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

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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 document class emisa, 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. TEX Live's TEX Live Utility). This type of installation is recommended in order to always get the latest version automatically. If you prefer a manual installation, please run `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, http://mirror.ctan.org/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 TEX Live 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 or via the distributions package manager. 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 the widely used TEX distributions TEX Live and MikTEX. Among the required packages 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 office requires that all text files of an article are provided in UTF-8 *UTF-8 file encoding*.

# 5   Class Options

**british, UKenglish**  British English is the language of choice for publishing in EMISA. The class option `british` is loaded 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).

**american, USenglish**  If you want to use American English instead, you can use the option `american` or `USenglish`. The hyphenation patterns and quotation marks will be changed accordingly.

**referee, review**  By default, a final version of the manuscript is typeset for online publication including the names and affiliations of authors. For reviewing purposes, the names and affiliations of the authors 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 and `\address[⟨letter of address⟩]{⟨⟩}` for all others. See `emisa-author-template.tex` for details.

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

# 7   Title, subtitle, abstract, and keywords

**\title**  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 typeset in a footnote on the first page below the corresponding author's email address.

**\authornote**  Additional information for reviewers and readers may be added in a footnote on the titlepage using

\authornote{⟨*author note*⟩}. This is typically used for stating earlier publications (e. g. in conference proceedings) on which the present manuscript is based.

# 9    Style guidelines for regular text

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

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

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

▷ 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.*

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

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

# 10    Abbreviations and initialisms

\eg    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.

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

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

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

# 11  Quotation marks

\enquote    It is *highly recommended* to use the `\enquote{⟨quotation⟩}` command to produce correct quotation marks. Note that the command can be nested and will produce correct primary and secondary quotation marks in British English (or American English – depending on the chosen class option), for example `\enquote{A quote \enquote{within a quote}}`. For other quotation macros and environment please consult the csquotes documentation [9].

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

# 12  Citations and references

\parencite    The EMISA journal uses its own author-year citation style predefined for the biblatex package (emisa.cbx),
\textcite    and its own style for formatting entries in the list of references (emisa.bbx). Consult the biblatex package
\cite    documentation [8] 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.

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

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

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

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

## 13 Figures

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

## 14 Tables

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

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

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

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

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

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

```
...
\begin{tabularx}{\textwidth}{Xll}
This a column with possibly long text passages,
so that line breaking is necessary and automatically
```

```
applied by the X column & This column is set ragged right and gets as
    wide as its contents &
Another column \\
...
\end{tabularx}
...
```

A second frequently used scenario is the need for equal-widthed columns without having to measure it out. For a much more comfortable solution one get assign the X parameter to all such columns.

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

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

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

# 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. The java environment should be used to format source code listings in the Java programming language, and the sourcecode environment should be used to format source code in any other programming language. You can add the name of the programming language and other parameters known to listings like caption or label as an optional argument.

Note that the source code in either case is 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:

```
\begin{java}[caption={A hello world example},label={hw-java}]
public class HelloWorld
{

   public static void main (String[] args)
   {
      // Ausgabe Hello World!
      System.out.println("Hello World!");
   }
```

7

```
}
\end{java}

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

      sprintf( "Hello, %s", name );

  }
\end{sourcecode}
```

# 16   Pseudo-code and algorithms

Apart from source code you might want to add pseudo code examples or algorithms. In contrast to the source code examples above EMISA does not define its own environments. Instead we recommend using the bundle algorithms consisting of the two packages algorithm and algorithmic.

Typical parts like loops, if-clauses or statements all have their own macro:

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

results in

**Require:** $n \geq 0$

**Ensure:** $y = x^n$

1: $y \leftarrow 1$

2: $X \leftarrow x$

3: $N \leftarrow n$

4: **while** $N \neq 0$ **do**

5:    **if** $N$ is even **then**

6:        $X \leftarrow X \times X$

7:        $N \leftarrow N/2$

8:     **else** $\{N$ is odd$\}$
9:       $y \leftarrow y \times X$
10:      $N \leftarrow N - 1$
11:     **end if**
12: **end while**

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

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

For more details, please have a look at the documentation \cite{
    algorithms}.

\section{Commands for use by the editorial office staff only}
\DescribeMacro{editor}Enter the corresponding editor (or editorial board
     member) for the article, in the format \enquote{first letter of the
    first name fullstop tilde last name}. Example: \verb|\editor{A.~Smith
    }|

\DescribeMacro{received}Enter the date of initial reception of the
    manuscript by the editorial office in the following format. Example:
    \verb|\received{31~March 2014}|

\DescribeMacro{accepted}Enter the date of the acceptance decision of the
     manuscript and the number of review rounds in the following format.
    Example: \verb|\accepted[3]{10~January 2016}|

\DescribeMacro{volume}Enter the number of the volume in which the
    article is published. Example: \verb|\volume{11}|

\DescribeMacro{issue}Enter the issue number and issue date of the
    article. Format example: \verb|\issue{1}{31~January 2016}|

\DescribeMacro{specialissuetitle}Enter the title of the Special Issue to
     which the article belongs if any. Note that the prefix 'Special
    Issue on' is added automatically. Example: \verb|\specialissuetitle{
    Multilevel Modelling}|

\emph{Note that volume, issue number and issue date and, optionally, the
     title of the special issue appear in the multiline page headline of
    the article.}

\DescribeMacro{CCBYNCSAFour}\DescribeMacro{CCBYNCSAThree}If an article
```

is licensed under a Creative Commons BY-NC-SA 4.0 (\cs{CCBYNCSAFour})
    or 3.0 (\cs{CCBYNCSAThree}) license, the reference to the license
    should be displayed at the end of the article. Read the license text
    at https://creativecommons.org/licenses/by-nc-sa/4.0/ (for version
    4.0; likewise for version 3.0).

\DescribeMacro{license}\DescribeMacro{licence}Alternatively, enter a
    license text by \cs{license} (or \cs{licence}).\\ Example: \verb|\
    license{This work is licensed under LPPL 1.3c.}|

\section{Example file for both, authors and editorial office}
\begin{examplecode}
% Use the option [draft] to mark overfull lines.
\documentclass[british]{emisa}
% The following package imports are recommended, but not obligatory;
% you might want take a look into their respective manuals if you want
    to how they can be used:
\usepackage{amsmath,amssymb,mathtools}
\usepackage{algorithmic,algorithm}
% Additional package imports go here:
% The document begins here:
\begin{document}
% Optionally, set the style for typesetting source code listings (see
    listings package).
% \lstset{language=Java}
% Take note of the following article environment!
\begin{article}{%
% Enter your bibliography database file here.
% Make sure to use UTF-8 character encoding in the bibliography data
    bases,
% and add the .bib extension for the biblatex package!
\bibliography{emisa.bib}
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% For editorial office only: Start
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% Add editorial meta data to appear in the multiline page headline.
\editor{Enter corresponding editor here}
\received{Enter date of manuscript reception here}
\accepted[1]{Enter number of review rounds and date of acceptance here.}
\volume{11} % volume number
\issue{1}{31~Jan~2016} % issue number and issue date
\specialissuetitle{Title of special issue if publication belongs to a
    special issue}
% Add license information at end of article, either
\CCBYNCSAFour % or \CCBYNCSAThree or \license
\license{Enter your license text here}
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% For editorial office only: End
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```latex
% Enter bibliographic meta data about publication
\title[Insert shorttitle for page headline]{Enter full title here}
\subtitle{Enter subtitle here, or leave empty}
\author*{FirstName LastName of corresponding author}{email@address.org}
\address{Enter affiliation of first (corresponding) author here.  Note
    that only the starred version of author* accepts a second argument
    requiring an email address for the corresponding author.}
\author{FirstName LastName}
\address{Enter affiliation of second and further authors here. Add
    further authors following this scheme.}
% Enter abstract, keywords, acknowledgements, authornotes
\abstract{Enter abstract here}
\keywords{Enter at a minimum three keywords here. Keyword1 \and Keyword2
     \and Keyword3}
\acknowledgements{Enter acknowledgements here.}
\authornote{If your submission is based on a prior publication and
    revises / extends this work, enter a corresponding note here (This
    work is based on ...) but DO NOT cite the prior work during the
    reviewing process. INSTEAD provide full citations of all prior
    publications to the editors during the submission process (use the
    text field in the online submission system).}
% Take note of the following closing bracket!
}

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

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

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

% Example of a double-column table. Tables should NOT be typeset in a
    single column!
% Note the use of \toprule, \midrule, and \bottomrule!
```

```latex
% DO NOT use vertical rules in tables!
\begin{table*}[tb]
\centering
\caption{Enter your table caption above the table here.}
\begin{tabular}{llllll}
\toprule
column head1 & column head2 & column head3 & column head4 & column head5
    & column head6\\
\midrule
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
cell1 & cell2 & cell3 & cell4 & cell5 & cell6\\
\bottomrule
\end{tabular}
\label{tab:unique-label}
\end{table*}

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

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

% Formatting the bibliographic data base:
% Please make sure to properly enter all data for each entry
% in the bibliographic database (.bib).
```

```
% Pay special attention to formatting names and page numbers,
% see the following example:
%@ARTICLE{key1,
%   author = {{van der Aalst}, W. M. P.
%   and {van Hee}, K. M.
%   and {van Werf}, J. M.
%   and Verdonk, M.},
%   title = {{Auditing 2.0: Using
%   Process Mining to Support
%   Tomorrow's Auditor}},
%   journal = {Computer},
%   year = {2010},
%   volume = {43},
%   pages = {90--93},
%   number = {3}
%}
\printbibliography
\end{article}
\end{document}
```

# References

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

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

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

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

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

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

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

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

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

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

[20]  The LaTeX $2_\varepsilon$ Sources. 18.10

[21]  Typeset source code listings using LaTeX.

[22]  A suite of tools for typesetting algorithms in pseudo-code.

# 17 Implementation

Here, the code of the LaTeX class emisa begins.

```
1 ⟨∗class⟩
```

## 17.1 Options

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

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

british option
UKenglish option

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

american option
USenglish option

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

draft option
final option
@draft switch

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

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

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

referee option
noreferee option
review option
noreview option
@referee switch

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

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

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.

```
45 \newif\if@cover
46 \def\coveron{\@covertrue}
47 \def\coveroff{\@coverfalse}
48 \DeclareOption{cover}{\coveron}
49 \DeclareOption{nocover}{\coveroff}

50 \newif\if@microtype
51 \@microtypetrue
52 \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.

```
53 \PassOptionsToClass{a4paper,twoside,11pt}{article}%
54 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{article}}%
55 \ExecuteOptions{british,final,noreferee,nocover,oneside,openany}%
56 \ProcessOptions*\relax%

57 \IfFileExists{latexrelease.sty}%
58     {\RequirePackage[latest]{latexrelease}}%
59     {\RequirePackage{fixltx2e}}%
```

## 17.2   Loading the base class and packages

This class is build upon the LaTeX standard class article.

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

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

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

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

Since many PostScript fonts only implement a subset of the TS1 encoding which contains text symbols for use with the T1-encoded text fonts, many commands only produce black blobs of ink. The textcomp package is supplied as a part of the LaTeX base distribution to resolve the resulting problems [1].

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

The microtype package provides a LaTeX interface to the micro-typographic extensions of pdfTeX: most prominently, character protrusion and font expansion, furthermore the adjustment of interword spacing and additional kerning, as well as hyphenatable letterspacing (tracking) and the possibility to disable all or selected ligatures [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.

```
64 \if@microtype
65     \RequirePackage{microtype}%
66 \else
67     \ClassWarning{emisa}{Package `microtype' not loaded!%
68         \MessageBreak Output will differ from final result in the journal!%
69         \MessageBreak Please consult the documentation, if you%
70         \MessageBreak get an error when loading microtype}
71 \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].

```
72 \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.*).

```
73 \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.

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

### 17.2.1 Colour and graphics

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

```
75 \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].

```
76 \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.

```
77 \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, . . .

---

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

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).

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

83  \ExecuteBibliographyOptions{%
84      maxcitenames=3,%
85      maxbibnames=999,%
86      terseinits=false,%
87      isbn=false,%
88      url=true,%
89      doi=false,%
90      eprint=false,%
91      dashed=false,%
92      bibencoding=inputenc,%
93      sorting=anyt,%
94      hyperref=true%
95  }%
```

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.

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

### 17.2.2 Helpers

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

```
97  \RequirePackage{twoopt}%
```

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

```
98  \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.

```
99 \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.

```
100 \let\itemize\compactitem
101 \let\enditemize\endcompactitem
102 \let\enumerate\compactenum
103 \let\endenumerate\endcompactenum
104 \let\description\compactdesc
105 \let\enddescription\endcompactdesc
```

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

```
106 \setdefaultenum{1.}{a)}{i.}{A}%
107 \setdefaultleftmargin{1em}{0.9em}{0.7em}{0.5em}{0.4em}{0.3em}%
108 \setlength{\plitemsep}{3\p@}%
109 \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.

```
110 \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).

```
111 \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].

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

### 17.2.3 Scripts, fonts, and maps

```
113 \RequirePackage{newtxtext}
114 \RequirePackage{newtxmath}
115 \RequirePackage[zerostyle=b,straightquotes]{newtxtt}
116 \if@microtype
117     \UseMicrotypeSet[protrusion]{basicmath} % disable protrusion for tt fonts
118 \fi%
```

To make figures and ligatures searchable when using pdfTeX $\geq$ 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.

```
119 \InputIfFileExists{glyphtounicode}%
120     {\ClassInfo{emisa}{Reading file `glyphtounicode.tex`}
121      \pdfgentounicode=1}%
122     {\ClassWarning{emisa}{Couldn't find file `glyphtounicode.tex`}}%

123     \RequirePackage{booktabs}
124     \RequirePackage{listings}
125     \lstset{basicstyle=\ttfamily\small}
126     \lstnewenvironment{java}[1][]
127         {\lstset{language=Java,float=*htbp,#1}}
128         {}
129     \lstnewenvironment{java*}[1][]
130         {\lstset{language=Java,float=htbp,#1}}
131         {}
132     \lstnewenvironment{sourcecode}[1][]
133         {\lstset{float=*htbp,#1}}
134         {}
135     \lstnewenvironment{sourcecode*}[1][]
136         {\lstset{float=htbp,#1}}
137         {}
138     \RequirePackage{amsmath}
139     \RequirePackage[amsmath,standard,hyperref]{ntheorem}
```

## 17.3 Hypertext

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

```
140 \RequirePackage{url}
141 \urlstyle{same}
142 \RequirePackage[%
143   colorlinks,
144   breaklinks,
145   pdfview=Fit,
146   bookmarksopen,
147   bookmarksnumbered,
148   linkcolor=black,
```

```
149    anchorcolor=black,
150    citecolor=black,
151    filecolor=black,
152    urlcolor=black,
153    hyperfootnotes=false
154    ]{hyperref}%

155  \RequirePackage{doclicense}
```

## 17.4 Tools

\@ifempty  These determinate if an argument ist empty (or not) and to act consequently. An argument is ‚empty',
\@ifarg  iff it contains nothing or just whitespace. All three macros first test their first argument. If it is empty
\@ifnoarg  \@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*⟩}

```
156  \begingroup
157    \catcode`\Z=3
158    \long\gdef\@M@T@#1#2Z#3#4#5\@nil{#4}
159    \long\gdef\@ifempty#1{\@M@T@#1ZZ\@secondoftwo\@firstoftwo\@nil}
160    \long\gdef\@ifarg#1{\@M@T@#1ZZ\@firstofone\@gobble\@nil}
161    \long\gdef\@ifnoarg#1{\@M@T@#1ZZ\@gobble\@firstofone\@nil}
162  \endgroup
```

## 17.5 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.

```
163  \geometry{%
164    a4paper,%
165    portrait,%
166    twoside,%
167    ignoreall,%
168    hcentering,%
169    textwidth      = 162.5mm,%
170    textheight     = 220mm,%
171    heightrounded,%
172    columnsep      = 12.5mm,%
173    top            = 47mm,%
174    headheight     = 16mm,%
```

```
175    headsep        = 13mm,%
176    marginparwidth = 15mm,%
177    marginparsep   = 5mm,%
178    footskip       = 16mm%
179    }%
180 \marginparpush 5mm%

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

182 \parindent=4mm%

183 \smallskipamount=.5\baselineskip
184 \medskipamount=2\smallskipamount
185 \bigskipamount=2\medskipamount

186 \flushbottom

187 \abovedisplayskip=.5\baselineskip plus .33\baselineskip
188                                 minus .33\baselineskip
189 \belowdisplayskip=\abovedisplayskip
190 \abovedisplayshortskip= 0pt plus .33\baselineskip
191 \belowdisplayshortskip=.5\baselineskip plus .33\baselineskip
192                                 minus .33\baselineskip
```

## 17.6   Scripts

\pageheadfont    Assigning scripts to text elements.
\pagenumfont     Page head and foot:
\pagefootfont
```
193 \def\pageheadfont{\normalfont}%
194 \def\pagenumfont{\pageheadfont\bfseries}%
195 \def\pagefootfont{\pageheadfont}%
```

\authorfont      The elements of the article titles:
\titlefont
\subtitlefont
```
196 \def\authorfont{\normalfont\Large}%
197 \def\titlefont{\normalfont\bfseries\LARGE\boldmath}%
198 \def\subtitlefont{\normalfont\bfseries\Large\boldmath}%
```
\abstractfont
```
199 \def\abstractfont{\normalfont\itshape}%
```

\affiliationfont         The elements of the affiliation box:
\affiliationauthorfont
\affiliationaddressfont
```
200 \def\affiliationfont{\normalfont}
201 \def\affiliationauthorfont{\bfseries}
202 \def\affiliationaddressfont{\mdseries}
```
\affiliationemailfont
```
203 \def\affiliationemailfont{\mdseries}%
```

\sectionfont     Section headlines:
\sec@font
\para@font
```
204 \def\sectionfont{%
205   \normalfont
206   \bfseries
207   \boldmath}%
208 \def\sec@font{\sectionfont\large}%
```

```
209  \def\para@font{\sectionfont}%
```

\captionfont   Captions:

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

## 17.7   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

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

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

```
213  \definecolor{headtextcolor}{gray}{0.5}%
214  \definecolor{boxframecolor}{gray}{1}%
215  \definecolor{boxbgcolor}{gray}{0.8}%
```

## 17.8   Double line spacing

\displayskipstretch

\setdisplayskipstretch

```
216  \newcommand{\displayskipstretch}{\baselinestretch}
217  \newcommand{\setdisplayskipstretch}[1]{\def\displayskipstretch{#1}}
```

\setstretch   Line space commands.

```
218  \newcommand{\setstretch}[1]{%
219    \def\baselinestretch{#1}%
220    \@currsize
221  }
```

\@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.

```
222  \def\@setsize#1#2#3#4{%
223    \@nomath#1%
224    \let\@currsize#1%
225    \baselineskip #2%
226    \baselineskip=\baselinestretch\baselineskip
```

```
227  \parskip=\baselinestretch\parskip
228  \setbox\strutbox \hbox{%
229    \vrule height.7\baselineskip
230          depth.3\baselineskip
231          width\z@}%
232  \skip\footins=\baselinestretch\skip\footins
233  \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).

```
234  \everydisplay\expandafter{%
235    \the\everydisplay
236    \abovedisplayskip     \displayskipstretch\abovedisplayskip
237    \belowdisplayskip     \displayskipstretch\belowdisplayskip
238    \abovedisplayshortskip  \displayskipstretch\abovedisplayshortskip
239    \belowdisplayshortskip  \displayskipstretch\belowdisplayshortskip
240  }
```

## 17.9   Document markup

### 17.9.1   Declaring issue data

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

\journalname   The journal name.

```
241  \def\journalname#1{\@bsphack\def\@journalname{#1}\@esphack}%
242  \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.

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

\volume   Volume number.

```
246  \def\volume#1{\@bsphack\def\@volume{#1}\@esphack}%
247  \volume{\textcolor{red}{0}}%
```

\issue   Issue number and date.

```
248  \def\issue#1#2{\@bsphack
249    \def\@issue{#1}%
250    \def\@issuedate{#2}%
251    \@esphack}%
252  \issue{\textcolor{red}{0}}{\textcolor{red}{month 0000}}%
```

25

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

`\specialissuetitle*`

`\specialissuetitleprefix`

```
253 \def\specialissuetitle{\@ifstar\@sspit\@spit}%
254 \newcommand{\@spit}[2][]{%
255   \@bsphack
256   \@ifempty{#2}%
257     {\let\@specialissuetitle\relax}%
258     {\@ifempty{#1}%
259       {\def\@specialissuetitle{\@specialissuetitleprefix#2}}%
260       {\def\@specialissuetitle{#1\space#2}}}%
261   \@esphack}%
262 \newcommand{\@sspit}[2][]{%
263   \@bsphack
264   \@ifempty{#2}%
265     {\let\@specialissuetitle\relax}%
266     {\def\@specialissuetitle{#2}}%
267   \@esphack}%
268 \newcommand{\specialissuetitleprefix}[1]{%
269   \@bsphack
270   \@ifempty{#1}%
271     {\let\@specialissuetitleprefix\relax}%
272     {\def\@specialissuetitleprefix{#1\space}}%
273   \@esphack}%
274 \specialissuetitle{}%
275 \specialissuetitleprefix{Special Issue on}%
```

`\copyrightyear`  Copyright owner and year.

`\copyrightholder`

```
276 \def\copyrightyear#1{\@bsphack\def\@copyrightyear{#1}\@esphack}%
277 \copyrightyear{\the\year}%
278 \def\copyrightholder#1{\@bsphack\def\@copyrightholder{#1}\@esphack}%
279 \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.

```
280  \renewcommandtwoopt*{\title}[3][][]{%
281    \@bsphack
282    \def\@title{#3}%
283    \@ifempty{#1}{\def\@shorttitle{\@title}}{\def\@shorttitle{#1}}%
284            \@ifempty{#2}{\def\@toctitle{\@shorttitle}}{\def\@toctitle{#2}}%
285    \@esphack}%
286  \newcommandtwoopt*{\subtitle}[3][][]{%
287    \@bsphack
288    \def\@subtitle{#3}%
289    \@ifempty{#1}{\def\@shortsubtitle{\@subtitle}}{\def\@shortsubtitle{#1}}%
290    \@ifempty{#2}{\def\@tocsubtitle{\@shortsubtitle}}{\def\@tocsubtitle{#2}}%
291    \@esphack}%
292  \def\email#1{%
293    \ifx\@email\@empty
294        \def\@email{#1}
295    \else
296        \ClassError{emisa}{There can only be one corresponding author!}{}
297    \fi}%
298  \renewcommand{\author}{\@ifstar{\@authorstar}{\@authornostar}}
299  \newcommand*{\@authornostar}[1]{%
300    \@bsphack
301    \if@referee
302      \def\@authors{}%
303      \def\@shortauthors{}
304    \else
305        \gdef\@address@sep{}%
306        \ifx\@authors\@empty
307            \protected@xdef\@authors{#1}
308            \protected@xappto\@shortauthors{#1}
309        \else
310            \protected@xappto\@authors{,\space #1}
311            \protected@xappto\@shortauthors{,\space #1}
312        \fi%
313    \fi
314    \@esphack}%
315  \newcommandtwoopt*{\@authorstar}[3][][]{%
316      \@bsphack
317      \if@referee
318        \def\@authors{}%
319        \def\@shortauthors{}%
320        \def\@tocauthors{}%
321        \def\@email{}%
322      \else
323        \gdef\@address@sep{}%
324        \ifx\@authors\@empty
325            \protected@xdef\@authors{#3\textsuperscript{*,}}
```

27

```latex
326          \protected@xappto\@shortauthors{#3}
327        \else
328          \protected@xappto\@authors{,\space #3\textsuperscript{*,}}
329          \protected@xappto\@shortauthors{,\space #3}
330        \fi%
331        \@ifempty{#1}{\def\@shortauthor{\@shortauthors}}{\def\@shortauthor{#1}}%
332        \@ifempty{#2}{\def\@tocauthor{\@shortauthors}}{\def\@tocauthor{#2}}%
333      \fi
334      \@esphack
335      \@ifnextchar\bgroup\email{\ClassError{emisa}{Please provide an E-mail address for the corre
336 \newcommand{\keywords}[1]{
337      \@bsphack
338      \def\and{\unskip\ \textbullet\ }%
339      \def\@keywords{#1}%
340      \@esphack}%
341 \newcommand{\authornote}[1]{
342      \@bsphack
343      \if@referee
344        \def\@authornote{}%
345      \else
346        \def\@authornote{#1}%
347      \fi%
348      \@esphack}%
349 \newcommand{\editor}[1]{
350      \@bsphack
351      \def\@articleinfo@name{#1}%
352      \@esphack}%
353 \newcommand{\received}[1]{
354      \@bsphack
355      \def\@articleinfo@rdate{#1}%
356      \@esphack}%
357 \newcommand{\accepted}[2][]{
358      \@bsphack
359      \def\@articleinfo@rounds{#1}
360      \def\@articleinfo@adate{#2}%
361      \@esphack}%
362 \newcommand{\doitext}{DOI:}
363 \newcommand*{\outdoi}{%
364    \begingroup
365    \lccode`\~=`\#\relax
366    \lowercase{\def~{\#}}%
367    \lccode`\~=`\_\relax
368    \lowercase{\def~{\_}}%
369    \lccode`\~=`\<\relax
370    \lowercase{\def~{\textless}}%
371    \lccode`\~=`\>\relax
372    \lowercase{\def~{\textgreater}}%
373    \lccode`\~=0\relax
374    \catcode`\#=\active
```

```latex
375    \catcode`\_=\active
376    \catcode`\<=\active
377    \catcode`\>=\active
378    \@outdoi
379 }
380 \def\@outdoi#1{%
381    \let\#\relax
382    \let\_\relax
383    \let\textless\relax
384    \let\textgreater\relax
385    \edef\x{\toks0={{#1}}}%
386    \x
387    \edef\#{\@percentchar23}%
388    \edef\_{_}%
389    \edef\textless{\@percentchar3C}% instead of {\string<} for Apple
390    \edef\textgreater{\@percentchar3E}% instead of {\string>} for Apple
391    \edef\x{\toks1={\noexpand\href{http://dx.doi.org/#1}}}%
392    \x
393    \edef\x{\endgroup\doitext\the\toks1 \the\toks0}%
394    \x
395 }
396 \newcommand*{\doi}[1]{
397    \@bsphack
398    \def\@doi{#1}
399    \@esphack}%
400 \newcommand{\acknowledgements}[1]{
401    \@bsphack
402    \def\@acknowledgements{#1}
403    \@esphack}%
404 \newif\if@licenseset
405 \newcommand{\licence}[1]{%
406    \@bsphack
407    \def\@licence{#1}
408    \@esphack}%
409 \let\license\licence
410 \newcommand{\CCBYNCSAThree}{%
411    \@licensesettrue%
412    \def\doclicense@type{CC}%
413    \def\doclicense@modifier@uppercase{BY-NC-SA}%
414    \def\doclicense@versionUsed{3.0}%
415 }%
416 \newcommand{\CCBYNCSAFour}{%
417    \@licensesettrue%
418    \def\doclicense@type{CC}%
419    \def\doclicense@modifier@uppercase{BY-NC-SA}%
420    \def\doclicense@versionUsed{4.0}%
421 }%
422 \newcounter{addresses}
423 \renewcommand{\theaddresses}{\alph{addresses}}
```

```
424 \newcommand{\address}[2][]{%
425   \@bsphack
426   \if@referee
427     \def\@addresses@list{}
428   \else
429     \@ifempty{#2}{%
430       \@ifempty{#1}{}{%
431         \protected@xappto\@authors{\textsuperscript{\@address@sep #1}}
432         \gdef\address@sep{,}%
433     }}{%
434         \stepcounter{addresses}
435         \protected@xappto\@authors{\textsuperscript{\@address@sep\theaddresses}}
436         \gdef\@address@sep{,}%
437         \ifx\@addresses@list\@empty
438           \protected@xdef\@addresses@list{\textsuperscript{\theaddresses}\ #2}
439         \else
440           \protected@xappto\@addresses@list{\newline\textsuperscript{\theaddresses}\ #2}
441         \fi}
442   \fi
443   \@esphack}%
444 \title{}%
445 \subtitle{}%
446 \author{}%
447 \address{}
448 \keywords{}%
449 \authornote{}%
450 \editor{}%
451 \received{}%
452 \accepted{}%
453 \doi{}%
454 \licence{}
455 \acknowledgements{}%
456 \def\abstract#1{\@bsphack\def\@abstract{#1}\@esphack}%
457 \abstract{}%
458 \def\@authors{}
459 \def\@shortauthor{}
460 \def\@shortauthors{}
461 \def\@tocauthor{}
462 \def\@tocauthors{}
463 \def\@email{}
464 \def\@addresses@list{}
```

\abstract    This accepts the abstract text.

```
465 \def\abstract#1{\@bsphack\def\@abstract{#1}\@esphack}%
466 \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
articleappendix
articleappendix*

very end. The basic form `articleappendix` begins a new page per instance while the starred form `articleappendix*` does not. Each appendix is wrapped into its own group so things remain local.

```
467  \DeclareRobustCommand{\outputarticleappendix}{%
468    {%
469      \appendix
470  \@articleappendix
471  \global\let\@articleappendix\relax
472    }%
473  }%
474  \long\def\@wrap@articleappendix#1{\gappto{\@articleappendix}{{#1}}}
475  \newenvironment{articleappendix}{%
476    \gappto{\@articleappendix}{\clearpage}%
477    \Collect@Body\@wrap@articleappendix}{}
478  \newenvironment{articleappendix*}{%
479    \Collect@Body\@wrap@articleappendix}{}
480  \let\@articleappendix\relax
481  \def\@makefnmark{\textsu{\@thefnmark}\ }%
482  \renewcommand\@makefntext[1]{%
483      \parindent 1em%
484      \noindent%
485      \@makefnmark#1}%
```

### 17.9.2 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`  Basic lengths for head and foot elements. `\headwidth` is the overall width of the headbox equalling the
`\headmargin`  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.

```
486 \newlength{\headwidth}%
487 \newlength{\bleed}%
488 \newlength{\headmargin}%
489 \newlength{\footrulewidth}%
490 \newlength{\headfootruleheight}%
491 \setlength{\bleed}{3mm}%
492 \setlength{\headfootruleheight}{0.4mm}%
```

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

```
493 \AtBeginDocument{%
494    \setlength{\headwidth}{\paperwidth+2\bleed}%
495    \setlength{\headmargin}{0.5\headwidth-0.5\textwidth}%
496    \setlength{\footrulewidth}{0.5\headwidth+0.5\textwidth}}%
```

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

```
497 \newcommand{\headbox}[6]{\bgroup%
498    \setstretch{1}%
499    \reset@font\pageheadfont
500    \tabcolsep\z@
501    \arrayrulewidth\headfootruleheight
502    \hskip-\headmargin
503    \begin{tabular*}{\headwidth}[b]%
504      {@{\rule{\headmargin}{\z@}}%
505      >{\rule[-1.25mm]{\z@}{5mm-\arrayrulewidth}}%
506      l@{\extracolsep{\textwidth minus 1fill}}r%
507      @{\rule{\headmargin}{\z@}}}
508      #1 & #2\\
509      \hline
510      #3 & #4\\
511      \hline
512      #5 & #6\\
513      \hline
514    \end{tabular*}%
515    \hskip-\headmargin
516    \egroup
517 }%
```

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

```
518 \newcommand{\theheadvolume}{%
519    \begingroup\hypersetup{urlcolor=headtextcolor}\textcolor{headtextcolor}{Vol.\,\@volume, No.\,
```

```
520  \newlength{\headpageoffset}%
521  \setlength{\headpageoffset}{10mm}%
522  \def\theoddheadpage{%
523    \rlap{\makebox[\headpageoffset][r]{\pagenumfont\thepage}}}%
524  \def\theevenheadpage{%
525    \llap{\makebox[\headpageoffset][l]{\pagenumfont\thepage}}}%
```

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

```
526  \newif\if@footrule%
527  \def\footruleoff{\global\@footrulefalse}%
528  \def\footruleon{\global\@footruletrue}%
529  \def\footrule#1{%
530    \if@footrule
531      \makebox[\textwidth][#1]{%
532        \reset@font
533        \rule[\headfootruleheight]{\footrulewidth}{\headfootruleheight}%
534        }\fi}%
```

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

```
535  \def\headmarkstyle#1{\@bsphack
536    \def\@headmarkstyle{#1}%
537    \@esphack}%
538  \headmarkstyle{\color{headtextcolor}}%
539  \def\markhead#1#2{\@bsphack
540    \gdef\@evenmark{#1}%
541    \gdef\@oddmark{#2}%
542    \@esphack}%
543  \def\markarticle{\markhead{\@shortauthor}{\@shorttitle}}%
544  \def\markeditorial{\markhead{\@shorttitle}{\@shorttitle}}%
```

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

```
545  \def\ps@emisa{%
546    \def\@oddhead{%
547      \headbox{\@journalname}{}%
548              {\theheadvolume}{}%
549              {{\@headmarkstyle\@oddmark}}{\theoddheadpage}%
550      }%
551    \def\@evenhead{%
552      \headbox{}{\@journalname}%
553              {}{\theheadvolume}%
554              {\theevenheadpage}{{\@headmarkstyle\@evenmark}}%
555      }%
556    \let\@oddmark\relax
557    \let\@evenmark\relax
558    \def\@oddfoot{\footrule{r}}%
559    \def\@evenfoot{\footrule{l}}%
560    }%
```

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

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

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

```
561 \def\ps@emisaarticle{%
562   \ps@emisa
563   \markarticle
564   \footruleoff
565 }%

566 \def\ps@emisaeditorial{%
567   \ps@emisa
568   \markeditorial
569   \footruleon
570 }%

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

### 17.9.3 Cover and advertisement pages

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

```
572 \def\basecoverfont{\normalfont\sffamily}%
573 \def\covervolumefont{%
574   \basecoverfont\fontsize{6mm}{6mm}\selectfont}%
575 \def\covertitlefont{%
576   \basecoverfont\bfseries\fontsize{11mm}{16.5mm}\selectfont}%
```

\coverIbgname  These are names for background graphics and logos. As these are subject to be changed from time to
\coverIVbgname  time these adjustments are put into the base config file, too.
\sigmobislogoname
\gislogoname
```
577 \def\coverIbgname{U1_bg}%
578 \def\coverIVbgname{U4_bg}%
579 \def\sigmobislogoname{SIG-MOBIS-logo-300}%
580 \def\sigEMISAlogoname{EMISA-Logo-svg}%
581 \def\gislogoname{GIS-logo_with_text-300}%
```

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

```
582 \newcommand{\AtPageDeadCenter}[1]{%
583   \AtPageCenter{\makebox[\z@][c]{%
584     \raisebox{-0.5\totalheight}[\z@][\z@]{#1}}}%
585 }%
586 \def\page@empty{\relax}%
```

\pagebg  Background color for one whole page plus bleed.

```
587 \newcommand{\pagebg}[1]{%
588   \AtPageDeadCenter{%
589     \textcolor{#1}{\rule{\paperwidth+2\bleed}{\paperheight+2\bleed}}}}%
```

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

```
590 \newcommand{\thispagebackground}[2][]{%
591   \@ifarg{#1}{\thispagestyle{#1}}%
592   \AddToShipoutPicture*{%
593     \unitlength 1mm\relax%
594     {#2}%
595 }}%
```

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

```
596 \newcommand{\picturepage}[2][empty]{%
597   \thispagebackground[#1]{#2}%
598   \null\clearpage
599 }%
```

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

```
600 \newcommandtwoopt*{\inputpagegraphic}[3][empty][]{%
601   \thispagebackground[#1]{\includegraphics[width=\paperwidth,#2]{#3}}%
602   \null\clearpage
603 }%
```

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

```
604 \newcommand{\coverpage}[2][]{%
605   \@ifarg{#1}{\setcounter{page}{#1}}%
606   \picturepage{#2}%
607 }%
```

\thecovervolumeline
\thecovertitle  These represent the

```
608 \newcommand{\thecovervolumeline}{%
609   \parbox[t]{130mm}{%
610     \raggedright
611     \color{covertextcolor}\covervolumefont%
612     Volume\space\@volume
613     \enspace\rule[-1mm]{0.5mm}{6mm}\enspace
614     No.\,\@issue\space\textbf{\@issuedate}\\[3mm]%
615     \@specialissuetitle
616   }%
617 }%
618 \def\thecovertitle{%
619   \parbox[t]{30mm}[s]{174mm}{%
620     \color{covertextcolor}%
621     \covertitlefont
622     \raggedright\@journalname\par
623     \vskip8mm
624     \covervolumefont
625     \raggedleft
626     \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].

```
627 \def\sigmobispage{%
628   \makebox[\z@][c]{%
629     \begin{minipage}[c][260mm][s]{\textwidth}
630       \sigmobispagehead
631       \medskip
632
633       The GI-SIG-MoBIS portal provides numerous resources on enterprise
634       modelling research, such as a full-text digital library, a
635       bibliography, conference announcements, a glossary and evaluation
636       reports.  It is intended to establish the premier forum for an
637       international community in enterprise modelling.  The new version
638       is based on a Content Management System allowing authorized users
639       to conveniently upload content.  A \BibTeX{} interface allows for
640       conveniently integrating bibliographic data.  Information about
641       this journal, such as guidelines for authors, tables of content
642       and full-text access to articles (for GI-SIG-MobIS members only)
643       are also available on the~portal.
644       \par
645       \medskip
646
647       \begin{center}
648         \includegraphics{GI-SIG-MOBIS_portal}
649       \end{center}
650
651       \medskip
652
653       GI encourages everybody who wants to participate in the
654       evolution of this community knowledge base to contribute to any of
655   the categories covered by the portal. Please contact Michael He\ss{}
656   (\href{mailto:m.hess@uni-duisburg-essen.de}{m.hess@uni-duisburg-essen.de})
657   for further~information.
658
659       \vfill
660
661       \sigmobispagefoot
662     \end{minipage}%
663   }%
664 }
```

\sigmobispagehead    Elements of \sigmobispage.

\sigmobispagefoot

\sigmobispagerule

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

```
666 \parbox[c][23mm][s]{\linewidth}{%
667   \centering
668   \textcolor{gray}{\rule{.92\linewidth}{1mm}}%
669   \par\vfill
670   \raisebox{-.4\height}[.5\totalheight][.5\totalheight]{\huge#1}%
671   \par\vfill
672   \textcolor{gray}{\rule{.92\linewidth}{1mm}}}\par}%
673 \def\sigmobispagehead{\sigmobispagerule{SIG-MoBIS Portal}}
674 \def\sigmobispagefoot{\sigmobispagerule{http://wi-mobis.gi-ev.de/}}
```

\coverI
\coverII
\coverIII
\coverIV

Each of these prepares one of the cover pages.

```
675 \def\coverI#1{\@ifempty{#1}%
676   {\let\@coverI\relax}%
677   {\def\@coverI{\coverpage[-2]{#1}}}}%
678 \def\coverII#1{\@ifempty{#1}%
679   {\let\@coverII\relax}%
680   {\def\@coverII{\coverpage[-1]{#1}}}}%
681 \def\coverIII#1{\@ifempty{#1}%
682   {\let\@coverIII\relax}%
683   {\def\@coverIII{\coverpage{#1}}}}%
684 \def\coverIV#1{\@ifempty{#1}%
685   {\let\@coverIV\relax}%
686   {\def\@coverIV{\coverpage{#1}}}}%
```

So we prepare the four cover pages.

```
687 \coverI{%
688   \pagebg{coverbgcolor}%
689   \AtPageUpperLeft{%
690     \raisebox{-\totalheight}{\includegraphics{\coverIbgname}}}%
691   \AtPageUpperLeft{\put(17,-28){\mbox{%
692     \includegraphics[height=19mm]{\sigmobislogoname}%
693     \hspace{5mm}%
694     \includegraphics[height=14.75mm]{\sigEMISAlogoname}%
695     }}%
696   }%
697   \AtPageLowerLeft{\put(166,9){\includegraphics{\gislogoname}}}%
698   \AtPageLowerLeft{\put(17,44){\thecovervolumeline}}%
699   \AtTextLowerLeft{\put(-28,36){\framebox(200,62)[c]{}}}%
700   \AtPageLowerLeft{\put(17,112){\thecovertitle}}%
701 }%
702 \coverII{\page@empty}%
703 \coverIII{\AtPageCenter{\sigmobispage}}%
704 \coverIV{%
705   \pagebg{coverbgcolor}%
706   \AtPageLowerLeft{%
707     \raisebox{167mm}{\includegraphics{\coverIVbgname}}}%
708   \AtPageLowerLeft{%
709     \put(6,9){\parbox[b]{10cm}{\raggedright\large\sffamily\@issn}}}%
710   \AtPageLowerLeft{%
```

```
711     \put(166,9){\includegraphics{GIS-logo_with_text-300}}}%
712 }%
713 \if@cover
714   \AtBeginDocument{%
715     \@coverI\@coverII
716     \setcounter{page}{1}%
717   }%
718   \AtEndDocument{%
719     \@coverIII\@coverIV
720   }%
721 \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.

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

### 17.9.4 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.

```
723 \newcounter{article}%
724 \@addtoreset{section}{article}%
725 \@addtoreset{footnote}{article}%
726 \@addtoreset{figure}{article}%
727 \@addtoreset{table}{article}%
```

article  This encapsulates each article.

```
728 \newenvironment{article}[1]{%
729   \clearpage
730   \refstepcounter{article}%
731   \pagestyle{emisaarticle}%
732   \col@number=\tw@\relax
733   #1\relax
734   \l@article
```

Every `article` is its own bibliographical unit.

```
735   \begin{refsection}%
736   \maketitle
737   \ignorespaces
738 }{%
739   \end{refsection}%
740   \outputarticleappendix\par%
741   \vspace{\baselineskip}%
742   \noindent\ignorespaces
```

```
743    \if@licenseset
744        \begin{minipage}{\columnwidth}
745        \parbox[t]{\dimexpr 0.975\columnwidth-\doclicense@imagewidth\relax}{\vskip 0pt\raggedright
746        \hfill%
747        \parbox[t]{\doclicense@imagewidth}{\vskip 0pt\doclicenseImage}%
748        \end{minipage}%
749    \else
750        \ifx\@licence\@empty\relax\else\par\noindent\@licence\fi%
751    \fi%
752    \onecolumn
753    \ignorespacesafterend}%
```

### 17.9.5   Formatting editorial content

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

```
754 \newcommandtwoopt{\edit@setup}[3][][]{%
755    \title[#1][#2]{#3}
756    \pagestyle{emisaeditorial}
```

Here, section titles are a bit larger than otherwise.

```
757    \def\sec@font{\sectionfont\Large}%
758    \def\para@font{\sectionfont}%
759    \setcounter{section}{0}%
760 }%
```

editorialcontent    This encapsulates editorial content entries.

```
761 \newenvironment{editorialcontent}[1]{%
762    \onecolumn
763    \refstepcounter{article}%
764    \edit@setup{#1}%
765    \l@editorialcontent
766    \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
```

Every editorialcontent is its own bibliographical unit.

```
767    \begin{refsection}%
768    \ignorespaces
769    }{%
770    \end{refsection}%
771    \onecolumn
772    \ignorespacesafterend}%
```

### 17.9.6   Standard editorial content environments

Several types of standardized editorial contents.

editorial    This encapsulates editorials.
\editorialname

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

```
774 \newenvironment{editorial}[1][\editorialname]{%
775   \clearpage
776   \edit@setup{#1}%
777   \twocolumn[{\raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}}]%
778   \l@editorialcontent
```

Every `editorial` is its own bibliographical unit.

```
779   \begin{refsection}%
780   \ignorespaces
781   }{%
782   \end{refsection}%
783   \onecolumn
784   \ignorespacesafterend}%
```

cfp  Call for papers.

\cfpname

```
785 \def\cfpname{Call for Papers}%
786 \newenvironment{cfp}[1][\cfpname]%
787   {\editorialcontent{#1}}%
788   {\endeditorialcontent}%
```

\imprint  Imprint.

\imprintname
\imprintbody

```
789 \newcommandtwoopt{\imprint}[2][\@imprintname][\@imprintbody]{%
790   \onecolumn
791   \edit@setup[#1]{\@journalname}%
792   \l@editorialcontent
793   \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
794   \ignorespaces
795   #2
796   \onecolumn\ignorespacesafterend}%
797 \def\imprintname#1{\@bsphack\def\@imprintname{#1}\@esphack}%
798 \long\def\imprintbody#1{\@bsphack\def\@imprintbody{#1}\@esphack}%
```

```
799 \imprintname{Imprint}%
800 \imprintbody{%
801   The journal \emph{\@journalname} is the official journal of the
802   Special Interest Group on Modelling Business Information Systems
803   within the German Informatics Society (GI-SIG MoBIS).
804
805   The journal Enterprise Modelling and Information Systems
806   Architectures is intended to provide a forum for those who prefer a
807   design-oriented approach.  As the official journal of the German
808   Informatics Society (GI-SIG-MoBIS), it is dedicated to promote the
809   study and application of languages and methods for enterprise
810   modelling -- bridging the gap between theoretical foundations and
811   real world requirements.  The journal is not only aimed at
812   researchers and students in Information Systems and Computer
813   Science, but also at information systems professionals in industry,
814   commerce and public administration who are interested in innovative
815   and inspiring concepts.
```

```
816
817    The journal's editorial board consists of scholars and practitioners
818    who are renowned experts on various aspects of developing, analysing
819    and deploying enterprise models.  Besides Information Systems, they
820    cover various fields of Computer Science.
821
822    \section*{Subscription Information}
823
824    The journal is distributed free of charge for members of the
825    GI-SIG-MoBIS. Membership can be acquired through the German
826    Informatics Society (http://www.gi-ev.de/verein/mitgliedschaft/).
827    Single issues, priced at EUR\,25 each (plus shipment), can be ordered
828    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.

```
829    \newsavebox{\@editorial@box}%
830    \newlength{\editorialboxmaxheight}%
831    \setlength{\editorialboxmaxheight}{\textheight+10mm}%
832    \newcommandtwoopt{\editorialboard}[2]%
833     [\@editorialboardname][\@editorialboardbody]{%
834      \clearpage
835      \edit@setup[#1]{#1}%
836      \l@editorialcontent
837      \savebox{\@editorial@box}{%
838        \vbox{\centering%
839      \fboxsep=5mm
840      \fcolorbox{boxframecolor}{boxbgcolor}{%
841    \begin{minipage}[t]{110mm}
842      \raggedright
843      #2
844    \end{minipage}}\\*
845    }%
846      }%
847      \raisebox{15mm-\totalheight}[5mm][0mm]{\makebox[\textwidth][c]{%
848        \ifdim\ht\@editorial@box>\editorialboxmaxheight
849      \resizebox{!}{\editorialboxmaxheight}{\usebox{\@editorial@box}}%
850    \else
851      \usebox{\@editorial@box}%
852    \fi
853      }}\\*
854      \raisebox{-\textheight}[0mm][0mm]{\makebox[\textwidth][l]{%
855      \parbox[t]{\textwidth}{\raggedleft\bfseries\@issn}%
```

```latex
856 }}%
857   \onecolumn\ignorespacesafterend
858 }%
859 \def\editorialboardname#1{%
860   \@bsphack\def\@editorialboardname{#1}\@esphack}%
861 \long\def\editorialboardbody#1{%
862   \@bsphack\def\@editorialboardbody{#1}\@esphack}%

863 \editorialboardname{Editorial Board}%
864 \editorialboardbody{%
865   \section*{\@title}\vskip1mm
866   {\Large Editors in Chief\\[1mm]}
867   Ulrich Frank, University of Duisburg-Essen\\
868   Manfred Reichert, Ulm University\\[1mm]
869   {\Large Associate Editors\\[1mm]}
870   Wil van der Aalst, Eindhoven University of Technology\\
871   Witold Abramowicz, Poznan University of Economics\\
872   Colin Atkinson, University of Mannheim\\
873   J\"org Becker, University of M\"unster\\
874   J\"org Desel, University of Hagen\\
875   Werner Esswein, Dresden University of Technology\\
876   Fernand Feltz, Centre de Recherche Public Gabriel Lippmann\\
877   Andreas Gadatsch, Bonn-Rhine-Sieg University of Applied Sciences\\
878   Martin Glinz, University of Zurich\\
879   Norbert Gronau, University of Potsdam\\
880   Wilhelm Hasselbring, University of Kiel\\
881   Brian Henderson-Sellers, University of Technology, Sydney\\
882   Stefan Jablonski, University of Bayreuth\\
883   Manfred Jeusfeld, Tilburg University\\
884   Reinhard Jung, University of St.\,Gallen\\
885   Dimitris Karagiannis, University of Vienna\\
886   John Krogstie, University of Trondheim\\
887   Thomas K\"uhne, Victoria University of Wellington\\
888   Frank Leymann, University of Stuttgart\\
889   Stephen W. Liddle, Brigham Young University\\
890   Peter Loos, Johannes Gutenberg-University of Mainz\\
891   Oscar Pastor L\'opez, Universidad Polit\`ecnica de Val\`encia\\
892   Heinrich C. Mayr, University of Klagenfurt\\
893   Jan Mendling, Vienna University of Economics and Business\\
894   Markus N\"uttgens, University of Hamburg\\
895   Andreas Oberweis, University of Karlsruhe\\
896   Erich Ortner, Darmstadt University of Technology\\
897   Erik Proper, Radboud University Nijmegen\\
898   Michael Rebstock, University of Applied Sciences Darmstadt\\
899   Stefanie Rinderle-Ma, University of Vienna\\
900   Michael Rosemann, Queensland University of Technology\\
901   Matti Rossi, Aalto University\\
902   Elmar J. Sinz, University of Bamberg\\
903   Friedrich Steimann, University of Hagen\\
904   Stefan Strecker, University of Hagen\\
```

```
905    Bernhard Thalheim, University of Kiel\\
906    Oliver Thomas, University of Osnabr\"uck\\
907    Juha-Pekka Tolvanen, University of Jyv\"askyl\"a\\
908    Klaus Turowski, University of Augsburg\\
909    Gottfried Vossen, University of M\"unster\\
910    Mathias Weske, University of Potsdam\\
911    Robert Winter, University of St.\,Gallen\\
912    Heinz Z\"ullighoven, University of Hamburg}%
```

\guidelines  Guidelines for Authors.

\guidelinesname

\guidelinesbody

```
913  \newcommandtwoopt{\guidelines}[2]%
914  [\@guidelinesname][\@guidelinesbody]{%
915    \onecolumn
916    \edit@setup{#1}%
917    \l@editorialcontent
918    \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
919    \ignorespaces
920    #2
921    \onecolumn\ignorespacesafterend}%
922  \def\guidelinesname#1{%
923    \@bsphack\def\@guidelinesname{#1}\@esphack}%
924  \long\def\guidelinesbody#1{%
925    \@bsphack\def\@guidelinesbody{#1}\@esphack}%

926  \guidelinesname{Guidelines for Authors}%
927  \guidelinesbody{%
928    The journal serves to publish results of innovative research on all
929    facets of creating and analysing enterprise models and information
930    systems architectures.  For research papers, it is required to
931    satisfy academic standards in terms of originality, level of
932    abstraction and justification of results.  Experience reports serve
933    to describe and analyse success stories as well as practical
934    obstacles and resulting research challenges.  Topics covered by the
935    journal include, but are not restricted to the following subjects:
936    \begin{itemize}
937      \item  Languages and Methods for Enterprise Modelling
938      \item  Reusable Domain Models (Reference Models)
939      \item  Analysis and Design Patterns
940      \item  Modelling of Business Processes and Workflows
941      \item  Process-Oriented System Architectures
942      \item  Component-Oriented System Architectures
943      \item  Conceptual Modelling for Component-Oriented Design
944      \item  Ontologies for Enterprise Modelling
945      \item  Modelling for Enterprise Application Integration
946      \item  Modelling for Data Warehouses
947      \item  Modelling to support Knowledge Management
948      \item  Model-Driven Development
949      \item  Aspect-Oriented Design
950      \item  Agile Methods for Enterprise Modelling
```

### 17.9.7  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.

```
970  \def\maketitle{%
971    \begingroup
972    \let\footnoterule\relax
973    \let\footnote\thanks
974    \let\thefootnote\relax
975    \def\@makefnmark{\textsuperscript{\@thefnmark}}%
976    \ifnum\col@number=\@ne
977      \@maketitle
978    \else
979      \twocolumn[\@maketitle]%
980    \fi
981    \global\@topnum\z@
982    \@thanks
983    \endgroup
984    \setcounter{footnote}{0}%
985  }%
```

\@maketitle   This assembles and outputs the article title.

```
986  \def\@maketitle{%
987    \bgroup
988    \normalfont
989    \pretolerance=9999
990    \parskip\z@
991    \parindent\z@
```

```
992     \if!\@title!
993     \else
994     {\raggedright
995         \titlefont\ignorespaces
996         \strut\@title\strut\par}%
997     \vskip2mm\relax
998     \fi
999  \if!\@subtitle!
1000 \vskip5mm\relax
1001 \else
1002    {\makebox[\textwidth][r]{%
1003      \begin{minipage}{\textwidth-15mm}
1004          \raggedright
1005          \subtitlefont\ignorespaces
1006          \strut\@subtitle\strut
1007       \end{minipage}}%
1008        \par}%
1009    \vskip5mm\relax
1010 \fi
1011 \if!\@authors!
1012 \else
1013 {\raggedright
1014  \authorfont\ignorespaces
1015  \strut\@authors
1016  \ifx\@email\@empty
1017      \ClassError{emisa}{There has to be one corresponding author!}{Please use \string\author*
1018  \else
1019     \ignorespaces\makebox[0pt][l]{\footnote{*~Corresponding author.\newline E-mail.\ \url{\@e
1020  \fi%
1021  \ifx\@acknowledgements\@empty
1022  \else
1023     \ignorespaces\makebox[0pt][l]{\footnote{\@acknowledgements}}%
1024  \fi%
1025  \strut\par}%
1026 \vskip2mm\relax
1027 \fi
1028 \if!\@addresses@list!
1029 \else
1030    {\raggedright
1031     \footnotesize\ignorespaces
1032     \strut\@addresses@list\strut\par}%
1033    \vskip8mm\relax
1034 \fi
1035 \if!\@authornote!
1036 \else
1037    \let\thefootnote\relax
1038    \ignorespaces\makebox[0pt][l]{\footnote{Note: \@authornote}}%
1039 \fi
1040 \if!\@abstract!
```

```
1041    \else
1042     {\abstractfont\ignorespaces
1043      \strut\textup{Abstract.\ }\@abstract\strut\par}%
1044      \vskip5mm\relax
1045    \fi
1046    \if!\@keywords!
1047      \vskip3mm\relax
1048    \else
1049     {\raggedright
1050      \ignorespaces
1051      \strut Keywords.\ \@keywords\strut\par}
1052      \vskip3mm\relax
1053    \fi
1054    \if!\@articleinfo@name!
1055      \if!\@articleinfo@rdate!
1056        \if!\@articleinfo@adate!
1057          \vskip\baselineskip\relax
1058        \fi
1059      \fi
1060    \else
1061     {\raggedright
1062      \small
1063      \ignorespaces
1064      \strut Communicated by\ \@articleinfo@name.%
1065      \if!\@articleinfo@rdate!%
1066      \else
1067          \space Received\ \@articleinfo@rdate.%
1068      \fi%
1069      \if!\@articleinfo@adate!%
1070      \else
1071          \space Accepted\ %
1072          \if!\@articleinfo@rounds!%
1073          \else%
1074            \ifnum\@articleinfo@rounds=1
1075                after \@articleinfo@rounds{} revision\space%
1076            \else
1077                after \@articleinfo@rounds{} revisions\space%
1078            \fi%
1079          \fi%
1080          on \@articleinfo@adate.
1081      \fi%
1082      \strut\par}
1083      \vskip5mm\relax
1084    \fi
1085    \egroup
1086 }
```

### 17.9.8 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.

```
1087 \def\@sect#1#2#3#4#5#6[#7]#8{%
1088   \ifnum #2>\c@secnumdepth
1089     \let\@svsec\@empty
1090   \else
1091     \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.

```
1092     \protected@edef\@svsec{\@seccntformat{#1}}%
1093   \fi
1094   \@tempskipa #5\relax
1095   \ifdim \@tempskipa>\z@
```

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

```
1096     \begingroup
1097       #6{\noindent%
```

```
1098        \@hangfrom{\hskip #3\relax\@svsec}%
1099          \raggedright
1100          \interlinepenalty\@M
1101          \strut#8\strut
1102          \@@par}%
1103      \endgroup
1104      \csname #1mark\endcsname{#7}%
1105      \addcontentsline{toc}{#1}{%
1106        \ifnum #2>\c@secnumdepth \else
1107          \protect\numberline{\csname the#1\endcsname}%
1108        \fi
1109        #7}%
1110    \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.

```
1111      \def\@svsechd{%
1112        #6{\hskip #3\relax
1113        \@svsec #8}%
1114        \csname #1mark\endcsname{#7}%
1115        \addcontentsline{toc}{#1}{%
1116          \ifnum #2>\c@secnumdepth \else
1117            \protect\numberline{\csname the#1\endcsname}%
1118          \fi
1119          #7}}%
1120    \fi
1121    \@xsect{#5}}
```

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

**Syntax:**

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

See also the list on p. .

```
1122  \def\@ssect#1#2#3#4#5{%
1123    \@tempskipa #3\relax
1124    \ifdim \@tempskipa>\z@
1125      \begingroup
1126        #4{\noindent%
1127          \hskip #1\relax
1128          \noindent%
1129          \parbox[t]{\linewidth}{%
1130            \raggedright\interlinepenalty\@M#5\strut}\@@par}%
1131      \endgroup
1132    \else
1133      \def\@svsechd{#4{\hskip #1\relax #5}}%
1134    \fi
1135    \@xsect{#3}}
```

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

```
1136 \def\@seccntformat#1{%
1137   \csname the#1\endcsname%
1138   \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.

```
1139 \def\section{\@startsection{section}%
1140   {1}{\z@}%
1141   {-1\baselineskip plus -2mm minus -2mm}%
1142   {.5\baselineskip plus .25\baselineskip minus .125\baselineskip}%
1143   {\sec@font}}%
```

**\subsection**

```
1144 \def\subsection{\@startsection{subsection}%
1145   {2}{\z@}%
1146   {-3mm plus -2mm minus -1.5mm}%
1147   {.25\baselineskip  plus .125\baselineskip minus .125\baselineskip}%
1148   {\sec@font}}%
```

**\subsubsection**

```
1149 \def\subsubsection{\@startsection{subsubsection}%
1150   {3}{\z@}%
1151   {-3mm plus -2mm minus -1mm}%
1152   {1sp}%
1153   {\sec@font}}%
```

**\paragraph**

```
1154 \def\paragraph{\@startsection{paragraph}%
1155   {4}{\z@}%
1156   {-1.5mm plus -1mm minus -0.75mm}%
1157   {1sp}%
1158   {\para@font}}%
```

\subparagraph

```
1159  \def\subparagraph{\@startsection{subparagraph}%
1160    {5}{\z@}%
1161    {-1.5mm}%
1162    {-1em}%
1163    {\para@font}}%
```

### 17.9.9 The table of contents

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

```
1164  \def\tableofcontents{%
1165    \onecolumn
1166    \pagestyle{emisaeditorial}%
1167    \footruleon
1168    \title{Table of Contents}%
1169    \null
1170    \vskip10mm
1171    \maketitle
1172    \vskip15mm
1173    \bgroup
```

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

```
1174      \parindent\z@
1175      \parskip\z@
1176      \@starttoc{toc}%
1177    \egroup
1178    \onecolumn
1179    }
```

\l@article          These two routines output content lines to the ToC.
\l@editorialcontent
```
1180  \newcommand*\l@article{%
1181    \if!\@subtitle!
1182      \addtocentry{\@tocauthor}{\thepage}{\@toctitle}%
1183    \else
1184      \addtocentry{\@tocauthor}{\thepage}{\@toctitle\ --\ \@tocsubtitle}%
1185    \fi}%
1186  \newcommand*\l@editorialcontent{%
1187    \addtocentry{\@toctitle}{\thepage}{}}%
```

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

```
1188  \newcommand*\addtocentry[4][toc]{%
1189    \addtocontents{#1}{\string\emisa@tocentry{#2}{#3}{#4}}}%
```

\emisa@tocentry typesets that entry.

```
1190 \newcommand{\emisa@tocentry}[3]{%
1191   \makebox[\textwidth][l]{%
1192     \parbox[t]{72.5mm-\@pnumwidth}{\raggedright\textbf{#1}}%
1193     \makebox[\@pnumwidth][r]{\textbf{#2}}%
1194     \hfill
1195     \parbox[t]{85mm}{\raggedright#3}}%
1196   \vspace{3mm}}%
```

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

```
1197 \setcounter{tocdepth}{-2}
```

### 17.9.10  A few abbreviations

\ie
\eg
\cf
\etal
\emisa@abbrv
\emisaabbrv
\emisa@initialism
\emisainitialism
\OMG
\BPM
\BPMN
\UML Macros for a couple of abbreviations used quite frequently.

```
1198 \newcommand*{\emisa@abbrv}[1]{#1\@\xspace}
1199 \newcommand*{\emisaabbrv}[2]{\gdef#1{\emisa@abbrv{#2}}}
1200 \newcommand*{\emisa@initialism}[1]{\textsc{#1}\xspace}
1201 \newcommand*{\emisainitialism}[2]{\gdef#1{\emisa@initialism{#2}}}
1202 \newcommand*{\ie}{\@ifnextchar,{\emisa@abbrv{i.e.}}{\emisa@abbrv{i.e.,}}}
1203 \newcommand*{\eg}{\@ifnextchar,{\emisa@abbrv{e.g.}}{\emisa@abbrv{e.g.,}}}
1204 \newcommand*{\cf}{\emisa@abbrv{cf.}}
1205 \newcommand*{\etal}{\emisa@abbrv{et~al.}}
1206 \newcommand*{\OMG}{\emisa@initialism{omg}}
1207 \newcommand*{\BPM}{\emisa@initialism{bpm}}
1208 \newcommand*{\BPMN}{\emisa@initialism{bpmn}}
1209 \newcommand*{\UML}{\emisa@initialism{uml}}
```

### 17.9.11  Other macros defined by EMISA

Macros for convience

```
1210 \newcommand{\meta}[1]{{\ttfamily\small #1}} % designate a meta type (meta class)
1211 \newcommand{\type}[1]{\textsf{#1}} % designate a type (class)
```

## 17.10  Bibliographies

The infrastructure for that is already present in LaTeX [19, ltbibl.dtx] so we have to tinker with just a couple of things.

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.

```
1212 \def\@tempa#1\do\addbibresource#2\nil{%
1213     \ifx\relax#2\relax
1214     \else
1215     \def\@tempa##1\do\addbibresource##2\nil{\def\@preamblecmds{##1##2}}%
1216     \expandafter\@tempa\@preamblecmds\nil
1217     \fi
1218 }
1219 \expandafter\@tempa\@preamblecmds\do\addbibresource\nil
1220 \AfterEndPreamble{%
1221     \DeclareRobustCommand{\bibliography}[1]{%
1222         \addbibresource{#1}}%
1223 }%
1224 \renewcommand{\fps@figure}{htbp}
1225 \renewcommand{\fps@table}{htbp}
1226 \tolerance 1414
1227 \hbadness 1414
1228 \emergencystretch 1.5em
1229 \hfuzz 0.3pt
1230 \widowpenalty=10000
1231 \displaywidowpenalty=10000
1232 \clubpenalty=5000
1233 \interfootnotelinepenalty=9999
1234 \brokenpenalty=2000
1235 \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.

```
1236 ⟨/class⟩
1237 ⟨*biblatex⟩
```

### 17.10.1   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.

```
1238 ⟨*bbx⟩
```

We start by declaring the file name and date.

```
1239 \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
. . .

```
1240 \RequireBibliographyStyle{authoryear}
```

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

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

```
1241 \newcommand*{\bibitemlabel}[1]{%
1242    \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.

```
1243 \defbibenvironment{bibliography}
1244  {\list{}%
1245    {\setlength{\labelwidth}{\z@}%
1246     \setlength{\leftmargin}{\z@}%
1247     \setlength{\itemindent}{-\leftmargin}%
1248     \setlength{\itemsep}{.5\baselineskip\@plus.2\baselineskip\@minus.2\baselineskip}%
1249     \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.

```
1250    }%
1251    \let\makelabel\bibitemlabel
```

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

```
1252    \tolerance 9999
1253    \emergencystretch 3em
1254    \hfuzz .5\p@
1255    \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.

```
1256    \clubpenalty 4000
1257    \@clubpenalty\clubpenalty
1258    \widowpenalty 4000
```

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

```
1259    \sfcode`\.\@m
```

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

```
1260    \renewcommand*{\finalnamedelim}{\addcomma\space}%
1261  }%
1262  {%
```

An empty `thebibliography` environment will cause a warning.

```
1263    \def\@noitemerr{\@latex@warning{Empty `thebibliography' environment}}%
1264    \endlist}
```

53

```
1265    {\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 BIBTEXbehavior (no linebreaks at highnamepenalty breakpoints) is reached by setting it to ‚Äòinfinite' ($\geq 10\,000$).

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

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

```
1266 \renewcommand*{\newunitpunct}{\space}
```

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

```
1267 \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.

```
1268 \renewcommand*{\bibsetup}{%
1269   \interlinepenalty=5000\relax
```

```
1270    \widowpenalty=10000\relax
1271    \clubpenalty=10000\relax
1272    \biburlsetup
1273    \flushbottom
1274    \frenchspacing
1275    \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.

```
1276  \renewcommand*{\biburlsetup}{%
1277    \Urlmuskip=0mu plus 2mu\relax
1278    \mathchardef\UrlBreakPenalty=200\relax
1279    \mathchardef\UrlBigBreakPenalty=100\relax
1280    \mathchardef\UrlEmergencyPenalty=9000\relax
1281    \appto\UrlSpecials{%
1282      \do\0{\mathchar`\0\penalty\UrlEmergencyPenalty}%
1283      \do\1{\mathchar`\1\penalty\UrlEmergencyPenalty}%
1284      \do\2{\mathchar`\2\penalty\UrlEmergencyPenalty}%
1285      \do\3{\mathchar`\3\penalty\UrlEmergencyPenalty}%
1286      \do\4{\mathchar`\4\penalty\UrlEmergencyPenalty}%
1287      \do\5{\mathchar`\5\penalty\UrlEmergencyPenalty}%
1288      \do\6{\mathchar`\6\penalty\UrlEmergencyPenalty}%
1289      \do\7{\mathchar`\7\penalty\UrlEmergencyPenalty}%
1290      \do\8{\mathchar`\8\penalty\UrlEmergencyPenalty}%
1291      \do\9{\mathchar`\9\penalty\UrlEmergencyPenalty}}%
1292    \def\UrlBreaks{%
```

```
1293    \do\.\do\@\do\/\do\\\do\!\do\_\do\|\do\;\do\>\do\]\do\)\do\}%
1294    \do\,\do\?\do\'\do\+\do\=\do\#\do\$\do\&\do\*\do\^\do\"}%
1295  \def\UrlBigBreaks{\do\:\do\-}%
```

URLs are typeset in sans-serif script.

```
1296  \def\UrlFont{\sffamily}%
1297  }
```

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.

```
1298 \DeclareFieldFormat{citetitle}{#1}
1299 \DeclareFieldFormat[article]{citetitle}{#1\isdot}
1300 \DeclareFieldFormat[inbook]{citetitle}{#1\isdot}
1301 \DeclareFieldFormat[incollection]{citetitle}{#1\isdot}
1302 \DeclareFieldFormat[inproceedings]{citetitle}{#1\isdot}
1303 \DeclareFieldFormat[patent]{citetitle}{#1\isdot}
1304 \DeclareFieldFormat[thesis]{citetitle}{#1\isdot}
1305 \DeclareFieldFormat[unpublished]{citetitle}{#1\isdot}
```

The following field formats are used for output in bibliographies.

```
1306 \DeclareFieldFormat{booktitle}{#1\isdot}
1307 \DeclareFieldFormat{journaltitle}{#1}
1308 \DeclareFieldFormat{issuetitle}{#1}
```

```
1309 \DeclareFieldFormat{maintitle}{#1}
1310 \DeclareFieldFormat{title}{#1}
1311 \DeclareFieldFormat[article]{title}{#1\isdot}
1312 \DeclareFieldFormat[inbook]{title}{#1\isdot}
1313 \DeclareFieldFormat[incollection]{title}{#1\isdot}
1314 \DeclareFieldFormat[inproceedings]{title}{#1\isdot}
1315 \DeclareFieldFormat[patent]{title}{#1\isdot}
1316 \DeclareFieldFormat[thesis]{title}{#1\isdot}
1317 \DeclareFieldFormat[unpublished]{title}{#1\isdot}
1318 \DeclareFieldFormat{url}{\url{#1}}
1319 \DeclareFieldFormat{urldate}{\bibstring{urlseen}\addcolon\space#1}
1320 \DeclareFieldAlias[misc]{note}{urldate}
1321 \DeclareFieldAlias[report]{note}{urldate}
1322 \DeclareFieldAlias[thesis]{note}{urldate}
1323 \DeclareFieldFormat{version}{\bibcpstring{version}~#1}
1324 \DeclareFieldFormat{volume}{\bibcpstring{volume}~#1}
1325 \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.

```
1326 \DeclareNameFormat{emisa:names}{%
1327   \usebibmacro{name:last-firstinit}{#1}{#4}{#5}{#7}%
1328   \usebibmacro{name:andothers}}
```

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

me:last-firstinit

bibmacro
```
1329 \newbibmacro*{name:last-firstinit}[4]{%
1330   \usebibmacro{name:delim}{#2#3#1}%
1331   \usebibmacro{name:hook}{#2#3#1}%
```

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

```
1332   \ifblank{#3}{}{%
1333     \mkbibnameprefix{#3}%\isdot
1334     \ifpunctmark{'}
1335       {}
1336       {\ifuseprefix{\addhighpenspace}{\addlowpenspace}}}%
```

. . . last name . . .

```
1337   \mkbibnamelast{#1}\addhighpenspace
```

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

```
1338   \ifblank{#4}{}{\addlowpenspace\mkbibnameaffix{#4}\addlowpenspace}%
```

. . . and first name (initials).

```
1339   \ifblank{#2}{}{\mkbibnamefirst{#2}\isdot}%
1340 }%
```

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

```
1341 \renewbibmacro*{in:}{%
1342   \printtext{%
1343     \bibcpstring{in}%
1344     \intitlepunct}}
```

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

author bibmacro

```
1345 \renewbibmacro*{author}{%
1346   \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
1347     {\printnames{author}%
1348      \iffieldundef{authortype}
1349         {}
1350         {\setunit{\addspace}%
1351 \usebibmacro{authorstrg}}}
1352     {}}
```

```
1353 \renewbibmacro*{editor}{%
1354   \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
1355     {\printnames{editor}%
1356      \setunit{\addspace}%
1357      \usebibmacro{editorstrg}%
1358      \clearname{editor}}
1359     {}}
```

```
1360 \renewbibmacro*{editor+others}{%
1361   \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
1362     {\printnames[emisa:names]{editor}%
1363      \setunit{\addspace}%
1364      \usebibmacro{editor+othersstrg}%
1365      \clearname{editor}}
1366     {}}
```

```
1367 \renewbibmacro*{translator}{%
1368   \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
1369     {\printnames{translator}%
1370      \setunit{\addspace}%
1371      \usebibmacro{translatorstrg}%
1372      \clearname{translator}}
1373     {}}
```

```
1374 \renewbibmacro*{translator+others}{%
1375   \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
1376     {\printnames{translator}%
1377      \setunit{\addspace}%
1378      \usebibmacro{translator+othersstrg}%
1379      \clearname{translator}}
1380     {}}
```

```
1381 \renewbibmacro*{editor+othersstrg}{%
1382   \iffieldundef{editortype}
1383     {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
1384        {\def\abx@tempa{editors}}
1385        {\def\abx@tempa{editor}}}
1386     {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
1387        {\edef\abx@tempa{\thefield{editortype}s}}
1388        {\edef\abx@tempa{\thefield{editortype}}}}%
1389   \let\abx@tempb=\empty
1390   \ifnamesequal{editor}{translator}
1391     {\appto\abx@tempa{tr}%
```

```
1392        \appto\abx@tempb{\clearname{translator}}}
1393      {}%
1394    \ifnamesequal{editor}{commentator}
1395      {\appto\abx@tempa{co}%
1396       \appto\abx@tempb{\clearname{commentator}}}
1397      {\ifnamesequal{editor}{annotator}
1398         {\appto\abx@tempa{an}%
1399 \appto\abx@tempb{\clearname{annotator}}}
1400         {}}%
1401    \ifnamesequal{editor}{introduction}
1402      {\appto\abx@tempa{in}%
1403       \appto\abx@tempb{\clearname{introduction}}}
1404      {\ifnamesequal{editor}{foreword}
1405         {\appto\abx@tempa{fo}%
1406 \appto\abx@tempb{\clearname{foreword}}}
1407         {\ifnamesequal{editor}{afterword}
1408            {\appto\abx@tempa{af}%
1409             \appto\abx@tempb{\clearname{afterword}}}
1410            {}}}%
1411    \ifbibxstring{\abx@tempa}
1412      {\bibstring[\mkbibparens]{\abx@tempa}%
1413       \abx@tempb}
1414      {\usebibmacro{editorstrg}}}%
```

emisa:url+urldate bibmacro

```
1415 \newbibmacro*{emisa:url+urldate}{%
1416    \iffieldundef{url}
1417      {\printfield{howpublished}}
1418      {\printfield{url}}
1419    \setunit*{\addperiod\space}\newblock
1420    \iffieldundef{urlyear}
1421      {\printfield{note}}
1422      {\printtext[urldate]{\printurldate}}}
```

isa:url+type+version+urldate
                  bibmacro

```
1423 \newbibmacro*{emisa:url+type+version+urldate}{%
1424    \iffieldundef{url}%
1425      {\printfield{url}}
1426      {\printfield{howpublished}}%
1427    \setunit*{\addcomma\space}\newblock
1428    \printfield{type}%
1429    \setunit*{\addcomma\space}\newblock
1430    \printfield{version}%
1431    \setunit*{\addcomma\space}\newblock
1432    \iffieldundef{urlyear}
1433      {\printfield{note}}
1434      {\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_.

```
1435 \renewbibmacro*{finentry}{}%
```

```
1436 \DeclareBibliographyDriver{article}{%
1437   \usebibmacro{bibindex}%
1438   \usebibmacro{begentry}%
1439   \usebibmacro{author/translator+others}%
1440   \setunit{\labelnamepunct}\newblock
1441   \usebibmacro{title}%
1442   \newunit
1443   \printlist{language}%
1444   \newunit\newblock
1445   \usebibmacro{bytranslator+others}%
1446   \newunit\newblock
1447   \printfield{version}%
1448   \setunit{\addperiod\space}%
1449   \usebibmacro{in:}%
1450   \usebibmacro{journal+issuetitle}%
1451   \newunit\newblock
1452   \usebibmacro{editor+others}%
1453   \newunit\newblock
1454   \usebibmacro{note+pages}%
1455   \newunit\newblock
1456   \iftoggle{bbx:isbn}
1457     {\printfield{issn}}
1458     {}%
1459   \newunit\newblock
1460   \usebibmacro{doi+eprint+url}%
1461   \newunit\newblock
1462   \usebibmacro{addendum+pubstate}%
1463   \newunit\newblock
1464   \usebibmacro{pageref}%
1465   \usebibmacro{finentry}}
```

```
1466 \DeclareBibliographyDriver{book}{%
1467   \usebibmacro{bibindex}%
1468   \usebibmacro{begentry}%
1469   \usebibmacro{author/editor+others/translator+others}%
1470   \setunit{\labelnamepunct}\newblock
1471   \usebibmacro{maintitle+title}%
1472   \newunit
1473   \printlist{language}%
```

```
1474    \newunit\newblock
1475    \usebibmacro{editor+others}%
1476    \setunit{\addcomma\space}%
1477    \newblock
1478    \printfield{edition}%
1479    \setunit{\addperiod\space}%
1480    \newblock
1481    \usebibmacro{series+number}%
1482    \newunit
1483    \newblock
1484    \iffieldundef{maintitle}
1485      {\printfield{volume}%
1486       \printfield{part}}
1487      {}%
1488    \newunit
1489    \printfield{volumes}%
1490    \setunit{\addperiod\space}%
1491    \newblock
1492    \printfield{note}%
1493    \setunit{\addperiod\space}%
1494    \newblock
1495    \usebibmacro{publisher+location+date}%
1496    \newunit\newblock
1497    \usebibmacro{chapter+pages}%
1498    \newunit
1499    \printfield{pagetotal}%
1500    \newunit\newblock
1501    \iftoggle{bbx:isbn}
1502      {\printfield{isbn}}
1503      {}%
1504    \newunit\newblock
1505    \usebibmacro{doi+eprint+url}%
1506    \newunit\newblock
1507    \usebibmacro{addendum+pubstate}%
1508    \newunit\newblock
1509    \usebibmacro{pageref}%
1510    \usebibmacro{finentry}}
```

## booklet bibdriver

```
1511    \DeclareBibliographyDriver{booklet}{%
1512      \usebibmacro{bibindex}%
1513      \usebibmacro{begentry}%
1514      \usebibmacro{author/editor+others/translator+others}%
1515      \setunit{\labelnamepunct}\newblock
1516      \usebibmacro{title}%
1517      \newunit
1518      \printlist{language}%
1519      \newunit\newblock
1520      \usebibmacro{editor+others}%
```

```
1521    \newunit\newblock
1522    \printfield{howpublished}%
1523    \newunit\newblock
1524    \printfield{type}%
1525    \newunit\newblock
1526    \printfield{note}%
1527    \newunit\newblock
1528    \usebibmacro{location+date}%
1529    \newunit\newblock
1530    \usebibmacro{chapter+pages}%
1531    \newunit
1532    \printfield{pagetotal}%
1533    \newunit\newblock
1534    \usebibmacro{doi+eprint+url}%
1535    \newunit\newblock
1536    \usebibmacro{addendum+pubstate}%
1537    \newunit\newblock
1538    \usebibmacro{pageref}%
1539    \usebibmacro{finentry}}
```

collection bibdriver

```
1540 \DeclareBibliographyDriver{collection}{%
1541    \usebibmacro{bibindex}%
1542    \usebibmacro{begentry}%
1543    \usebibmacro{editor+others}%
1544    \setunit{\labelnamepunct}\newblock
1545    \usebibmacro{maintitle+title}%
1546    \newunit
1547    \printlist{language}%
1548    \newunit\newblock
1549    \usebibmacro{editor+others}%
1550    \setunit{\addcomma\space}%
1551    \newblock
1552    \printfield{edition}%
1553    \setunit{\addperiod\space}%
1554    \newblock
1555    \usebibmacro{series+number}%
1556 \newunit
1557    \newblock
1558    \iffieldundef{maintitle}
1559      {\printfield{volume}%
1560       \printfield{part}}
1561      {}%
1562    \newunit
1563    \printfield{volumes}%
1564    \setunit{\addperiod\space}%
1565    \newblock
1566    \printfield{note}%
1567    \setunit{\addperiod\space}%
```

```
1568    \newblock
1569    \usebibmacro{publisher+location+date}%
1570    \newunit\newblock
1571    \usebibmacro{chapter+pages}%
1572    \newunit
1573    \printfield{pagetotal}%
1574    \newunit\newblock
1575    \iftoggle{bbx:isbn}
1576      {\printfield{isbn}}
1577      {}%
1578    \newunit\newblock
1579    \usebibmacro{doi+eprint+url}%
1580    \newunit\newblock
1581    \usebibmacro{addendum+pubstate}%
1582    \newunit\newblock
1583    \usebibmacro{pageref}%
1584    \usebibmacro{finentry}}
```

## inbook bibdriver

```
1585  \DeclareBibliographyDriver{inbook}{%
1586    \usebibmacro{bibindex}%
1587    \usebibmacro{begentry}%
1588    \usebibmacro{author/translator+others}%
1589    \setunit{\labelnamepunct}\newblock
1590    \usebibmacro{title}%
1591    \newunit
1592    \printlist{language}%
1593    \newunit\newblock
1594    \usebibmacro{in:}%
1595    \usebibmacro{bybookauthor}%
1596    \newunit\newblock
1597    \usebibmacro{maintitle+booktitle}%
1598    \newunit\newblock
1599    \usebibmacro{editor+others}%
1600    \setunit{\addcomma\space}%
1601    \newblock
1602    \printfield{edition}%
1603    \newunit
1604    \iffieldundef{maintitle}
1605      {\printfield{volume}%
1606       \printfield{part}}
1607      {}%
1608    \newunit
1609    \printfield{volumes}%
1610    \newunit\newblock
1611    \usebibmacro{series+number}%
1612    \newunit\newblock
1613    \printfield{note}%
1614    \newunit\newblock
```

```
1615    \usebibmacro{publisher+location+date}%
1616    \newunit\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}}
```

## incollection bibdriver

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

Period after title, if any

```
1637    \setunit{\addperiod\space}%
1638    \usebibmacro{in:}%
1639    \usebibmacro{editor+others}%
1640    \setunit{\addspace}%
1641    \newblock
1642    \usebibmacro{byauthor}%
1643    \newblock
1644    \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
1645    \newblock
1646    \printfield{edition}%
1647    \setunit{\addperiod\space}%
1648    \newblock
1649    \usebibmacro{series+number}%
1650    \newunit
1651    \newblock
1652    \iffieldundef{maintitle}
1653      {\printfield{volume}%
1654       \printfield{part}}
1655      {}%
1656    \newunit
1657    \printfield{volumes}%
```

```
1658    \setunit{\addperiod\space}%
1659    \newblock
1660    \printfield{note}%
1661    \setunit{\addperiod\space}%
1662    \newblock
1663    \usebibmacro{publisher+location+date}%
1664    \setunit*{\addcomma\space}%
1665    \newblock
1666    \usebibmacro{chapter+pages}%
1667    \newunit\newblock
1668    \iftoggle{bbx:isbn}
1669      {\printfield{isbn}}
1670      {}%
1671    \newunit\newblock
1672    \usebibmacro{doi+eprint+url}%
1673    \newunit\newblock
1674    \usebibmacro{addendum+pubstate}%
1675    \newunit\newblock
1676    \usebibmacro{pageref}%
1677    \usebibmacro{finentry}}
```

inproceedings bibdriver

```
1678  \DeclareBibliographyDriver{inproceedings}{%
1679    \usebibmacro{bibindex}%
1680    \usebibmacro{begentry}%
1681    \usebibmacro{author/translator+others}%
1682    \setunit{\labelnamepunct}%
1683    \newblock
1684    \usebibmacro{title}%
1685    \setunit{\addcomma\space}%
1686    \printlist{language}%
1687    \newblock
1688    \usebibmacro{byauthor}%
```

Period after title, if any

```
1689    \setunit{\addperiod\space}%
1690    \usebibmacro{in:}%
1691    \usebibmacro{editor+others}%
1692    \setunit{\addspace}%
1693    \newblock
1694    \usebibmacro{byauthor}%
1695    \newblock
1696    \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
1697    \newblock
1698    \usebibmacro{event+venue+date}%
1699    \setunit{\addperiod\space}%
1700    \newblock
```

```
1701    \usebibmacro{series+number}%
1702    \newunit
1703    \newblock
1704    \iffieldundef{maintitle}
1705      {\printfield{volume}%
1706       \printfield{part}}
1707      {}%
1708    \newunit
1709    \printfield{volumes}%
1710    \setunit{\addperiod\space}%
1711    \newblock
1712    \printfield{note}%
1713    \setunit{\addperiod\space}%
1714    \newblock
1715    \printlist{organization}%
1716    \setunit{\addperiod\space}%
1717    \newblock
1718    \usebibmacro{publisher+location+date}%
1719    \setunit{\addcomma\space}%
1720    \newblock
1721    \usebibmacro{chapter+pages}%
1722    \newunit\newblock
1723    \iftoggle{bbx:isbn}
1724      {\printfield{isbn}}
1725      {}%
1726    \newunit\newblock
1727    \usebibmacro{doi+eprint+url}%
1728    \newunit\newblock
1729    \usebibmacro{addendum+pubstate}%
1730    \newunit\newblock
1731    \usebibmacro{pageref}%
1732    \usebibmacro{finentry}}
```

manual bibdriver

```
1733  \DeclareBibliographyDriver{manual}{%
1734    \usebibmacro{bibindex}%
1735    \usebibmacro{begentry}%
1736    \usebibmacro{author/editor}%
1737    \setunit{\labelnamepunct}\newblock
1738    \usebibmacro{title}%
1739    \newunit
1740    \printlist{language}%
1741    \newunit\newblock
1742    \usebibmacro{byeditor}%
1743    \setunit{\addcomma\space}%
1744    \newblock
1745    \printfield{edition}%
1746    \newunit\newblock
1747    \usebibmacro{series+number}%
```

```
1748    \newunit\newblock
1749    \printfield{type}%
1750    \newunit
1751    \printfield{version}%
1752    \newunit
1753    \printfield{note}%
1754    \newunit\newblock
1755    \printlist{organization}%
1756    \newunit
1757    \usebibmacro{publisher+location+date}%
1758    \newunit\newblock
1759    \usebibmacro{chapter+pages}%
1760    \newunit
1761    \printfield{pagetotal}%
1762    \newunit\newblock
1763    \iftoggle{bbx:isbn}
1764      {\printfield{isbn}}
1765      {}%
1766    \newunit\newblock
1767    \usebibmacro{doi+eprint+url}%
1768    \newunit\newblock
1769    \usebibmacro{addendum+pubstate}%
1770    \newunit\newblock
1771    \usebibmacro{pageref}%
1772    \usebibmacro{finentry}}
```

### misc bibdriver

```
1773  \DeclareBibliographyDriver{misc}{%
1774    \usebibmacro{bibindex}%
1775    \usebibmacro{begentry}%
1776    \usebibmacro{author/editor+others/translator+others}%
1777    \setunit{\labelnamepunct}\newblock
1778    \usebibmacro{title}%
1779    \newunit
1780    \printlist{language}%
```

Period after title, if any

```
1781    \setunit{\addperiod\space}%
1782    \usebibmacro{emisa:url+urldate}%
1783    \usebibmacro{finentry}}
```

### online bibdriver

```
1784  \DeclareBibliographyDriver{online}{%
1785    \usebibmacro{bibindex}%
1786    \usebibmacro{begentry}%
1787    \usebibmacro{author/editor+others/translator+others}%
1788    \setunit{\labelnamepunct}\newblock
1789    \usebibmacro{title}%
1790    \newunit
```

```
1791    \printlist{language}%
1792    \newunit\newblock
1793    \usebibmacro{editor+others}%
1794    \newunit\newblock
1795    \printfield{version}%
1796    \newunit
1797    \printfield{note}%
1798    \newunit\newblock
1799    \printlist{organization}%
1800    \newunit\newblock
1801    \usebibmacro{date}%
1802    \newunit\newblock
1803    \iftoggle{bbx:eprint}
1804      {\usebibmacro{eprint}}
1805      {}%
1806    \newunit\newblock
1807    \usebibmacro{url+urldate}%
1808    \newunit\newblock
1809    \usebibmacro{addendum+pubstate}%
1810    \newunit\newblock
1811    \usebibmacro{pageref}%
1812    \usebibmacro{finentry}}
```

patent bibdriver

```
1813    \DeclareBibliographyDriver{patent}{%
1814    \usebibmacro{bibindex}%
1815    \usebibmacro{begentry}%
1816    \usebibmacro{author}%
1817    \setunit{\labelnamepunct}\newblock
1818    \usebibmacro{title}%
1819    \newunit
1820    \printlist{language}%
1821    \newunit\newblock
1822    \printfield{type}%
1823    \setunit*{\addspace}%
1824    \printfield{number}%
1825    \iflistundef{location}
1826      {}
1827      {\setunit*{\addspace}%
1828       \printtext[parens]{%
1829         \printlist[][-\value{listtotal}]{location}}}%
1830    \newunit\newblock
1831    \usebibmacro{byholder}%
1832    \newunit\newblock
1833    \printfield{note}%
1834    \newunit\newblock
1835    \usebibmacro{date}%
1836    \newunit\newblock
1837    \iftoggle{bbx:url}
```

```
1838        {\usebibmacro{url+urldate}}
1839      {}%
1840    \newunit\newblock
1841    \usebibmacro{addendum+pubstate}%
1842    \newunit\newblock
1843    \usebibmacro{pageref}%
1844    \usebibmacro{finentry}}
```

periodical bibdriver

```
1845  \DeclareBibliographyDriver{periodical}{%
1846    \usebibmacro{bibindex}%
1847    \usebibmacro{begentry}%
1848    \usebibmacro{editor}%
1849    \setunit{\labelnamepunct}\newblock
1850    \usebibmacro{title+issuetitle}%
1851    \newunit
1852    \printlist{language}%
1853    \newunit\newblock
1854    \usebibmacro{byeditor}%
1855    \newunit\newblock
1856    \printfield{note}%
1857    \newunit\newblock
1858    \iftoggle{bbx:isbn}
1859      {\printfield{issn}}
1860      {}%
1861    \newunit\newblock
1862    \usebibmacro{doi+eprint+url}%
1863    \newunit\newblock
1864    \usebibmacro{addendum+pubstate}%
1865    \newunit\newblock
1866    \usebibmacro{pageref}%
1867    \usebibmacro{finentry}}
```

proceedings bibdriver

```
1868  \DeclareBibliographyDriver{proceedings}{%
1869    \usebibmacro{bibindex}%
1870    \usebibmacro{begentry}%
1871    \usebibmacro{editor+others}%
1872    \setunit{\labelnamepunct}\newblock
1873    \usebibmacro{maintitle+title}%
1874    \newunit
1875    \printlist{language}%
1876    \newunit\newblock
1877    \usebibmacro{event+venue+date}%
1878    \newunit\newblock
1879    \usebibmacro{editor+others}%
1880    \setunit{\addperiod\space}%
1881    \newblock
```

```
1882    \usebibmacro{series+number}%
1883    \newunit
1884    \newblock
1885    \iffieldundef{maintitle}
1886      {\printfield{volume}%
1887       \printfield{part}}
1888      {}%
1889    \newunit
1890    \printfield{volumes}%
1891    \setunit{\addperiod\space}%
1892    \newblock
1893    \printfield{note}%
1894    \setunit{\addperiod\space}%
1895    \newblock
1896    \printlist{organization}%
1897    \setunit{\addperiod\space}%
1898    \newblock
1899    \usebibmacro{publisher+location+date}%
1900    \newblock
1901    \usebibmacro{chapter+pages}%
1902    \newunit
1903    \printfield{pagetotal}%
1904    \newunit\newblock
1905    \iftoggle{bbx:isbn}
1906      {\printfield{isbn}}
1907      {}%
1908    \newunit\newblock
1909    \usebibmacro{doi+eprint+url}%
1910    \newunit\newblock
1911    \usebibmacro{addendum+pubstate}%
1912    \newunit\newblock
1913    \usebibmacro{pageref}%
1914    \usebibmacro{finentry}}
```

Technical reports

author
title
year
type
number
institution
address
url
note

report bibdriver

```
1915  \DeclareBibliographyDriver{report}{%
1916    \usebibmacro{bibindex}%
```

71

```
1917    \usebibmacro{begentry}%
1918    \usebibmacro{author}%
1919    \setunit{\labelnamepunct}\newblock
1920    \usebibmacro{title}%
1921    \setunit{\addperiod\space}%
1922    \printfield{type}%
1923    \newunit
1924    \printfield{number}%
1925    \setunit{\addperiod\space}%
1926    \printlist{institution}%
1927    \setunit*{\addperiod\space}\newblock
1928    \printlist{location}%
1929    \setunit*{\addperiod\space}\newblock
1930    \printfield{url}%
1931    \setunit*{\addperiod\space}\newblock
1932    \printfield{note}%
1933    \newunit\newblock
1934    \usebibmacro{finentry}}%
1935 \DeclareBibliographyAlias{techreport}{report}%
```

## thesis bibdriver

```
1936 \DeclareBibliographyDriver{thesis}{%
1937    \usebibmacro{bibindex}%
1938    \usebibmacro{begentry}%
1939    \usebibmacro{author}%
1940    \setunit{\labelnamepunct}\newblock
1941    \usebibmacro{title}%
1942    \newunit
1943    \printlist{language}%
```

Period after title, if any

```
1944    \setunit{\addperiod\space}%
1945    \printfield{type}%
1946    \setunit*{\addcomma\space}%
1947    \usebibmacro{institution+location+date}%
1948    \setunit{\addperiod\space}%
1949    \usebibmacro{chapter+pages}%
1950    \newunit
1951    \printfield{pagetotal}%
1952    \newunit\newblock
1953    \printfield{url}%
1954    \setunit*{\addperiod\space}\newblock
1955    \printfield{note}%
1956    \newunit\newblock
1957    \usebibmacro{addendum+pubstate}%
1958    \newunit\newblock
1959    \usebibmacro{pageref}%
1960    \usebibmacro{finentry}}
```

```
1961 \DeclareBibliographyDriver{unpublished}{%
1962   \usebibmacro{bibindex}%
1963   \usebibmacro{begentry}%
1964   \usebibmacro{author}%
1965   \setunit{\labelnamepunct}\newblock
1966   \usebibmacro{title}%
1967   \newunit
1968   \printlist{language}%
1969   \newunit\newblock
1970   \printfield{howpublished}%
1971   \newunit\newblock
1972   \printfield{note}%
1973   \newunit\newblock
1974   \usebibmacro{date}%
1975   \newunit\newblock
1976   \iftoggle{bbx:url}
1977     {\usebibmacro{url+urldate}}
1978     {}%
1979   \newunit\newblock
1980   \usebibmacro{addendum+pubstate}%
1981   \newunit\newblock
1982   \usebibmacro{pageref}%
1983   \usebibmacro{finentry}}
```

bibmacro
```
1984 \renewbibmacro*{maintitle+booktitle}{%
1985   \iffieldundef{maintitle}
1986     {}
1987     {\usebibmacro{maintitle}%
1988      \addspace
1989      \newblock
1990      \iffieldundef{volume}
1991        {}
1992        {\printfield{volume}%
1993         \printfield{part}%
1994         \addspace
1995     }}%
1996   \usebibmacro{booktitle}%
1997   \newunit}
```

```
1998 \renewbibmacro*{journal+issuetitle}{%
1999   \usebibmacro{journal}%
2000   \setunit*{\addspace}%
2001   \iffieldundef{series}
2002     {}
2003     {\newunit
```

```
2004        \printfield{series}%
2005        \setunit{\addspace}}%
2006     \printfield{volume}%
2007     \printfield[parens]{number}%
2008     \setunit{\addcomma\space}%
2009     \printfield{eid}%
2010     \setunit{\addspace}%
2011     \usebibmacro{issue+date}%
2012     \setunit{\addcolon\space}%
2013     \usebibmacro{issue}%
2014     \newunit}
```

```
2015  \newbibmacro*{emisa:doi+eprint+url}{%
2016     \iftoggle{bbx:doi}
2017        {\printfield{doi}}
2018        {}%
2019     \newunit\newblock
2020     \iftoggle{bbx:eprint}
2021        {\usebibmacro{eprint}}
2022        {}%
2023     \newunit\newblock
2024     \iftoggle{bbx:url}
2025        {\usebibmacro{emisa:url+urldate}}
2026        {}}
```

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

```
2027  \renewbibmacro*{author}{%
2028     \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
2029        {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
2030                     \NOT\iffirstonpage\AND
2031                     \(\NOT\boolean{bbx@inset}\OR
2032                     \iffieldequalstr{entrysetcount}{1}\)}
2033           {\bibnamedash}
2034           {\usebibmacro{bbx:savehash}%
2035            \printnames[emisa:names]{author}%
2036            \iffieldundef{authortype}
2037              {\setunit{\addspace}}
2038              {\setunit{\addcomma\space}%
2039               \usebibmacro{authorstrg}%
2040               \setunit{\addspace}}}%
2041        }{%
```

```
2042      \global\undef\bbx@lasthash
2043      \usebibmacro{labeltitle}%
2044      \setunit*{\addspace}}%
2045    \usebibmacro{date+extrayear}}
```

bbx:editor bibmacro

```
2046  \renewbibmacro*{bbx:editor}[1]{%
2047    \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
2048      {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
2049                    \NOT\iffirstonpage\AND
2050                    \(\NOT\boolean{bbx@inset}\OR
2051                    \iffieldequalstr{entrysetcount}{1}\)}
2052        {\bibnamedash}
2053        {\printnames[emisa:names]{editor}%
2054         \setunit{\addcomma\space}%
2055         \usebibmacro{bbx:savehash}}%
2056       \usebibmacro{#1}%
2057       \clearname{editor}%
2058       \setunit{\addspace}%
2059      }{\global\undef\bbx@lasthash
2060       \usebibmacro{labeltitle}%
2061       \setunit*{\addspace}%
2062      }%
2063  %    \usebibmacro{date+extrayear}%
2064    }
```

bbx:translator bibmacro

```
2065  \renewbibmacro*{bbx:translator}[1]{%
2066    \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
2067      {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
2068                    \NOT\iffirstonpage\AND
2069  \(\NOT\boolean{bbx@inset}\OR
2070    \iffieldequalstr{entrysetcount}{1}\)}
2071        {\bibnamedash}
2072        {\printnames[emisa:names]{translator}%
2073  \setunit{\addcomma\space}%
2074  \usebibmacro{bbx:savehash}}%
2075       \usebibmacro{translator+othersstrg}%
2076       \clearname{translator}%
2077       \setunit{\addspace}}%
2078      {\global\undef\bbx@lasthash
2079       \usebibmacro{labeltitle}%
2080       \setunit*{\addspace}}%
2081    \usebibmacro{date+extrayear}}
```

blisher+location+date

bibmacro
```
2082  \renewbibmacro*{publisher+location+date}{%
2083    \printlist{publisher}%
```

```
2084    \setunit*{\addcomma\space}%
2085    \printlist{location}%
2086    \newunit}
```

```
2087  \renewbibmacro*{institution+location+date}{%
2088    \printlist{institution}%
2089    \setunit*{\addcomma\space}%
2090    \printlist{location}%
2091    \newunit}
```

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

### Localization

```
2092  \DefineBibliographyStrings{english}{%
2093  urlseen = {Last Access},
2094  techreport = {},%
2095  }%

2096  \DefineBibliographyStrings{german}{%
2097  urlseen = {Letzter Zugriff},%
2098  techreport = {},%
2099  }%

2100  \DefineBibliographyStrings{ngerman}{%
2101  urlseen = {Letzter Zugriff},%
2102  techreport = {},%
2103  }%
```

### Unlocalization

```
2104  % year/month/day
2105  \protected\def\mkbibdateiso#1#2#3{%
2106    \iffieldundef{#1}{}{%
2107      \thefield{#1}%
2108      \iffieldundef{#2}{}{-}}%
2109    \iffieldundef{#2}{}{%
2110      \mkdatezeros{\thefield{#2}}%
2111      \iffieldundef{#3}{}{-}}%
2112    \mkdatezeros{\thefield{#3}}%
2113  }%

2114  \DefineBibliographyExtras{english}{\let\mkbibdateshort\mkbibdateiso}%
2115  \DefineBibliographyExtras{german}{\let\mkbibdateshort\mkbibdateiso}%
2116  \DefineBibliographyExtras{ngerman}{\let\mkbibdateshort\mkbibdateiso}%
```

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

```
2117  ⟨/bbx⟩
```

### 17.10.2 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.

2118 ⟨∗cbx⟩

2119 \ProvidesFile{emisa.cbx}[2010/09/24 0.3 EMISA citation style]
2120 \RequireCitationStyle{authoryear-comp}
2121 \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".

2122 \DeclareRangeChars*{f}

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

2123 ⟨/cbx⟩
2124 ⟨/biblatex⟩
2125 ⟨∗class⟩

Here, the LaTeX class EMISA ends.

2126 ⟨/class⟩


## 17.11   Examples and templates

### 17.11.1   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.

2127 ⟨∗template⟩
2128 ⟨∗article⟩
2129 \documentclass[british]{emisa}
2130 %% You can use the following additional class options:
2131 %% referee, review -- Use for submission to peer-review process.
2132 %% draft -- mark overfull lines
2133 %% british, UKenglish -- British English hyphenation and quotation marks
2134 %% american, USenglish -- US English hyphenation and quotation marks

```
2135 ⟨/article⟩
2136 ⟨issue⟩\documentclass[final,cover]{emisa}
2137 ⟨∗article | issue⟩
2138 %% The following package imports are recommended, but not obligatory;
2139 %% you might want take a look into their respective manuals if you
2140 %% don't know what they do.
2141 \usepackage{amsmath,amssymb,mathtools}
2142 \usepackage{algorithmic,algorithm}
2143 %% Additional package imports go here:
2144 ⟨/article | issue⟩
2145 ⟨∗issue⟩
2146 %% Insert here issue data:
2147 \volume{}% Volume No.
2148 \issue{}{}% Issue No. and Issue Date
2149 %% If there are any bibliography data bases to be used globally
2150 %% please indicate here:
2151 \bibliography{}
2152 %% Insert here any (relative or absolute) path to be searched for
2153 %% graphics files:
2154 \graphicspath{{./figs_base/},{}}
2155 %% Here you can alter the cover pages; e.g. this:
2156 %% \coverII{\AtPageDeadCenter{Something}}
2157 %% typesets the word "Something" centered on the inner side of the
2158 %% front sheet.
2159 %% You can also delete any cover pages at all by defining them empty,
2160 %% see below:
2161 \coverII{}
2162 %% This outputs the SIG-MOBIS page on the inner side of the back
2163 %% sheet:
2164 \coverIII{\AtPageCenter{\sigmobispage}}
2165 ⟨/issue⟩
2166 ⟨∗article | issue⟩
2167 %% Here, the normal text begins.
2168 \begin{document}
2169 ⟨/article | issue⟩
2170 ⟨∗issue⟩
2171 \tableofcontents
2172
2173 \begin{editorial}
2174 %% Please insert editorial text here.
2175
2176 \end{editorial}
2177 ⟨/issue⟩
2178 ⟨∗article | issue⟩
2179 \begin{article}{%
2180 %% Please declare the title elements of your article here.  Unused
2181 %% elements can either be deleted or commented out, or else just let
2182 %% empty.  In either case they are not typeset.
2183 %% If the option referee or review is given, all author tags, address,
```

```
2184 %% email and acknowledgements will be likewise omitted.
2185   \title{}
2186   \subtitle{}
2187   \author*{<Name>}{<Email address>}
2188   \address{address line 1\\address line 2}
2189   \author{Name}
2190   \address[a]{}
2191   \abstract{}
2192   \keywords{Keyword 1 \and keyword 2 \and keyword 3}
2193 %% Note: Remember to completely anonymise the submission if
2194 %% intended for the double-blind review process!
2195 %% Among others, remove identifying references to your earlier work
2196 %% in the following author note and remove the acknowledgements!
2197   \authornote{This article extends an earlier conference paper, see ...}
2198 ⟨/article | issue⟩
2199 ⟨∗issue⟩
2200   \editor{My self}
2201   \received{24 Octover 2014}
2202   \accepted[2]{1 November 2015}
2203   \doi{10.5073/EMISA.2011.11.1}
2204 ⟨/issue⟩
2205 ⟨∗article | issue⟩
2206   \acknowledgements{}
2207 %% Please declare here the bibliography data base(s) you want to use
2208 %% in this article (make sure to add the file extension, e.g. .bib):
2209   \bibliography{}
2210   }
2211 %% Please insert your article text here.
2212 \section{Introduction}
2213 \subsection{The research problem}
2214 %% Remember to provide a unique label for each section, table, figure, listing and algorithm fo
2215 %%
2216 %% This directive typesets the bibliography.  To achieve this, one has
2217 %% to run the biber program on the corresponding auxiliary file
2218 %% generated in the previous LaTeX run; you can just use the job name
2219 %% (the name of this file without ".tex)", e.g.: biber emisa-author-template
2220 \printbibliography
2221 %
2222 \end{article}
2223 ⟨/article | issue⟩
2224 ⟨∗issue⟩
2225
2226 %% Please insert as much article environments here as are needed.
2227 \begin{article}{%
2228   \title{}
2229   \subtitle{}
2230   \author*{<Name>}{<Email address>}
2231   \address{address line 1\\address line 2}
2232   \author{Name}
```

```latex
2233    \address[a]{}
2234    \abstract{}
2235    \keywords{Keyword 1 \and keyword 2\and keyword 3}
2236    \authornote{This article extends an earlier conference paper, see ...}
2237    \acknowledgements{}
2238    \editor{My self}
2239    \received{24 Octover 2014}
2240    \accepted[2]{1 November 2015}
2241    \doi{10.5073/EMISA.2011.11.1}
2242    \bibliography{}
2243  }
2244
2245
2246 \printbibliography
2247 \end{article}
2248
2249 \begin{cfp}
2250 %% Please insert your Call for papers here.
2251 \end{cfp}
2252
2253 \imprint
2254 \editorialboard
2255 \guidelines
2256 ⟨/issue⟩
2257 ⟨article | issue⟩\end{document}
2258 ⟨/template⟩
```