{\@M@T@#1ZZ\@gobble\@firstofone\@nil}
122  \endgroup
```

18.5 Basic page layout

The geometry options using the keyval (⟨*key*⟩ = ⟨*value*⟩) 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.

```
123  \geometry{%
124    a4paper,%
125    portrait,%
126    twoside,%
127    ignoreall,%
128    hcentering,%
129    textwidth     = 162.5mm,%
130    textheight    = 220mm,%
131    heightrounded,%
132    columnsep     = 12.5mm,%
133    top           = 47mm,%
```

17

```
134    headheight    = 16mm,%
135    headsep       = 13mm,%
136    marginparwidth = 15mm,%
137    marginparsep   = 5mm,%
138    footskip       = 16mm%
139    }%
140 \marginparpush 5mm%

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

142 \parindent=4mm%

143 \smallskipamount=.5\baselineskip
144 \medskipamount=2\smallskipamount
145 \bigskipamount=2\medskipamount

146 \flushbottom

147 \abovedisplayskip=.5\baselineskip plus .33\baselineskip
148                                  minus .33\baselineskip
149 \belowdisplayskip=\abovedisplayskip
150 \abovedisplayshortskip= 0pt plus .33\baselineskip
151 \belowdisplayshortskip=.5\baselineskip plus .33\baselineskip
152                                  minus .33\baselineskip
```

18.6   Scripts

\pageheadfont Assigning scripts to text elements.

\pagenumfont   Page head and foot:

\pagefootfont
```
153 \def\pageheadfont{\normalfont}%
154 \def\pagenumfont{\pageheadfont\bfseries}%
155 \def\pagefootfont{\pageheadfont}%
```

\authorfont   The elements of the article titles:

\titlefont
```
156 \def\authorfont{\normalfont\Large}%
157 \def\titlefont{\normalfont\bfseries\LARGE\boldmath}%
158 \def\subtitlefont{\normalfont\bfseries\Large\boldmath}%
159 \def\abstractfont{\normalfont\itshape}%
```
\subtitlefont

\abstractfont

\affiliationfont   The elements of the affiliation box:

\affiliationauthorfont
```
160 \def\affiliationfont{\normalfont}
161 \def\affiliationauthorfont{\bfseries}
162 \def\affiliationaddressfont{\mdseries}
163 \def\affiliationemailfont{\mdseries}%
```
\affiliationaddressfont

\affiliationemailfont

\sectionfont   Section headlines:

\sec@font
```
164 \def\sectionfont{%
165    \normalfont
166    \bfseries
167    \boldmath}%
```
\para@font

```
168  \def\sec@font{\sectionfont\large}%
169  \def\para@font{\sectionfont}%
```

\captionfont   Captions:

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

18.7   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

```
171  \definecolor{coverbgcolor}{cmyk}{0.15,0.1,0.09,0}%
172  \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

boxframecolor color   background of text boxes like that one used in \editorialboard (100% grey = black and 20% grey,

boxbgcolor color   respectively).

```
173  \definecolor{headtextcolor}{gray}{0.5}%
174  \definecolor{boxframecolor}{gray}{1}%
175  \definecolor{boxbgcolor}{gray}{0.8}%
```

18.8   Double line spacing

\displayskipstretch

\setdisplayskipstretch

```
176  \newcommand{\displayskipstretch}{\baselinestretch}
177  \newcommand{\setdisplayskipstretch}[1]{\def\displayskipstretch{#1}}
```

\setstretch   Line space commands.

```
178  \newcommand{\setstretch}[1]{%
179    \def\baselinestretch{#1}%
180    \@currsize
181  }
```

\@setsize   Modification of the LaTeX command \@setsize. Stretch the baseline *before* calculating the strut size. This improves spacing below tabular environments etc., probably.

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.

```
182  \def\@setsize#1#2#3#4{%
183    \@nomath#1%
184    \let\@currsize#1%
```

19

```
185    \baselineskip #2%
186    \baselineskip=\baselinestretch\baselineskip
187    \parskip=\baselinestretch\parskip
188    \setbox\strutbox \hbox{%
189      \vrule height.7\baselineskip
190            depth.3\baselineskip
191            width\z@}%
192    \skip\footins=\baselinestretch\skip\footins
193    \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).

```
194  \everydisplay\expandafter{%
195    \the\everydisplay
196    \abovedisplayskip    \displayskipstretch\abovedisplayskip
197    \belowdisplayskip    \displayskipstretch\belowdisplayskip
198    \abovedisplayshortskip  \displayskipstretch\abovedisplayshortskip
199    \belowdisplayshortskip  \displayskipstretch\belowdisplayshortskip
200  }
```

18.9 Document markup

18.9.1 Declaring issue data

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

\journalname The journal name.

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

\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.

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

\volume Volume number.

```
206  \def\volume#1{\@bsphack\def\@volume{#1}\@esphack}%
207  \volume{\textcolor{red}{0}}%
```

\issue Issue number and date.

```
208  \def\issue#1#2{\@bsphack
209    \def\@issue{#1}%
210    \def\@issuedate{#2}%
```

```
211      \@esphack}%
212  \issue{\textcolor{red}{0}}{\textcolor{red}{month 0000}}%
```

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

\specialissuetitle*

\specialissuetitleprefix

```
213  \def\specialissuetitle{\@ifstar\@sspit\@spit}%
214  \newcommand{\@spit}[2][]{%
215      \@bsphack
216      \@ifempty{#2}%
217        {\let\@specialissuetitle\relax}%
218        {\@ifempty{#1}%
219          {\def\@specialissuetitle{\@specialissuetitleprefix#2}}%
220          {\def\@specialissuetitle{#1\space#2}}}%
221      \@esphack}%
222  \newcommand{\@sspit}[2][]{%
223      \@bsphack
224      \@ifempty{#2}%
225        {\let\@specialissuetitle\relax}%
226        {\def\@specialissuetitle{#2}}%
227      \@esphack}%
228  \newcommand{\specialissuetitleprefix}[1]{%
229      \@bsphack
230      \@ifempty{#1}%
231          {\let\@specialissuetitleprefix\relax}%
232          {\def\@specialissuetitleprefix{#1\space}}%
233      \@esphack}%
234  \specialissuetitle{}%
235  \specialissuetitleprefix{Special Issue on}%
```

\copyrightyear   Copyright owner and year.

\copyrightholder

```
236  \def\copyrightyear#1{\@bsphack\def\@copyrightyear{#1}\@esphack}%
237  \copyrightyear{\the\year}%
238  \def\copyrightholder#1{\@bsphack\def\@copyrightholder{#1}\@esphack}%
239  \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.

```
240 \renewcommandtwoopt*{\title}[3][][]{%
241   \@bsphack
242   \def\@title{#3}%
243   \@ifempty{#1}{\def\@shorttitle{\@title}}{\def\@shorttitle{#1}}%
244           \@ifempty{#2}{\def\@toctitle{\@shorttitle}}{\def\@toctitle{#2}}%
245   \@esphack}%
246 \newcommandtwoopt*{\subtitle}[3][][]{%
247   \@bsphack
248   \def\@subtitle{#3}%
249   \@ifempty{#1}{\def\@shortsubtitle{\@subtitle}}{\def\@shortsubtitle{#1}}%
250   \@ifempty{#2}{\def\@tocsubtitle{\@shortsubtitle}}{\def\@tocsubtitle{#2}}%
251   \@esphack}%
252 \def\email#1{%
253   \ifx\@email\@empty
254       \def\@email{#1}
255   \else
256       \ClassError{emisa}{There can only be one corresponding author!}{}
257   \fi}%
258 \renewcommand{\author}{\@ifstar{\@authorstar}{\@authornostar}}
259 \newcommand*{\@authornostar}[1]{%
260   \@bsphack
261   \if@referee
262     \def\@authors{}%
263     \def\@shortauthors{}
264   \else
265       \gdef\@address@sep{}%
266       \ifx\@authors\@empty
267           \protected@xdef\@authors{#1}
268           \protected@xappto\@shortauthors{#1}
269       \else
270           \protected@xappto\@authors{,\space #1}
271           \protected@xappto\@shortauthors{,\space #1}
272       \fi%
273   \fi
274   \@esphack}%
275 \newcommandtwoopt*{\@authorstar}[3][][]{%
276     \@bsphack
277     \if@referee
278       \def\@authors{}%
279       \def\@shortauthors{}%
280       \def\@tocauthors{}%
281       \def\@email{}%
282     \else
283       \gdef\@address@sep{}%
```

22

```latex
284        \ifx\@authors\@empty
285            \protected@xdef\@authors{#3\textsuperscript{*,}}
286            \protected@xappto\@shortauthors{#3}
287        \else
288            \protected@xappto\@authors{,\space #3\textsuperscript{*,}}
289            \protected@xappto\@shortauthors{,\space #3}
290        \fi%
291        \@ifempty{#1}{\def\@shortauthor{\@shortauthors}}{\def\@shortauthor{#1}}%
292        \@ifempty{#2}{\def\@tocauthor{\@shortauthors}}{\def\@tocauthor{#2}}%
293    \fi
294    \@esphack
295    \@ifnextchar\bgroup\email{\ClassError{emisa}{Please provide an E-mail address for the corre
296 \newcommand{\keywords}[1]{
297    \@bsphack
298    \def\and{\unskip\ \textbullet\ }%
299    \def\@keywords{#1}%
300    \@esphack}%
301 \newcommand{\authornote}[1]{
302    \@bsphack
303    \def\@authornote{#1}%
304    \@esphack}%
305 \newcommand{\editor}[1]{
306    \@bsphack
307    \def\@articleinfo@name{#1}%
308    \@esphack}%
309 \newcommand{\received}[1]{
310    \@bsphack
311    \def\@articleinfo@rdate{#1}%
312    \@esphack}%
313 \newcommand{\accepted}[2][]{
314    \@bsphack
315    \def\@articleinfo@rounds{#1}
316    \def\@articleinfo@adate{#2}%
317    \@esphack}%
318 \newcommand{\doitext}{DOI:}
319 \newcommand*{\outdoi}{%
320    \begingroup
321    \lccode`\~=`\#\relax
322    \lowercase{\def~{\#}}%
323    \lccode`\~=`\_\relax
324    \lowercase{\def~{\_}}%
325    \lccode`\~=`\<\relax
326    \lowercase{\def~{\textless}}%
327    \lccode`\~=`\>\relax
328    \lowercase{\def~{\textgreater}}%
329    \lccode`\~=0\relax
330    \catcode`\#=\active
331    \catcode`\_=\active
332    \catcode`\<=\active
```

```latex
333    \catcode`\>=\active
334    \@outdoi
335  }
336  \def\@outdoi#1{%
337    \let\#\relax
338    \let\_\relax
339    \let\textless\relax
340    \let\textgreater\relax
341    \edef\x{\toks0={{#1}}}%
342    \x
343    \edef\#{\@percentchar23}%
344    \edef\_{_}%
345    \edef\textless{\@percentchar3C}% instead of {\string<} for Apple
346    \edef\textgreater{\@percentchar3E}% instead of {\string>} for Apple
347    \edef\x{\toks1={\noexpand\href{http://dx.doi.org/#1}}}%
348    \x
349    \edef\x{\endgroup\doitext\the\toks1 \the\toks0}%
350    \x
351  }
352  \newcommand*{\doi}[1]{
353      \@bsphack
354      \def\@doi{#1}
355      \@esphack}%
356  \newcommand{\acknowledgements}[1]{
357      \@bsphack
358      \def\@acknowledgements{#1}
359      \@esphack}%
360  \newif\if@licenseset
361  \newcommand{\licence}[1]{%
362      \@bsphack
363      \def\@licence{#1}
364      \@esphack}%
365  \let\license\licence
366  \newcommand{\CCBYNCSAThree}{%
367      \@licensesettrue%
368      \def\doclicense@type{CC}%
369      \def\doclicense@modifier@uppercase{BY-NC-SA}%
370      \def\doclicense@versionUsed{3.0}%
371  }%
372  \newcommand{\CCBYNCSAFour}{%
373      \@licensesettrue%
374      \def\doclicense@type{CC}%
375      \def\doclicense@modifier@uppercase{BY-NC-SA}%
376      \def\doclicense@versionUsed{4.0}%
377  }%
378  \newcounter{addresses}
379  \renewcommand{\theaddresses}{\alph{addresses}}
380  \newcommand{\address}[2][]{%
381    \@bsphack
```

```
382    \if@referee
383        \def\@addresses@list{}
384    \else
385        \@ifempty{#2}{%
386            \@ifempty{#1}{}{%
387                \protected@xappto\@authors{\textsuperscript{\@address@sep #1}}
388                \gdef\address@sep{,}%
389        }}{%
390            \stepcounter{addresses}
391            \protected@xappto\@authors{\textsuperscript{\@address@sep\theaddresses}}
392            \gdef\@address@sep{,}%
393            \ifx\@addresses@list\@empty
394                \protected@xdef\@addresses@list{\textsuperscript{\theaddresses}\ #2}
395            \else
396                \protected@xappto\@addresses@list{\newline\textsuperscript{\theaddresses}\ #2}
397            \fi}
398    \fi
399    \@esphack}%
400 \title{}%
401 \subtitle{}%
402 \author{}%
403 \address{}
404 \keywords{}%
405 \authornote{}%
406 \editor{}%
407 \received{}%
408 \accepted{}%
409 \doi{}%
410 \licence{}
411 \acknowledgements{}%
412 \def\abstract#1{\@bsphack\def\@abstract{#1}\@esphack}%
413 \abstract{}%
414 \def\@authors{}
415 \def\@shortauthor{}
416 \def\@shortauthors{}
417 \def\@tocauthor{}
418 \def\@tocauthors{}
419 \def\@email{}
420 \def\@addresses@list{}
```

\abstract This accepts the abstract text.

```
421 \def\abstract#1{\@bsphack\def\@abstract{#1}\@esphack}%
422 \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*

```
423  \DeclareRobustCommand{\outputarticleappendix}{%
424    {%
425      \appendix
426  \@articleappendix
427  \global\let\@articleappendix\relax
428    }%
429  }%
430  \long\def\@wrap@articleappendix#1{\gappto{\@articleappendix}{{#1}}}
431  \newenvironment{articleappendix}{%
432    \gappto{\@articleappendix}{\clearpage}%
433    \Collect@Body\@wrap@articleappendix}{}
434  \newenvironment{articleappendix*}{%
435    \Collect@Body\@wrap@articleappendix}{}
436  \let\@articleappendix\relax

437  \def\@makefnmark{\textsu{\@thefnmark}\ }%
438  \renewcommand\@makefntext[1]{%
439      \parindent 1em%
440      \noindent%
441      \@makefnmark#1}%
```

18.9.2 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: 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.

```
442 \newlength{\headwidth}%
443 \newlength{\bleed}%
444 \newlength{\headmargin}%
445 \newlength{\footrulewidth}%
446 \newlength{\headfootruleheight}%
447 \setlength{\bleed}{3mm}%
448 \setlength{\headfootruleheight}{0.4mm}%
```

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

```
449 \AtBeginDocument{%
450   \setlength{\headwidth}{\paperwidth+2\bleed}%
451   \setlength{\headmargin}{0.5\headwidth-0.5\textwidth}%
452   \setlength{\footrulewidth}{0.5\headwidth+0.5\textwidth}}%
```

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

```
453 \newcommand{\headbox}[6]{\bgroup%
454   \setstretch{1}%
455   \reset@font\pageheadfont
456   \tabcolsep\z@
457   \arrayrulewidth\headfootruleheight
458   \hskip-\headmargin
459   \begin{tabular*}{\headwidth}[b]%
460     {@{\rule{\headmargin}{\z@}}%
461     >{\rule[-1.25mm]{\z@}{5mm-\arrayrulewidth}}%
462     l@{\extracolsep{\textwidth minus 1fill}}r%
463     @{\rule{\headmargin}{\z@}}}
464     #1 & #2\\
465     \hline
466     #3 & #4\\
467     \hline
468     #5 & #6\\
469     \hline
470   \end{tabular*}%
471   \hskip-\headmargin
472   \egroup
473 }%
```

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

```
474 \newcommand{\theheadvolume}{%
475   \begingroup\hypersetup{urlcolor=headtextcolor}\textcolor{headtextcolor}{Vol.\,\@volume, No.\,
476 \newlength{\headpageoffset}%
477 \setlength{\headpageoffset}{10mm}%
478 \def\theoddheadpage{%
479   \rlap{\makebox[\headpageoffset][r]{\pagenumfont\thepage}}}%
```

```
480  \def\theevenheadpage{%
481      \llap{\makebox[\headpageoffset][l]{\pagenumfont\thepage}}}%
```

<div align="right">@footrule switch</div>

... and these are for the page foot.

<div align="right">\footruleoff
\footruleon
\footrule</div>

```
482  \newif\if@footrule%
483  \def\footruleoff{\global\@footrulefalse}%
484  \def\footruleon{\global\@footruletrue}%
485  \def\footrule#1{%
486      \if@footrule
487        \makebox[\textwidth][#1]{%
488          \reset@font
489          \rule[\headfootruleheight]{\footrulewidth}{\headfootruleheight}%
490          }\fi}%
```

<div align="right">\headmarkstyle</div>

Sets the content marks in the running titles.

<div align="right">\markhead
\markarticle
\markeditorial</div>

```
491  \def\headmarkstyle#1{\@bsphack
492      \def\@headmarkstyle{#1}%
493      \@esphack}%
494  \headmarkstyle{\color{headtextcolor}}%
495  \def\markhead#1#2{\@bsphack
496      \gdef\@evenmark{#1}%
497      \gdef\@oddmark{#2}%
498      \@esphack}%
499  \def\markarticle{\markhead{\@shortauthor}{\@shorttitle}}%
500  \def\markeditorial{\markhead{\@shorttitle}{\@shorttitle}}%
```

<div align="right">\ps@emisa</div>

Finally that all being thrown together gives the basic page style.

```
501  \def\ps@emisa{%
502      \def\@oddhead{%
503        \headbox{\@journalname}{}%
504                {\theheadvolume}{}%
505                {{\@headmarkstyle\@oddmark}}{\theoddheadpage}%
506        }%
507      \def\@evenhead{%
508        \headbox{}{\@journalname}%
509                {}{\theheadvolume}%
510                {\theevenheadpage}{{\@headmarkstyle\@evenmark}}%
511        }%
512      \let\@oddmark\relax
513      \let\@evenmark\relax
514      \def\@oddfoot{\footrule{r}}%
515      \def\@evenfoot{\footrule{l}}%
516  }%
```

<div align="right">\ps@emisaarticle
\ps@emisaeditorial</div>

We have two minimally different page styles:

▷ \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.

```
517 \def\ps@emisaarticle{%
518     \ps@emisa
519     \markarticle
520     \footruleoff
521 }%

522 \def\ps@emisaeditorial{%
523     \ps@emisa
524     \markeditorial
525     \footruleon
526 }%

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

18.9.3 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.

```
528 \def\basecoverfont{\normalfont\sffamily}%
529 \def\covervolumefont{%
530     \basecoverfont\fontsize{6mm}{6mm}\selectfont}%
531 \def\covertitlefont{%
532     \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.

```
533 \def\coverIbgname{U1_bg}%
534 \def\coverIVbgname{U4_bg}%
535 \def\sigmobislogoname{SIG-MOBIS-logo-300}%
536 \def\sigEMISAlogoname{EMISA-Logo-svg}%
537 \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.

```
538 \newcommand{\AtPageDeadCenter}[1]{%
539     \AtPageCenter{\makebox[\z@][c]{%
540         \raisebox{-0.5\totalheight}[\z@][\z@]{#1}}}%
541 }%
542 \def\page@empty{\relax}%
```

\pagebg   Background color for one whole page plus bleed.

```
543 \newcommand{\pagebg}[1]{%
544     \AtPageDeadCenter{%
545         \textcolor{#1}{\rule{\paperwidth+2\bleed}{\paperheight+2\bleed}}}}%
```

29

`\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`).

```
546 \newcommand{\thispagebackground}[2][]{%
547   \@ifarg{#1}{\thispagestyle{#1}}%
548   \AddToShipoutPicture*{%
549     \unitlength 1mm\relax%
550     {#2}%
551 }}%
```

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

```
552 \newcommand{\picturepage}[2][empty]{%
553   \thispagebackground[#1]{#2}%
554   \null\clearpage
555 }%
```

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

```
556 \newcommandtwoopt*{\inputpagegraphic}[3][empty][]{%
557   \thispagebackground[#1]{\includegraphics[width=\paperwidth,#2]{#3}}%
558   \null\clearpage
559 }%
```

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

```
560 \newcommand{\coverpage}[2][]{%
561   \@ifarg{#1}{\setcounter{page}{#1}}%
562   \picturepage{#2}%
563 }%
```

`\thecovervolumeline`   These represent the
`\thecovertitle`

```
564 \newcommand{\thecovervolumeline}{%
565   \parbox[t]{130mm}{%
566     \raggedright
567     \color{covertextcolor}\covervolumefont%
568     Volume\space\@volume
569     \enspace\rule[-1mm]{0.5mm}{6mm}\enspace
570     No.\,\@issue\space\textbf{\@issuedate}\\[3mm]%
571     \@specialissuetitle
572   }%
573 }%
574 \def\thecovertitle{%
575   \parbox[t][30mm][s]{174mm}{%
576     \color{covertextcolor}%
577     \covertitlefont
578     \raggedright\@journalname\par
579     \vskip8mm
580     \covervolumefont
581     \raggedleft
582     \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 18.9.3) from eso-pic [17].

```
583  \def\sigmobispage{%
584    \makebox[\z@][c]{%
585      \begin{minipage}[c][260mm][s]{\textwidth}
586        \sigmobispagehead
587        \medskip
588
589        The GI-SIG-MoBIS portal provides numerous resources on enterprise
590        modelling research, such as a full-text digital library, a
591        bibliography, conference announcements, a glossary and evaluation
592        reports.  It is intended to establish the premier forum for an
593        international community in enterprise modelling.  The new version
594        is based on a Content Management System allowing authorized users
595        to conveniently upload content.  A \BibTeX{} interface allows for
596        conveniently integrating bibliographic data.  Information about
597        this journal, such as guidelines for authors, tables of content
598        and full-text access to articles (for GI-SIG-MobIS members only)
599        are also available on the~portal.
600        \par
601        \medskip
602
603        \begin{center}
604          \includegraphics{GI-SIG-MOBIS_portal}
605        \end{center}
606
607        \medskip
608
609        GI encourages everybody who wants to participate in the
610        evolution of this community knowledge base to contribute to any of
611    the categories covered by the portal. Please contact Michael He\ss{}
612    (\href{mailto:m.hess@uni-duisburg-essen.de}{m.hess@uni-duisburg-essen.de})
613    for further~information.
614
615        \vfill
616
617        \sigmobispagefoot
618      \end{minipage}%
619    }%
620  }
```

\sigmobispagehead

\sigmobispagefoot

\sigmobispagerule

Elements of \sigmobispage.

```
621  \def\sigmobispagerule#1{%
```

```
622 \parbox[c][23mm][s]{\linewidth}{%
623     \centering
624     \textcolor{gray}{\rule{.92\linewidth}{1mm}}%
625     \par\vfill
626     \raisebox{-.4\height}[.5\totalheight][.5\totalheight]{\huge#1}%
627     \par\vfill
628     \textcolor{gray}{\rule{.92\linewidth}{1mm}}}\par}%
629 \def\sigmobispagehead{\sigmobispagerule{SIG-MoBIS Portal}}
630 \def\sigmobispagefoot{\sigmobispagerule{http://wi-mobis.gi-ev.de/}}
```

\coverI
\coverII
\coverIII
\coverIV Each of these prepares one of the cover pages.

```
631 \def\coverI#1{\@ifempty{#1}%
632     {\let\@coverI\relax}%
633     {\def\@coverI{\coverpage[-2]{#1}}}}%
634 \def\coverII#1{\@ifempty{#1}%
635     {\let\@coverII\relax}%
636     {\def\@coverII{\coverpage[-1]{#1}}}}%
637 \def\coverIII#1{\@ifempty{#1}%
638     {\let\@coverIII\relax}%
639     {\def\@coverIII{\coverpage{#1}}}}%
640 \def\coverIV#1{\@ifempty{#1}%
641     {\let\@coverIV\relax}%
642     {\def\@coverIV{\coverpage{#1}}}}%
```

So we prepare the four cover pages.

```
643 \coverI{%
644     \pagebg{coverbgcolor}%
645     \AtPageUpperLeft{%
646         \raisebox{-\totalheight}{\includegraphics{\coverIbgname}}}%
647     \AtPageUpperLeft{\put(17,-28){\mbox{%
648         \includegraphics[height=19mm]{\sigmobislogoname}%
649         \hspace{5mm}%
650         \includegraphics[height=14.75mm]{\sigEMISAlogoname}%
651         }}%
652     }%
653     \AtPageLowerLeft{\put(166,9){\includegraphics{\gislogoname}}}%
654     \AtPageLowerLeft{\put(17,44){\thecovervolumeline}}%
655     \AtTextLowerLeft{\put(-28,36){\framebox(200,62)[c]{}}}%
656     \AtPageLowerLeft{\put(17,112){\thecovertitle}}%
657 }%
658 \coverII{\page@empty}%
659 \coverIII{\AtPageCenter{\sigmobispage}}%
660 \coverIV{%
661     \pagebg{coverbgcolor}%
662     \AtPageLowerLeft{%
663         \raisebox{167mm}{\includegraphics{\coverIVbgname}}}%
664     \AtPageLowerLeft{%
665         \put(6,9){\parbox[b]{10cm}{\raggedright\large\sffamily\@issn}}}%
666     \AtPageLowerLeft{%
```

```
667    \put(166,9){\includegraphics{GIS-logo_with_text-300}}}%
668  }%
669  \if@cover
670    \AtBeginDocument{%
671      \@coverI\@coverII
672      \setcounter{page}{1}%
673    }%
674    \AtEndDocument{%
675      \@coverIII\@coverIV
676    }%
677  \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 EMISA 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.

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

18.9.4 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.

```
679  \newcounter{article}%
680  \@addtoreset{section}{article}%
681  \@addtoreset{footnote}{article}%
682  \@addtoreset{figure}{article}%
683  \@addtoreset{table}{article}%
```

article This encapsulates each article.

```
684  \newenvironment{article}[1]{%
685    \clearpage
686    \refstepcounter{article}%
687    \pagestyle{emisaarticle}%
688    \col@number=\tw@\relax
689    #1\relax
690    \l@article
```

Every `article` is its own bibliographical unit.

```
691    \begin{refsection}%
692    \maketitle
693    \ignorespaces
694  }{%
695    \end{refsection}%
696    \outputarticleappendix\par%
697    \vspace{\baselineskip}%
698    \noindent\ignorespaces
```

```
699    \if@licenseset
700        \begin{minipage}{\columnwidth}
701        \parbox[t]{\dimexpr 0.975\columnwidth-\doclicense@imagewidth\relax}{\vskip 0pt\raggedright
702        \hfill%
703        \parbox[t]{\doclicense@imagewidth}{\vskip 0pt\doclicenseImage}%
704        \end{minipage}%
705    \else
706        \ifx\@licence\@empty\relax\else\par\noindent\@licence\fi%
707    \fi%
708    \onecolumn
709    \ignorespacesafterend}%
```

18.9.5 Formatting editorial content

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

```
710 \newcommandtwoopt{\edit@setup}[3][][]{%
711    \title[#1][#2]{#3}
712    \pagestyle{emisaeditorial}
```

Here, section titles are a bit larger than otherwise.

```
713    \def\sec@font{\sectionfont\Large}%
714    \def\para@font{\sectionfont}%
715    \setcounter{section}{0}%
716 }%
```

editorialcontent   This encapsulates editorial content entries.

```
717 \newenvironment{editorialcontent}[1]{%
718    \onecolumn
719    \refstepcounter{article}%
720    \edit@setup{#1}%
721    \l@editorialcontent
722    \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
```

Every editorialcontent is its own bibliographical unit.

```
723    \begin{refsection}%
724    \ignorespaces
725 }{%
726    \end{refsection}%
727    \onecolumn
728    \ignorespacesafterend}%
```

18.9.6 Standard editorial content environments

Several types of standardized editorial contents.

editorial   This encapsulates editorials.
\editorialname

```
729 \def\editorialname{Editorial Preface}%
```

```
730  \newenvironment{editorial}[1][\editorialname]{%
731    \clearpage
732    \edit@setup{#1}%
733    \twocolumn[{\raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}}]%
734    \l@editorialcontent
```

Every `editorial` is its own bibliographical unit.

```
735    \begin{refsection}%
736    \ignorespaces
737    }{%
738    \end{refsection}%
739    \onecolumn
740    \ignorespacesafterend}%
```

cfp   Call for papers.

\cfpname

```
741  \def\cfpname{Call for Papers}%
742  \newenvironment{cfp}[1][\cfpname]%
743    {\editorialcontent{#1}}%
744    {\endeditorialcontent}%
```

\imprint   Imprint.

\imprintname

\imprintbody

```
745  \newcommandtwoopt{\imprint}[2][\@imprintname][\@imprintbody]{%
746    \onecolumn
747    \edit@setup[#1]{\@journalname}%
748    \l@editorialcontent
749    \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
750    \ignorespaces
751    #2
752    \onecolumn\ignorespacesafterend}%
753  \def\imprintname#1{\@bsphack\def\@imprintname{#1}\@esphack}%
754  \long\def\imprintbody#1{\@bsphack\def\@imprintbody{#1}\@esphack}%

755  \imprintname{Imprint}%
756  \imprintbody{%
757    The journal \emph{\@journalname} is the official journal of the
758    Special Interest Group on Modelling Business Information Systems
759    within the German Informatics Society (GI-SIG MoBIS).
760
761    The journal Enterprise Modelling and Information Systems
762    Architectures is intended to provide a forum for those who prefer a
763    design-oriented approach.  As the official journal of the German
764    Informatics Society (GI-SIG-MoBIS), it is dedicated to promote the
765    study and application of languages and methods for enterprise
766    modelling -- bridging the gap between theoretical foundations and
767    real world requirements.  The journal is not only aimed at
768    researchers and students in Information Systems and Computer
769    Science, but also at information systems professionals in industry,
770    commerce and public administration who are interested in innovative
771    and inspiring concepts.
```

```
772
773    The journal's editorial board consists of scholars and practitioners
774    who are renowned experts on various aspects of developing, analysing
775    and deploying enterprise models.  Besides Information Systems, they
776    cover various fields of Computer Science.
777
778    \section*{Subscription Information}
779
780    The journal is distributed free of charge for members of the
781    GI-SIG-MoBIS. Membership can be acquired through the German
782    Informatics Society (http://www.gi-ev.de/verein/mitgliedschaft/).
783    Single issues, priced at EUR\,25 each (plus shipment), can be ordered
784    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.

```
785   \newsavebox{\@editorial@box}%
786   \newlength{\editorialboxmaxheight}%
787   \setlength{\editorialboxmaxheight}{\textheight+10mm}%
788   \newcommandtwoopt{\editorialboard}[2]%
789    [\@editorialboardname][\@editorialboardbody]{%
790     \clearpage
791     \edit@setup[#1]{#1}%
792     \l@editorialcontent
793     \savebox{\@editorial@box}{%
794       \vbox{\centering%
795     \fboxsep=5mm
796     \fcolorbox{boxframecolor}{boxbgcolor}{%
797   \begin{minipage}[t]{110mm}
798     \raggedright
799     #2
800   \end{minipage}}\\*
801   }%
802     }%
803     \raisebox{15mm-\totalheight}[5mm][0mm]{\makebox[\textwidth][c]{%
804       \ifdim\ht\@editorial@box>\editorialboxmaxheight
805     \resizebox{!}{\editorialboxmaxheight}{\usebox{\@editorial@box}}%
806   \else
807     \usebox{\@editorial@box}%
808   \fi
809     }}\\*
810     \raisebox{-\textheight}[0mm][0mm]{\makebox[\textwidth][l]{%
811     \parbox[t]{\textwidth}{\raggedleft\bfseries\@issn}%
```

```latex
812 }}%
813   \onecolumn\ignorespacesafterend
814 }%
815 \def\editorialboardname#1{%
816   \@bsphack\def\@editorialboardname{#1}\@esphack}%
817 \long\def\editorialboardbody#1{%
818   \@bsphack\def\@editorialboardbody{#1}\@esphack}%

819 \editorialboardname{Editorial Board}%
820 \editorialboardbody{%
821   \section*{\@title}\vskip1mm
822   {\Large Editors in Chief\\[1mm]}
823   Ulrich Frank, University of Duisburg-Essen\\
824   Manfred Reichert, Ulm University\\[1mm]
825   {\Large Associate Editors\\[1mm]}
826   Wil van der Aalst, Eindhoven University of Technology\\
827   Witold Abramowicz, Poznan University of Economics\\
828   Colin Atkinson, University of Mannheim\\
829   J\"org Becker, University of M\"unster\\
830   J\"org Desel, University of Hagen\\
831   Werner Esswein, Dresden University of Technology\\
832   Fernand Feltz, Centre de Recherche Public Gabriel Lippmann\\
833   Andreas Gadatsch, Bonn-Rhine-Sieg University of Applied Sciences\\
834   Martin Glinz, University of Zurich\\
835   Norbert Gronau, University of Potsdam\\
836   Wilhelm Hasselbring, University of Kiel\\
837   Brian Henderson-Sellers, University of Technology, Sydney\\
838   Stefan Jablonski, University of Bayreuth\\
839   Manfred Jeusfeld, Tilburg University\\
840   Reinhard Jung, University of St.\,Gallen\\
841   Dimitris Karagiannis, University of Vienna\\
842   John Krogstie, University of Trondheim\\
843   Thomas K\"uhne, Victoria University of Wellington\\
844   Frank Leymann, University of Stuttgart\\
845   Stephen W. Liddle, Brigham Young University\\
846   Peter Loos, Johannes Gutenberg-University of Mainz\\
847   Oscar Pastor L\'opez, Universidad Polit\`ecnica de Val\`encia\\
848   Heinrich C. Mayr, University of Klagenfurt\\
849   Jan Mendling, Vienna University of Economics and Business\\
850   Markus N\"uttgens, University of Hamburg\\
851   Andreas Oberweis, University of Karlsruhe\\
852   Erich Ortner, Darmstadt University of Technology\\
853   Erik Proper, Radboud University Nijmegen\\
854   Michael Rebstock, University of Applied Sciences Darmstadt\\
855   Stefanie Rinderle-Ma, University of Vienna\\
856   Michael Rosemann, Queensland University of Technology\\
857   Matti Rossi, Aalto University\\
858   Elmar J. Sinz, University of Bamberg\\
859   Friedrich Steimann, University of Hagen\\
860   Stefan Strecker, University of Hagen\\
```

```
861    Bernhard Thalheim, University of Kiel\\
862    Oliver Thomas, University of Osnabr\"uck\\
863    Juha-Pekka Tolvanen, University of Jyv\"askyl\"a\\
864    Klaus Turowski, University of Augsburg\\
865    Gottfried Vossen, University of M\"unster\\
866    Mathias Weske, University of Potsdam\\
867    Robert Winter, University of St.\,Gallen\\
868    Heinz Z\"ullighoven, University of Hamburg}%
```

\guidelines   Guidelines for Authors.

\guidelinesname
\guidelinesbody

```
869  \newcommandtwoopt{\guidelines}[2]%
870  [\@guidelinesname][\@guidelinesbody]{%
871    \onecolumn
872    \edit@setup{#1}%
873    \l@editorialcontent
874    \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
875    \ignorespaces
876    #2
877    \onecolumn\ignorespacesafterend}%
878  \def\guidelinesname#1{%
879    \@bsphack\def\@guidelinesname{#1}\@esphack}%
880  \long\def\guidelinesbody#1{%
881    \@bsphack\def\@guidelinesbody{#1}\@esphack}%

882  \guidelinesname{Guidelines for Authors}%
883  \guidelinesbody{%
884    The journal serves to publish results of innovative research on all
885    facets of creating and analysing enterprise models and information
886    systems architectures.  For research papers, it is required to
887    satisfy academic standards in terms of originality, level of
888    abstraction and justification of results.  Experience reports serve
889    to describe and analyse success stories as well as practical
890    obstacles and resulting research challenges.  Topics covered by the
891    journal include, but are not restricted to the following subjects:
892    \begin{itemize}
893      \item  Languages and Methods for Enterprise Modelling
894      \item  Reusable Domain Models (Reference Models)
895      \item  Analysis and Design Patterns
896      \item  Modelling of Business Processes and Workflows
897      \item  Process-Oriented System Architectures
898      \item  Component-Oriented System Architectures
899      \item  Conceptual Modelling for Component-Oriented Design
900      \item  Ontologies for Enterprise Modelling
901      \item  Modelling for Enterprise Application Integration
902      \item  Modelling for Data Warehouses
903      \item  Modelling to support Knowledge Management
904      \item  Model-Driven Development
905      \item  Aspect-Oriented Design
906      \item  Agile Methods for Enterprise Modelling
```

```
907    \end{itemize}
908    Authors are asked for electronic submissions, which have to be sent
909    to the editor in chief as e-mail attachment.  In case of multiple
910    authors, it is required to name one author who acts as contact
911    person.  The submission should include a cover page with the paper's
912    title and the names, affiliations and e-mail addresses of all
913    authors.  The first page of the paper starts with the title and does
914    not carry the authors' names.  A manuscript must be either in MS
915    Word or PDF format.  It should not exceed 5.000 words -- this
916    includes an abstract of around 150 words.
917
918    Submitted papers will be reviewed within no more than two months.
919    The review process is double blind.  Authors who submit a manuscript
920    guarantee that it has not been published elsewhere, nor is intended
921    to be published elsewhere.  Papers that were accepted for
922    publication must be written according to the style defined for the
923    journal.  A comprehensive description as well as a corresponding
924    Word template is provided on the web portal of the GI-SIG-MobIS
925    (http://www.fg-mobis.gi-ev.de/).}
```

18.9.7 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.

```
926  \def\maketitle{%
927    \begingroup
928    \let\footnoterule\relax
929    \let\footnote\thanks
930    \let\thefootnote\relax
931    \def\@makefnmark{\textsuperscript{\@thefnmark}}%
932    \ifnum\col@number=\@ne
933      \@maketitle
934    \else
935      \twocolumn[\@maketitle]%
936    \fi
937    \global\@topnum\z@
938    \@thanks
939    \endgroup
940    \setcounter{footnote}{0}%
941  }%
```

\@maketitle   This assembles and outputs the article title.

```
942  \def\@maketitle{%
943    \bgroup
944    \normalfont
945    \pretolerance=9999
946    \parskip\z@
947    \parindent\z@
```

```
948    \if!\@title!
949    \else
950    {\raggedright
951        \titlefont\ignorespaces
952        \strut\@title\strut\par}%
953    \vskip2mm\relax
954    \fi
955 \if!\@subtitle!
956 \vskip5mm\relax
957 \else
958    {\makebox[\textwidth][r]{%
959      \begin{minipage}{\textwidth-15mm}
960          \raggedright
961          \subtitlefont\ignorespaces
962          \strut\@subtitle\strut
963        \end{minipage}}%
964        \par}%
965    \vskip5mm\relax
966 \fi
967 \if!\@authors!
968 \else
969 {\raggedright
970  \authorfont\ignorespaces
971  \strut\@authors
972  \ifx\@email\@empty
973      \ClassError{emisa}{There has to be one corresponding author!}{Please use \string\author*
974  \else
975      \ignorespaces\makebox[0pt][l]{\footnote{*~Corresponding author.\newline E-mail.\ \url{\@e
976  \fi%
977  \ifx\@acknowledgements\@empty
978  \else
979      \ignorespaces\makebox[0pt][l]{\footnote{\@acknowledgements}}%
980  \fi%
981  \strut\par}%
982 \vskip2mm\relax
983 \fi
984 \if!\@addresses@list!
985 \else
986    {\raggedright
987     \footnotesize\ignorespaces
988     \strut\@addresses@list\strut\par}%
989    \vskip8mm\relax
990 \fi
991 \if!\@authornote!
992 \else
993    \let\thefootnote\relax
994    \ignorespaces\makebox[0pt][l]{\footnote{Note: \@authornote}}%
995 \fi
996 \if!\@abstract!
```

```latex
  997  \else
  998   {\abstractfont\ignorespaces
  999    \strut\textup{Abstract.\ }\@abstract\strut\par}%
 1000    \vskip5mm\relax
 1001  \fi
 1002  \if!\@keywords!
 1003    \vskip3mm\relax
 1004  \else
 1005   {\raggedright
 1006    \ignorespaces
 1007    \strut Keywords.\ \@keywords\strut\par}
 1008    \vskip3mm\relax
 1009  \fi
 1010  \if!\@articleinfo@name!
 1011    \if!\@articleinfo@rdate!
 1012      \if!\@articleinfo@adate!
 1013        \vskip\baselineskip\relax
 1014      \fi
 1015    \fi
 1016  \else
 1017   {\raggedright
 1018    \small
 1019    \ignorespaces
 1020    \strut Communicated by\ \@articleinfo@name.%
 1021    \if!\@articleinfo@rdate!%
 1022    \else
 1023      \space Received\ \@articleinfo@rdate.%
 1024    \fi%
 1025    \if!\@articleinfo@adate!%
 1026    \else
 1027      \space Accepted\ %
 1028      \if!\@articleinfo@rounds!%
 1029      \else%
 1030        \ifnum\@articleinfo@rounds=1
 1031          after \@articleinfo@rounds{} revision\space%
 1032        \else
 1033          after \@articleinfo@rounds{} revisions\space%
 1034        \fi%
 1035      \fi%
 1036      on \@articleinfo@adate.
 1037    \fi%
 1038    \strut\par}
 1039    \vskip5mm\relax
 1040  \fi
 1041  \egroup
 1042 }
```

18.9.8 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$_\varepsilon$ 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.

```
1043 \def\@sect#1#2#3#4#5#6[#7]#8{%
1044   \ifnum #2>\c@secnumdepth
1045     \let\@svsec\@empty
1046   \else
1047     \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.

```
1048     \protected@edef\@svsec{\@seccntformat{#1}}%
1049   \fi
1050   \@tempskipa #5\relax
1051   \ifdim \@tempskipa>\z@
```

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

```
1052     \begingroup
1053       #6{\noindent%
```

42

```
1054          \@hangfrom{\hskip #3\relax\@svsec}%
1055            \raggedright
1056            \interlinepenalty\@M
1057            \strut#8\strut
1058            \@@par}%
1059        \endgroup
1060        \csname #1mark\endcsname{#7}%
1061        \addcontentsline{toc}{#1}{%
1062          \ifnum #2>\c@secnumdepth \else
1063            \protect\numberline{\csname the#1\endcsname}%
1064          \fi
1065          #7}%
1066      \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.

```
1067      \def\@svsechd{%
1068        #6{\hskip #3\relax
1069        \@svsec #8}%
1070        \csname #1mark\endcsname{#7}%
1071        \addcontentsline{toc}{#1}{%
1072          \ifnum #2>\c@secnumdepth \else
1073            \protect\numberline{\csname the#1\endcsname}%
1074          \fi
1075          #7}}%
1076    \fi
1077    \@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⟩}

```
1078 \def\@ssect#1#2#3#4#5{%
1079   \@tempskipa #3\relax
1080   \ifdim \@tempskipa>\z@
1081     \begingroup
1082       #4{\noindent%
1083         \hskip #1\relax
1084         \noindent%
1085         \parbox[t]{\linewidth}{%
1086           \raggedright\interlinepenalty\@M#5\strut}\@@par}%
1087     \endgroup
1088   \else
1089     \def\@svsechd{#4{\hskip #1\relax #5}}%
1090   \fi
1091   \@xsect{#3}}
```

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

```
1092 \def\@seccntformat#1{%
1093   \csname the#1\endcsname%
1094   \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.

```
1095 \def\section{\@startsection{section}%
1096   {1}{\z@}%
1097   {-1\baselineskip plus -2mm minus -2mm}%
1098   {.5\baselineskip plus .25\baselineskip minus .125\baselineskip}%
1099   {\sec@font}}%
```

\subsection

```
1100 \def\subsection{\@startsection{subsection}%
1101   {2}{\z@}%
1102   {-3mm plus -2mm minus -1.5mm}%
1103   {.25\baselineskip  plus .125\baselineskip minus .125\baselineskip}%
1104   {\sec@font}}%
```

\subsubsection

```
1105 \def\subsubsection{\@startsection{subsubsection}%
1106   {3}{\z@}%
1107   {-3mm plus -2mm minus -1mm}%
1108   {1sp}%
1109   {\sec@font}}%
```

\paragraph

```
1110 \def\paragraph{\@startsection{paragraph}%
1111   {4}{\z@}%
1112   {-1.5mm plus -1mm minus -0.75mm}%
1113   {1sp}%
1114   {\para@font}}%
```

\subparagraph

```
1115 \def\subparagraph{\@startsection{subparagraph}%
1116     {5}{\z@}%
1117     {-1.5mm}%
1118     {-1em}%
1119     {\para@font}}%
```

18.9.9 The table of contents

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

```
1120 \def\tableofcontents{%
1121    \onecolumn
1122    \pagestyle{emisaeditorial}%
1123    \footruleon
1124    \title{Table of Contents}%
1125    \null
1126    \vskip10mm
1127    \maketitle
1128    \vskip15mm
1129    \bgroup
```

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

```
1130       \parindent\z@
1131       \parskip\z@
1132       \@starttoc{toc}%
1133    \egroup
1134    \onecolumn
1135    }
```

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

\l@editorialcontent
```
1136 \newcommand*\l@article{%
1137    \if!\@subtitle!
1138       \addtocentry{\@tocauthor}{\thepage}{\@toctitle}%
1139    \else
1140       \addtocentry{\@tocauthor}{\thepage}{\@toctitle\ --\ \@tocsubtitle}%
1141    \fi}%
1142 \newcommand*\l@editorialcontent{%
1143    \addtocentry{\@toctitle}{\thepage}{}}%
```

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

```
1144 \newcommand*\addtocentry[4][toc]{%
1145    \addtocontents{#1}{\string\emisa@tocentry{#2}{#3}{#4}}}%
```

\emisa@tocentry typesets that entry.

```
1146 \newcommand{\emisa@tocentry}[3]{%
1147   \makebox[\textwidth][l]{%
1148     \parbox[t]{72.5mm-\@pnumwidth}{\raggedright\textbf{#1}}%
1149     \makebox[\@pnumwidth][r]{\textbf{#2}}%
1150     \hfill
1151     \parbox[t]{85mm}{\raggedright#3}}%
1152   \vspace{3mm}}%
```

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

```
1153 \setcounter{tocdepth}{-2}
```

18.9.10 A few abbreviations

\ie Macros for a couple of abbreviations used quite frequently.

\eg

\cf

\etal

\emisa@abbrv

\emisaabbrv

\emisa@vabbrv

\OMG

\BPM

\BPMN

\UML

```
1154 \newcommand*{\emisa@abbrv}[1]{#1\@\xspace}
1155 \newcommand*{\emisaabbrv}[2]{\gdef#1{\emisa@abbrv{#2}}}
1156 \newcommand*{\emisa@vabbrv}[1]{\textsc{#1}\xspace}
1157 \newcommand*{\ie}{\emisa@abbrv{i.e.,}}
1158 \newcommand*{\eg}{\emisa@abbrv{e.g.,}}
1159 \newcommand*{\cf}{\emisa@abbrv{cf.}}
1160 \newcommand*{\etal}{\emisa@abbrv{et~al.}}
1161 \newcommand*{\OMG}{\emisa@vabbrv{omg}}
1162 \newcommand*{\BPM}{\emisa@vabbrv{bpm}}
1163 \newcommand*{\BPMN}{\emisa@vabbrv{bpmn}}
1164 \newcommand*{\UML}{\emisa@vabbrv{uml}}
```

18.10 Bibliographies

The infrastructure for that is already present in LaTeX [19, 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.

```
1165 \def\@tempa#1\do\addbibresource#2\nil{%
1166   \ifx\relax#2\relax
1167     \else
```

```
1168      \def\@tempa##1\do\addbibresource##2\nil{\def\@preamblecmds{##1##2}}%
1169      \expandafter\@tempa\@preamblecmds\nil
1170      \fi
1171 }
1172 \expandafter\@tempa\@preamblecmds\do\addbibresource\nil
1173 \AfterEndPreamble{%
1174    \DeclareRobustCommand{\bibliography}[1]{%
1175      \addbibresource{#1}}%
1176 }%

1177 \tolerance 1414
1178 \hbadness 1414
1179 \emergencystretch 1.5em
1180 \hfuzz 0.3pt
1181 \widowpenalty=10000
1182 \displaywidowpenalty=10000
1183 \clubpenalty=5000
1184 \interfootnotelinepenalty=9999
1185 \brokenpenalty=2000
1186 \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.

```
1187 ⟨/class⟩
1188 ⟨*biblatex⟩
```

18.10.1   The EMISA **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 EMISA 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.

```
1189 ⟨*bbx⟩
```

We start by declaring the file name and date.

```
1190 \ProvidesFile{emisa.bbx}[2012/12/21 0.4 EMISA bibliography style]
```

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

```
1191 \RequireBibliographyStyle{authoryear}
```

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

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

```
1192 \newcommand*{\bibitemlabel}[1]{%
1193    \normalfont #1}
```

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.

```
1194 \defbibenvironment{bibliography}
1195 {\list{}%
1196   {\setlength{\labelwidth}{\z@}%
1197    \setlength{\leftmargin}{\z@}%
1198    \setlength{\itemindent}{-\leftmargin}%
1199    \setlength{\itemsep}{.5\baselineskip\@plus.2\baselineskip\@minus.2\baselineskip}%
1200    \setlength{\parsep}{\bibparsep}%
```

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.

```
1201   }%
1202   \let\makelabel\bibitemlabel
```

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

```
1203   \tolerance 9999
1204   \emergencystretch 3em
1205   \hfuzz .5\p@
1206   \vfuzz\hfuzz
```

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

```
1207   \clubpenalty 4000
1208   \@clubpenalty\clubpenalty
1209   \widowpenalty 4000
```

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

```
1210   \sfcode`\.\@m
```

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

```
1211   \renewcommand*{\finalnamedelim}{\addcomma\space}%
1212  }%
1213 {%
```

An empty `thebibliography` environment will cause a warning.

```
1214  \def\@noitemerr{\@latex@warning{Empty 'thebibliography' environment}}%
1215  \endlist}
```

```
1216 {\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 EMISA 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 BɪʙTEXbehavior (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.

```
1217 \renewcommand*{\newunitpunct}{\space}
```

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

```
1218 \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.

```
1219 \renewcommand*{\bibsetup}{%
1220   \interlinepenalty=5000\relax
1221   \widowpenalty=10000\relax
1222   \clubpenalty=10000\relax
1223   \biburlsetup
```

```
1224    \flushbottom
1225    \frenchspacing
1226    \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.

```
1227  \renewcommand*{\biburlsetup}{%
1228    \Urlmuskip=0mu plus 2mu\relax
1229    \mathchardef\UrlBreakPenalty=200\relax
1230    \mathchardef\UrlBigBreakPenalty=100\relax
1231    \mathchardef\UrlEmergencyPenalty=9000\relax
1232    \appto\UrlSpecials{%
1233      \do\0{\mathchar`\0\penalty\UrlEmergencyPenalty}%
1234      \do\1{\mathchar`\1\penalty\UrlEmergencyPenalty}%
1235      \do\2{\mathchar`\2\penalty\UrlEmergencyPenalty}%
1236      \do\3{\mathchar`\3\penalty\UrlEmergencyPenalty}%
1237      \do\4{\mathchar`\4\penalty\UrlEmergencyPenalty}%
1238      \do\5{\mathchar`\5\penalty\UrlEmergencyPenalty}%
1239      \do\6{\mathchar`\6\penalty\UrlEmergencyPenalty}%
1240      \do\7{\mathchar`\7\penalty\UrlEmergencyPenalty}%
1241      \do\8{\mathchar`\8\penalty\UrlEmergencyPenalty}%
1242      \do\9{\mathchar`\9\penalty\UrlEmergencyPenalty}}%
1243    \def\UrlBreaks{%
1244      \do\.\do\@\do\/\do\\\do\!\do\_\do\|\do\;\do\>\do\]\do\)\do\}%
1245      \do\,\do\?\do\'\do\+\do\=\do\#\do\$\do\&\do\*\do\^\do\"}%
1246    \def\UrlBigBreaks{\do\:\do\-}%
```

URLs are typeset in sans-serif script.

```
1247    \def\UrlFont{\sffamily}%
1248    }
```

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.

```
1249 \DeclareFieldFormat{citetitle}{#1}
1250 \DeclareFieldFormat[article]{citetitle}{#1\isdot}
1251 \DeclareFieldFormat[inbook]{citetitle}{#1\isdot}
1252 \DeclareFieldFormat[incollection]{citetitle}{#1\isdot}
1253 \DeclareFieldFormat[inproceedings]{citetitle}{#1\isdot}
1254 \DeclareFieldFormat[patent]{citetitle}{#1\isdot}
1255 \DeclareFieldFormat[thesis]{citetitle}{#1\isdot}
1256 \DeclareFieldFormat[unpublished]{citetitle}{#1\isdot}
```

The following field formats are used for output in bibliographies.

```
1257 \DeclareFieldFormat{booktitle}{#1\isdot}
1258 \DeclareFieldFormat{journaltitle}{#1}
1259 \DeclareFieldFormat{issuetitle}{#1}
1260 \DeclareFieldFormat{maintitle}{#1}
1261 \DeclareFieldFormat{title}{#1}
1262 \DeclareFieldFormat[article]{title}{#1\isdot}
```

```
1263  \DeclareFieldFormat[inbook]{title}{#1\isdot}
1264  \DeclareFieldFormat[incollection]{title}{#1\isdot}
1265  \DeclareFieldFormat[inproceedings]{title}{#1\isdot}
1266  \DeclareFieldFormat[patent]{title}{#1\isdot}
1267  \DeclareFieldFormat[thesis]{title}{#1\isdot}
1268  \DeclareFieldFormat[unpublished]{title}{#1\isdot}
1269  \DeclareFieldFormat{url}{\url{#1}}
1270  \DeclareFieldFormat{urldate}{\bibstring{urlseen}\addcolon\space#1}
1271  \DeclareFieldAlias[misc]{note}{urldate}
1272  \DeclareFieldAlias[report]{note}{urldate}
1273  \DeclareFieldAlias[thesis]{note}{urldate}
1274  \DeclareFieldFormat{version}{\bibcpstring{version}~#1}
1275  \DeclareFieldFormat{volume}{\bibcpstring{volume}~#1}
1276  \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.

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)

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

```
1277  \DeclareNameFormat{emisa:names}{%
1278    \usebibmacro{name:last-firstinit}{#1}{#4}{#5}{#7}%
1279    \usebibmacro{name:andothers}}
```

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

bibmacro

```
1280 \newbibmacro*{name:last-firstinit}[4]{%
1281   \usebibmacro{name:delim}{#2#3#1}%
1282   \usebibmacro{name:hook}{#2#3#1}%
```

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

```
1283   \ifblank{#3}{}{%
1284     \mkbibnameprefix{#3}%\isdot
1285     \ifpunctmark{'}
1286       {}
1287       {\ifuseprefix{\addhighpenspace}{\addlowpenspace}}}%
```

. . . last name . . .

```
1288   \mkbibnamelast{#1}\addhighpenspace
```

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

```
1289   \ifblank{#4}{}{\addlowpenspace\mkbibnameaffix{#4}\addlowpenspace}%
```

. . . and first name (initials).

```
1290   \ifblank{#2}{}{\mkbibnamefirst{#2}\isdot}%
1291 }%
```

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

```
1292 \renewbibmacro*{in:}{%
1293   \printtext{%
1294     \bibcpstring{in}%
1295     \intitlepunct}}
```

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

author bibmacro

```
1296 \renewbibmacro*{author}{%
1297   \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
1298     {\printnames{author}%
1299      \iffieldundef{authortype}
1300        {}
1301        {\setunit{\addspace}%
1302 \usebibmacro{authorstrg}}}
1303     {}}
```

```
1304 \renewbibmacro*{editor}{%
1305   \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
1306     {\printnames{editor}%
1307      \setunit{\addspace}%
1308      \usebibmacro{editorstrg}%
1309      \clearname{editor}}
1310     {}}
```

```
1311 \renewbibmacro*{editor+others}{%
1312   \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
1313     {\printnames[emisa:names]{editor}%
1314      \setunit{\addspace}%
1315      \usebibmacro{editor+othersstrg}%
1316     \clearname{editor}}
1317     {}}
```

```
1318 \renewbibmacro*{translator}{%
1319   \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
1320     {\printnames{translator}%
1321      \setunit{\addspace}%
1322      \usebibmacro{translatorstrg}%
1323      \clearname{translator}}
1324     {}}
```

```
1325 \renewbibmacro*{translator+others}{%
1326   \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
1327     {\printnames{translator}%
1328      \setunit{\addspace}%
1329      \usebibmacro{translator+othersstrg}%
1330      \clearname{translator}}
1331     {}}
```

```
1332 \renewbibmacro*{editor+othersstrg}{%
1333   \iffieldundef{editortype}
1334     {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
1335        {\def\abx@tempa{editors}}
1336        {\def\abx@tempa{editor}}}
1337     {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
1338        {\edef\abx@tempa{\thefield{editortype}s}}
1339        {\edef\abx@tempa{\thefield{editortype}}}}%
1340   \let\abx@tempb=\empty
1341   \ifnamesequal{editor}{translator}
1342     {\appto\abx@tempa{tr}%
```

```
1343        \appto\abx@tempb{\clearname{translator}}}
1344      {}%
1345    \ifnamesequal{editor}{commentator}
1346      {\appto\abx@tempa{co}%
1347       \appto\abx@tempb{\clearname{commentator}}}
1348      {\ifnamesequal{editor}{annotator}
1349          {\appto\abx@tempa{an}%
1350 \appto\abx@tempb{\clearname{annotator}}}
1351          {}}%
1352    \ifnamesequal{editor}{introduction}
1353      {\appto\abx@tempa{in}%
1354       \appto\abx@tempb{\clearname{introduction}}}
1355      {\ifnamesequal{editor}{foreword}
1356          {\appto\abx@tempa{fo}%
1357 \appto\abx@tempb{\clearname{foreword}}}
1358          {\ifnamesequal{editor}{afterword}
1359             {\appto\abx@tempa{af}%
1360              \appto\abx@tempb{\clearname{afterword}}}
1361          {}}}%
1362    \ifbibxstring{\abx@tempa}
1363      {\bibstring[\mkbibparens]{\abx@tempa}%
1364       \abx@tempb}
1365      {\usebibmacro{editorstrg}}}%
```

```
1366 \newbibmacro*{emisa:url+urldate}{%
1367    \iffieldundef{url}
1368      {\printfield{howpublished}}
1369      {\printfield{url}}
1370    \setunit*{\addperiod\space}\newblock
1371    \iffieldundef{urlyear}
1372      {\printfield{note}}
1373      {\printtext[urldate]{\printurldate}}}
```

```
1374 \newbibmacro*{emisa:url+type+version+urldate}{%
1375    \iffieldundef{url}%
1376      {\printfield{url}}
1377      {\printfield{howpublished}}%
1378    \setunit*{\addcomma\space}\newblock
1379    \printfield{type}%
1380    \setunit*{\addcomma\space}\newblock
1381    \printfield{version}%
1382    \setunit*{\addcomma\space}\newblock
1383    \iffieldundef{urlyear}
1384      {\printfield{note}}
1385      {\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

```
1386 \renewbibmacro*{finentry}{}%
```

article bibdriver

```
1387 \DeclareBibliographyDriver{article}{%
1388   \usebibmacro{bibindex}%
1389   \usebibmacro{begentry}%
1390   \usebibmacro{author/translator+others}%
1391   \setunit{\labelnamepunct}\newblock
1392   \usebibmacro{title}%
1393   \newunit
1394   \printlist{language}%
1395   \newunit\newblock
1396   \usebibmacro{bytranslator+others}%
1397   \newunit\newblock
1398   \printfield{version}%
1399   \setunit{\addperiod\space}%
1400   \usebibmacro{in:}%
1401   \usebibmacro{journal+issuetitle}%
1402   \newunit\newblock
1403   \usebibmacro{editor+others}%
1404   \newunit\newblock
1405   \usebibmacro{note+pages}%
1406   \newunit\newblock
1407   \iftoggle{bbx:isbn}
1408     {\printfield{issn}}
1409     {}%
1410   \newunit\newblock
1411   \usebibmacro{doi+eprint+url}%
1412   \newunit\newblock
1413   \usebibmacro{addendum+pubstate}%
1414   \newunit\newblock
1415   \usebibmacro{pageref}%
1416   \usebibmacro{finentry}}
```

book bibdriver

```
1417 \DeclareBibliographyDriver{book}{%
1418   \usebibmacro{bibindex}%
1419   \usebibmacro{begentry}%
1420   \usebibmacro{author/editor+others/translator+others}%
1421   \setunit{\labelnamepunct}\newblock
1422   \usebibmacro{maintitle+title}%
1423   \newunit
1424   \printlist{language}%
```

```
1425    \newunit\newblock
1426    \usebibmacro{editor+others}%
1427    \setunit{\addcomma\space}%
1428    \newblock
1429    \printfield{edition}%
1430    \setunit{\addperiod\space}%
1431    \newblock
1432    \usebibmacro{series+number}%
1433    \newunit
1434    \newblock
1435    \iffieldundef{maintitle}
1436      {\printfield{volume}%
1437       \printfield{part}}
1438      {}%
1439    \newunit
1440    \printfield{volumes}%
1441    \setunit{\addperiod\space}%
1442    \newblock
1443    \printfield{note}%
1444    \setunit{\addperiod\space}%
1445    \newblock
1446    \usebibmacro{publisher+location+date}%
1447    \newunit\newblock
1448    \usebibmacro{chapter+pages}%
1449    \newunit
1450    \printfield{pagetotal}%
1451    \newunit\newblock
1452    \iftoggle{bbx:isbn}
1453      {\printfield{isbn}}
1454      {}%
1455    \newunit\newblock
1456    \usebibmacro{doi+eprint+url}%
1457    \newunit\newblock
1458    \usebibmacro{addendum+pubstate}%
1459    \newunit\newblock
1460    \usebibmacro{pageref}%
1461    \usebibmacro{finentry}}
```

booklet bibdriver

```
1462  \DeclareBibliographyDriver{booklet}{%
1463    \usebibmacro{bibindex}%
1464    \usebibmacro{begentry}%
1465    \usebibmacro{author/editor+others/translator+others}%
1466    \setunit{\labelnamepunct}\newblock
1467    \usebibmacro{title}%
1468    \newunit
1469    \printlist{language}%
1470    \newunit\newblock
1471    \usebibmacro{editor+others}%
```

```
1472    \newunit\newblock
1473    \printfield{howpublished}%
1474    \newunit\newblock
1475    \printfield{type}%
1476    \newunit\newblock
1477    \printfield{note}%
1478    \newunit\newblock
1479    \usebibmacro{location+date}%
1480    \newunit\newblock
1481    \usebibmacro{chapter+pages}%
1482    \newunit
1483    \printfield{pagetotal}%
1484    \newunit\newblock
1485    \usebibmacro{doi+eprint+url}%
1486    \newunit\newblock
1487    \usebibmacro{addendum+pubstate}%
1488    \newunit\newblock
1489    \usebibmacro{pageref}%
1490    \usebibmacro{finentry}}
```

collection bibdriver

```
1491  \DeclareBibliographyDriver{collection}{%
1492    \usebibmacro{bibindex}%
1493    \usebibmacro{begentry}%
1494    \usebibmacro{editor+others}%
1495    \setunit{\labelnamepunct}\newblock
1496    \usebibmacro{maintitle+title}%
1497    \newunit
1498    \printlist{language}%
1499    \newunit\newblock
1500    \usebibmacro{editor+others}%
1501    \setunit{\addcomma\space}%
1502    \newblock
1503    \printfield{edition}%
1504    \setunit{\addperiod\space}%
1505    \newblock
1506    \usebibmacro{series+number}%
1507  \newunit
1508    \newblock
1509    \iffieldundef{maintitle}
1510      {\printfield{volume}%
1511       \printfield{part}}
1512      {}%
1513    \newunit
1514    \printfield{volumes}%
1515    \setunit{\addperiod\space}%
1516    \newblock
1517    \printfield{note}%
1518    \setunit{\addperiod\space}%
```

```
1519    \newblock
1520    \usebibmacro{publisher+location+date}%
1521    \newunit\newblock
1522    \usebibmacro{chapter+pages}%
1523    \newunit
1524    \printfield{pagetotal}%
1525    \newunit\newblock
1526    \iftoggle{bbx:isbn}
1527      {\printfield{isbn}}
1528      {}%
1529    \newunit\newblock
1530    \usebibmacro{doi+eprint+url}%
1531    \newunit\newblock
1532    \usebibmacro{addendum+pubstate}%
1533    \newunit\newblock
1534    \usebibmacro{pageref}%
1535    \usebibmacro{finentry}}
```

inbook bibdriver

```
1536    \DeclareBibliographyDriver{inbook}{%
1537    \usebibmacro{bibindex}%
1538    \usebibmacro{begentry}%
1539    \usebibmacro{author/translator+others}%
1540    \setunit{\labelnamepunct}\newblock
1541    \usebibmacro{title}%
1542    \newunit
1543    \printlist{language}%
1544    \newunit\newblock
1545    \usebibmacro{in:}%
1546    \usebibmacro{bybookauthor}%
1547    \newunit\newblock
1548    \usebibmacro{maintitle+booktitle}%
1549    \newunit\newblock
1550    \usebibmacro{editor+others}%
1551    \setunit{\addcomma\space}%
1552    \newblock
1553    \printfield{edition}%
1554    \newunit
1555    \iffieldundef{maintitle}
1556      {\printfield{volume}%
1557       \printfield{part}}
1558      {}%
1559    \newunit
1560    \printfield{volumes}%
1561    \newunit\newblock
1562    \usebibmacro{series+number}%
1563    \newunit\newblock
1564    \printfield{note}%
1565    \newunit\newblock
```

```
1566        \usebibmacro{publisher+location+date}%
1567        \newunit\newblock
1568        \usebibmacro{chapter+pages}%
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}}
```

incollection bibdriver

```
1580   \DeclareBibliographyDriver{incollection}{%
1581        \usebibmacro{bibindex}%
1582        \usebibmacro{begentry}%
1583        \usebibmacro{author/translator+others}%
1584        \setunit{\labelnamepunct}\newblock
1585        \usebibmacro{title}%
1586        \setunit{\addcomma\space}%
1587        \printlist{language}%
```

Period after title, if any

```
1588        \setunit{\addperiod\space}%
1589        \usebibmacro{in:}%
1590        \usebibmacro{editor+others}%
1591        \setunit{\addspace}%
1592        \newblock
1593        \usebibmacro{byauthor}%
1594        \newblock
1595        \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
1596        \newblock
1597        \printfield{edition}%
1598        \setunit{\addperiod\space}%
1599        \newblock
1600        \usebibmacro{series+number}%
1601        \newunit
1602        \newblock
1603        \iffieldundef{maintitle}
1604          {\printfield{volume}%
1605           \printfield{part}}
1606          {}%
1607        \newunit
1608        \printfield{volumes}%
```

```
1609    \setunit{\addperiod\space}%
1610    \newblock
1611    \printfield{note}%
1612    \setunit{\addperiod\space}%
1613    \newblock
1614    \usebibmacro{publisher+location+date}%
1615    \setunit*{\addcomma\space}%
1616    \newblock
1617    \usebibmacro{chapter+pages}%
1618    \newunit\newblock
1619    \iftoggle{bbx:isbn}
1620      {\printfield{isbn}}
1621      {}%
1622    \newunit\newblock
1623    \usebibmacro{doi+eprint+url}%
1624    \newunit\newblock
1625    \usebibmacro{addendum+pubstate}%
1626    \newunit\newblock
1627    \usebibmacro{pageref}%
1628    \usebibmacro{finentry}}
```

inproceedings bibdriver

```
1629  \DeclareBibliographyDriver{inproceedings}{%
1630    \usebibmacro{bibindex}%
1631    \usebibmacro{begentry}%
1632    \usebibmacro{author/translator+others}%
1633    \setunit{\labelnamepunct}%
1634    \newblock
1635    \usebibmacro{title}%
1636    \setunit{\addcomma\space}%
1637    \printlist{language}%
1638    \newblock
1639    \usebibmacro{byauthor}%
```

Period after title, if any

```
1640    \setunit{\addperiod\space}%
1641    \usebibmacro{in:}%
1642    \usebibmacro{editor+others}%
1643    \setunit{\addspace}%
1644    \newblock
1645    \usebibmacro{byauthor}%
1646    \newblock
1647    \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
1648    \newblock
1649    \usebibmacro{event+venue+date}%
1650    \setunit{\addperiod\space}%
1651    \newblock
```

```
1652    \usebibmacro{series+number}%
1653    \newunit
1654    \newblock
1655    \iffieldundef{maintitle}
1656      {\printfield{volume}%
1657       \printfield{part}}
1658      {}%
1659    \newunit
1660    \printfield{volumes}%
1661    \setunit{\addperiod\space}%
1662    \newblock
1663    \printfield{note}%
1664    \setunit{\addperiod\space}%
1665    \newblock
1666    \printlist{organization}%
1667    \setunit{\addperiod\space}%
1668    \newblock
1669    \usebibmacro{publisher+location+date}%
1670    \setunit{\addcomma\space}%
1671    \newblock
1672    \usebibmacro{chapter+pages}%
1673    \newunit\newblock
1674    \iftoggle{bbx:isbn}
1675      {\printfield{isbn}}
1676      {}%
1677    \newunit\newblock
1678    \usebibmacro{doi+eprint+url}%
1679    \newunit\newblock
1680    \usebibmacro{addendum+pubstate}%
1681    \newunit\newblock
1682    \usebibmacro{pageref}%
1683    \usebibmacro{finentry}}
```

manual bibdriver

```
1684  \DeclareBibliographyDriver{manual}{%
1685    \usebibmacro{bibindex}%
1686    \usebibmacro{begentry}%
1687    \usebibmacro{author/editor}%
1688    \setunit{\labelnamepunct}\newblock
1689    \usebibmacro{title}%
1690    \newunit
1691    \printlist{language}%
1692    \newunit\newblock
1693    \usebibmacro{byeditor}%
1694    \setunit{\addcomma\space}%
1695    \newblock
1696    \printfield{edition}%
1697    \newunit\newblock
1698    \usebibmacro{series+number}%
```

```
1699    \newunit\newblock
1700    \printfield{type}%
1701    \newunit
1702    \printfield{version}%
1703    \newunit
1704    \printfield{note}%
1705    \newunit\newblock
1706    \printlist{organization}%
1707    \newunit
1708    \usebibmacro{publisher+location+date}%
1709    \newunit\newblock
1710    \usebibmacro{chapter+pages}%
1711    \newunit
1712    \printfield{pagetotal}%
1713    \newunit\newblock
1714    \iftoggle{bbx:isbn}
1715      {\printfield{isbn}}
1716      {}%
1717    \newunit\newblock
1718    \usebibmacro{doi+eprint+url}%
1719    \newunit\newblock
1720    \usebibmacro{addendum+pubstate}%
1721    \newunit\newblock
1722    \usebibmacro{pageref}%
1723    \usebibmacro{finentry}}
```

misc bibdriver

```
1724  \DeclareBibliographyDriver{misc}{%
1725    \usebibmacro{bibindex}%
1726    \usebibmacro{begentry}%
1727    \usebibmacro{author/editor+others/translator+others}%
1728    \setunit{\labelnamepunct}\newblock
1729    \usebibmacro{title}%
1730    \newunit
1731    \printlist{language}%
```

Period after title, if any

```
1732    \setunit{\addperiod\space}%
1733    \usebibmacro{emisa:url+urldate}%
1734    \usebibmacro{finentry}}
```

online bibdriver

```
1735  \DeclareBibliographyDriver{online}{%
1736    \usebibmacro{bibindex}%
1737    \usebibmacro{begentry}%
1738    \usebibmacro{author/editor+others/translator+others}%
1739    \setunit{\labelnamepunct}\newblock
1740    \usebibmacro{title}%
1741    \newunit
```

```
1742    \printlist{language}%
1743    \newunit\newblock
1744    \usebibmacro{editor+others}%
1745    \newunit\newblock
1746    \printfield{version}%
1747    \newunit
1748    \printfield{note}%
1749    \newunit\newblock
1750    \printlist{organization}%
1751    \newunit\newblock
1752    \usebibmacro{date}%
1753    \newunit\newblock
1754    \iftoggle{bbx:eprint}
1755      {\usebibmacro{eprint}}
1756      {}%
1757    \newunit\newblock
1758    \usebibmacro{url+urldate}%
1759    \newunit\newblock
1760    \usebibmacro{addendum+pubstate}%
1761    \newunit\newblock
1762    \usebibmacro{pageref}%
1763    \usebibmacro{finentry}}
```

patent bibdriver

```
1764    \DeclareBibliographyDriver{patent}{%
1765      \usebibmacro{bibindex}%
1766      \usebibmacro{begentry}%
1767      \usebibmacro{author}%
1768      \setunit{\labelnamepunct}\newblock
1769      \usebibmacro{title}%
1770      \newunit
1771      \printlist{language}%
1772      \newunit\newblock
1773      \printfield{type}%
1774      \setunit*{\addspace}%
1775      \printfield{number}%
1776      \iflistundef{location}
1777        {}
1778        {\setunit*{\addspace}%
1779         \printtext[parens]{%
1780           \printlist[][-\value{listtotal}]{location}}}%
1781      \newunit\newblock
1782      \usebibmacro{byholder}%
1783      \newunit\newblock
1784      \printfield{note}%
1785      \newunit\newblock
1786      \usebibmacro{date}%
1787      \newunit\newblock
1788      \iftoggle{bbx:url}
```

```
1789        {\usebibmacro{url+urldate}}
1790        {}%
1791     \newunit\newblock
1792     \usebibmacro{addendum+pubstate}%
1793     \newunit\newblock
1794     \usebibmacro{pageref}%
1795     \usebibmacro{finentry}}
```

periodical bibdriver

```
1796  \DeclareBibliographyDriver{periodical}{%
1797     \usebibmacro{bibindex}%
1798     \usebibmacro{begentry}%
1799     \usebibmacro{editor}%
1800     \setunit{\labelnamepunct}\newblock
1801     \usebibmacro{title+issuetitle}%
1802     \newunit
1803     \printlist{language}%
1804     \newunit\newblock
1805     \usebibmacro{byeditor}%
1806     \newunit\newblock
1807     \printfield{note}%
1808     \newunit\newblock
1809     \iftoggle{bbx:isbn}
1810        {\printfield{issn}}
1811        {}%
1812     \newunit\newblock
1813     \usebibmacro{doi+eprint+url}%
1814     \newunit\newblock
1815     \usebibmacro{addendum+pubstate}%
1816     \newunit\newblock
1817     \usebibmacro{pageref}%
1818     \usebibmacro{finentry}}
```

proceedings bibdriver

```
1819  \DeclareBibliographyDriver{proceedings}{%
1820     \usebibmacro{bibindex}%
1821     \usebibmacro{begentry}%
1822     \usebibmacro{editor+others}%
1823     \setunit{\labelnamepunct}\newblock
1824     \usebibmacro{maintitle+title}%
1825     \newunit
1826     \printlist{language}%
1827     \newunit\newblock
1828     \usebibmacro{event+venue+date}%
1829     \newunit\newblock
1830     \usebibmacro{editor+others}%
1831     \setunit{\addperiod\space}%
1832     \newblock
```

```
1833    \usebibmacro{series+number}%
1834    \newunit
1835    \newblock
1836    \iffieldundef{maintitle}
1837      {\printfield{volume}%
1838       \printfield{part}}
1839      {}%
1840    \newunit
1841    \printfield{volumes}%
1842    \setunit{\addperiod\space}%
1843    \newblock
1844    \printfield{note}%
1845    \setunit{\addperiod\space}%
1846    \newblock
1847    \printlist{organization}%
1848    \setunit{\addperiod\space}%
1849    \newblock
1850    \usebibmacro{publisher+location+date}%
1851    \newblock
1852    \usebibmacro{chapter+pages}%
1853    \newunit
1854    \printfield{pagetotal}%
1855    \newunit\newblock
1856    \iftoggle{bbx:isbn}
1857      {\printfield{isbn}}
1858      {}%
1859    \newunit\newblock
1860    \usebibmacro{doi+eprint+url}%
1861    \newunit\newblock
1862    \usebibmacro{addendum+pubstate}%
1863    \newunit\newblock
1864    \usebibmacro{pageref}%
1865    \usebibmacro{finentry}}
```

Technical reports

author
title
year
type
number
institution
address
url
note

report bibdriver

```
1866  \DeclareBibliographyDriver{report}{%
1867    \usebibmacro{bibindex}%
```

```
1868    \usebibmacro{begentry}%
1869    \usebibmacro{author}%
1870    \setunit{\labelnamepunct}\newblock
1871    \usebibmacro{title}%
1872    \setunit{\addperiod\space}%
1873    \printfield{type}%
1874    \newunit
1875    \printfield{number}%
1876    \setunit{\addperiod\space}%
1877    \printlist{institution}%
1878    \setunit*{\addperiod\space}\newblock
1879    \printlist{location}%
1880    \setunit*{\addperiod\space}\newblock
1881    \printfield{url}%
1882    \setunit*{\addperiod\space}\newblock
1883    \printfield{note}%
1884    \newunit\newblock
1885    \usebibmacro{finentry}}%
1886 \DeclareBibliographyAlias{techreport}{report}%
```

thesis bibdriver

```
1887 \DeclareBibliographyDriver{thesis}{%
1888    \usebibmacro{bibindex}%
1889    \usebibmacro{begentry}%
1890    \usebibmacro{author}%
1891    \setunit{\labelnamepunct}\newblock
1892    \usebibmacro{title}%
1893    \newunit
1894    \printlist{language}%
```

Period after title, if any

```
1895    \setunit{\addperiod\space}%
1896    \printfield{type}%
1897    \setunit*{\addcomma\space}%
1898    \usebibmacro{institution+location+date}%
1899    \setunit{\addperiod\space}%
1900    \usebibmacro{chapter+pages}%
1901    \newunit
1902    \printfield{pagetotal}%
1903    \newunit\newblock
1904    \printfield{url}%
1905    \setunit*{\addperiod\space}\newblock
1906    \printfield{note}%
1907    \newunit\newblock
1908    \usebibmacro{addendum+pubstate}%
1909    \newunit\newblock
1910    \usebibmacro{pageref}%
1911    \usebibmacro{finentry}}
```

```
1912 \DeclareBibliographyDriver{unpublished}{%
1913   \usebibmacro{bibindex}%
1914   \usebibmacro{begentry}%
1915   \usebibmacro{author}%
1916   \setunit{\labelnamepunct}\newblock
1917   \usebibmacro{title}%
1918   \newunit
1919   \printlist{language}%
1920   \newunit\newblock
1921   \printfield{howpublished}%
1922   \newunit\newblock
1923   \printfield{note}%
1924   \newunit\newblock
1925   \usebibmacro{date}%
1926   \newunit\newblock
1927   \iftoggle{bbx:url}
1928     {\usebibmacro{url+urldate}}
1929     {}%
1930   \newunit\newblock
1931   \usebibmacro{addendum+pubstate}%
1932   \newunit\newblock
1933   \usebibmacro{pageref}%
1934   \usebibmacro{finentry}}
```

bibmacro
```
1935 \renewbibmacro*{maintitle+booktitle}{%
1936   \iffieldundef{maintitle}
1937     {}
1938     {\usebibmacro{maintitle}%
1939      \addspace
1940      \newblock
1941      \iffieldundef{volume}
1942        {}
1943        {\printfield{volume}%
1944         \printfield{part}%
1945         \addspace
1946     }}%
1947   \usebibmacro{booktitle}%
1948   \newunit}
```

```
1949 \renewbibmacro*{journal+issuetitle}{%
1950   \usebibmacro{journal}%
1951   \setunit*{\addspace}%
1952   \iffieldundef{series}
1953     {}
1954     {\newunit
```

```
1955        \printfield{series}%
1956        \setunit{\addspace}}%
1957      \printfield{volume}%
1958      \printfield[parens]{number}%
1959      \setunit{\addcomma\space}%
1960      \printfield{eid}%
1961      \setunit{\addspace}%
1962      \usebibmacro{issue+date}%
1963      \setunit{\addcolon\space}%
1964      \usebibmacro{issue}%
1965      \newunit}
```

bibmacro
```
1966  \newbibmacro*{emisa:doi+eprint+url}{%
1967    \iftoggle{bbx:doi}
1968      {\printfield{doi}}
1969      {}%
1970    \newunit\newblock
1971    \iftoggle{bbx:eprint}
1972      {\usebibmacro{eprint}}
1973      {}%
1974    \newunit\newblock
1975    \iftoggle{bbx:url}
1976      {\usebibmacro{emisa:url+urldate}}
1977      {}}
```

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
```
1978  \renewbibmacro*{author}{%
1979    \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
1980      {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
1981                  \NOT\iffirstonpage\AND
1982                  \(\NOT\boolean{bbx@inset}\OR
1983                  \iffieldequalstr{entrysetcount}{1}\)}
1984        {\bibnamedash}
1985        {\usebibmacro{bbx:savehash}%
1986         \printnames[emisa:names]{author}%
1987         \iffieldundef{authortype}
1988           {\setunit{\addspace}}
1989           {\setunit{\addcomma\space}%
1990            \usebibmacro{authorstrg}%
1991            \setunit{\addspace}}}%
1992      }{%
```

```
1993        \global\undef\bbx@lasthash
1994        \usebibmacro{labeltitle}%
1995        \setunit*{\addspace}}%
1996      \usebibmacro{date+extrayear}}
```

bbx:editor bibmacro

```
1997  \renewbibmacro*{bbx:editor}[1]{%
1998    \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
1999      {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
2000                   \NOT\iffirstonpage\AND
2001                   \(\NOT\boolean{bbx@inset}\OR
2002                   \iffieldequalstr{entrysetcount}{1}\)}
2003        {\bibnamedash}
2004        {\printnames[emisa:names]{editor}%
2005         \setunit{\addcomma\space}%
2006         \usebibmacro{bbx:savehash}}%
2007       \usebibmacro{#1}%
2008       \clearname{editor}%
2009       \setunit{\addspace}%
2010      }{\global\undef\bbx@lasthash
2011       \usebibmacro{labeltitle}%
2012       \setunit*{\addspace}%
2013      }%
2014  %    \usebibmacro{date+extrayear}%
2015    }
```

bbx:translator bibmacro

```
2016  \renewbibmacro*{bbx:translator}[1]{%
2017    \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
2018      {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
2019                   \NOT\iffirstonpage\AND
2020  \(\NOT\boolean{bbx@inset}\OR
2021    \iffieldequalstr{entrysetcount}{1}\)}
2022        {\bibnamedash}
2023        {\printnames[emisa:names]{translator}%
2024  \setunit{\addcomma\space}%
2025  \usebibmacro{bbx:savehash}}%
2026       \usebibmacro{translator+othersstrg}%
2027       \clearname{translator}%
2028       \setunit{\addspace}}%
2029      {\global\undef\bbx@lasthash
2030       \usebibmacro{labeltitle}%
2031       \setunit*{\addspace}}%
2032    \usebibmacro{date+extrayear}}
```

blisher+location+date
bibmacro
```
2033  \renewbibmacro*{publisher+location+date}{%
2034    \printlist{publisher}%
```

70

```
2035    \setunit*{\addcomma\space}%
2036    \printlist{location}%
2037    \newunit}
```

stitution+location+date

bibmacro

```
2038  \renewbibmacro*{institution+location+date}{%
2039    \printlist{institution}%
2040    \setunit*{\addcomma\space}%
2041    \printlist{location}%
2042    \newunit}
```

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

Localization

```
2043  \DefineBibliographyStrings{english}{%
2044  urlseen = {Last Access},
2045  techreport = {},%
2046  }%

2047  \DefineBibliographyStrings{german}{%
2048  urlseen = {Letzter Zugriff},%
2049  techreport = {},%
2050  }%

2051  \DefineBibliographyStrings{ngerman}{%
2052  urlseen = {Letzter Zugriff},%
2053  techreport = {},%
2054  }%
```

Unlocalization

```
2055  % year/month/day
2056  \protected\def\mkbibdateiso#1#2#3{%
2057    \iffieldundef{#1}{}{%
2058      \thefield{#1}%
2059      \iffieldundef{#2}{}{-}}%
2060    \iffieldundef{#2}{}{%
2061      \mkdatezeros\thefield{#2}}%
2062      \iffieldundef{#3}{}{-}}%
2063    \mkdatezeros\thefield{#3}}%
2064  }%

2065  \DefineBibliographyExtras{english}{\let\mkbibdateshort\mkbibdateiso}%
2066  \DefineBibliographyExtras{german}{\let\mkbibdateshort\mkbibdateiso}%
2067  \DefineBibliographyExtras{ngerman}{\let\mkbibdateshort\mkbibdateiso}%
```

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

```
2068  ⟨/bbx⟩
```

18.10.2 The EMISA citation style

A citation style is a set of commands such as `\ite` 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 EMISA citation style is defined in the file *emisa.cbx* which is generated from the following code lines between the `<*cbx>` and `</cbx>` meta-tags.

```
2069 ⟨*cbx⟩

2070 \ProvidesFile{emisa.cbx}[2010/09/24 0.3 EMISA citation style]
2071 \RequireCitationStyle{authoryear-comp}
2072 \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".

```
2073 \DeclareRangeChars*{f}
```

Here, the EMISA citation style file *emisa.cbx* ends.

```
2074 ⟨/cbx⟩
2075 ⟨/biblatex⟩
2076 ⟨*class⟩
```

Here, the LATEX class EMISA ends.

```
2077 ⟨/class⟩
```

18.11 Examples and templates

18.11.1 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.

```
2078 ⟨*template⟩
2079 ⟨*article⟩
2080 \documentclass[]{emisa}
2081 %% You can use this additional option (e.g.,"[english,draft]"):
2082 %% draft -- this marks overfull lines
2083 ⟨/article⟩
```

```
2084 ⟨issue⟩\documentclass[final,cover]{emisa}
2085 ⟨∗article | issue⟩
2086 %% The following package imports are recommended, but not obligatory;
2087 %% you might want take a look into their respective manuals if you
2088 %% don't know what they do.
2089 \usepackage{amsmath,amssymb,mathtools}
2090 %% Additional package imports go here:
2091 ⟨/article | issue⟩
2092 ⟨∗issue⟩
2093 %% Insert here issue data:
2094 \volume{}% Volume No.
2095 \issue{}{}% Issue No. and Issue Date
2096 %% If there are any bibliography data bases to be used globally
2097 %% please indicate here:
2098 \bibliography{}
2099 %% Insert here any (relative or absolute) path to be searched for
2100 %% graphics files:
2101 \graphicspath{{./figs_base/},{}}
2102 %% Here you can alter the cover pages; e.g. this:
2103 %% \coverII{\AtPageDeadCenter{Something}}
2104 %% typesets the word "Something" centered on the inner side of the
2105 %% front sheet.
2106 %% You can also delete any cover pages at all by defining them empty,
2107 %% see below:
2108 \coverII{}
2109 %% This outputs the SIG-MOBIS page on the inner side of the back
2110 %% sheet:
2111 \coverIII{\AtPageCenter{\sigmobispage}}
2112 ⟨/issue⟩
2113 ⟨∗article | issue⟩
2114 %% Here, the normal text begins.
2115 \begin{document}
2116 ⟨/article | issue⟩
2117 ⟨∗issue⟩
2118 \tableofcontents
2119
2120 \begin{editorial}
2121 %% Please insert editorial text here.
2122
2123 \end{editorial}
2124 ⟨/issue⟩
2125 ⟨∗article | issue⟩
2126 \begin{article}{%
2127 %% Please declare the title elements of your article here.  Unused
2128 %% elements can either be deleted or commented out, or else just let
2129 %% empty.  In either case they are not typeset.
2130 %% If the option referee or review is given, all author tags, address,
2131 %% email and acknowledgements will be likewise omitted.
2132   \title{}
```

```
2133    \subtitle{}
2134    \author*{<Name>}{<Email address>}
2135    \address{address line 1\\address line 2}
2136    \author{Name}
2137    \address[a]{}
2138    \abstract{}
2139    \keywords{Keyword 1 \and keyword 2\and keyword 3}
2140    \authornote{This article extends an earlier conference paper, see ...}
2141 ⟨/article | issue⟩
2142 ⟨*issue⟩
2143    \editor{My self}
2144    \received{24 Octover 2014}
2145    \accepted[2]{1 November 2015}
2146    \doi{10.5073/EMISA.2011.11.1}
2147 ⟨/issue⟩
2148 ⟨*article | issue⟩
2149    \acknowledgements{}
2150 %% Please declare here the bibliography data base(s) you want to use
2151 %% in this article (make sure to add the file extension, e.g. .bib):
2152    \bibliography{}
2153    }
2154 %% Please insert your article text here.
2155
2156
2157
2158 %% This directive typesets the bibliography.  To achieve this, one has
2159 %% to run the biber program on the corresponding auxiliary file
2160 %% generated in the previous LaTeX run; you can just use the job name
2161 %% (the name of this file without ".tex")", e.g.: biber emisa-author-template
2162 \printbibliography
2163 %
2164 \end{article}
2165 ⟨/article | issue⟩
2166 ⟨*issue⟩
2167
2168 %% Please insert as much article environments here as are needed.
2169 \begin{article}{%
2170    \title{}
2171    \subtitle{}
2172    \author*{<Name>}{<Email address>}
2173    \address{address line 1\\address line 2}
2174    \author{Name}
2175    \address[a]{}
2176    \abstract{}
2177    \keywords{Keyword 1 \and keyword 2\and keyword 3}
2178    \authornote{This article extends an earlier conference paper, see ...}
2179    \acknowledgements{}
2180    \editor{My self}
2181    \received{24 Octover 2014}
```

```
2182      \accepted[2]{1 November 2015}
2183      \doi{10.5073/EMISA.2011.11.1}
2184      \bibliography{}
2185    }
2186
2187
2188 \printbibliography
2189 \end{article}
2190
2191 \begin{cfp}
2192 %% Please insert your Call for papers here.
2193 \end{cfp}
2194
2195 \imprint
2196 \editorialboard
2197 \guidelines
2198 ⟨/issue⟩
2199 ⟨article | issue⟩\end{document}
2200 ⟨/template⟩
```