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

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

November 2, 2020 – Version 2.3.0-devel

1 Introduction

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

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

2 Installation

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

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

`Automatic installation`

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

`Manual installation`

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

3 Instructions and guidelines

This document provides instructions and style guidelines for authors. Follow the instructions and guidelines in the present document to set up your files, to type in your text, to format figures, tables, source code listings and algorithms, and to obtain a consistent visual appearance in accordance with the journal's style specifications. Before submitting your manuscript online to the journal's online submission system at https://emisa-journal.org, use these instructions and guidelines as a checklist. Note that these instructions are *not* intended as a general introduction to LATEX2e and corresponding tools (see, for example, http://mirror.ctan.org/info/lshort/english/ for "The Not So Short Introduction to LATEX2e—Or LATEX2e in 157 minutes").

4 Preliminary remarks

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

`UTF-8`

`File naming convention`

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

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

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

5 Class Options

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

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

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

6 Author information

`\author` 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. At least three keywords should be provided.

8 Additional information on the first (title) page

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

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

9 Style guidelines for regular text

- ▷ Manuscripts should *not* make use of outdated LaTeX commands such as `\em`, but rather use the LaTeX2e commands (e. g. `\emph`, `\texttt`).
- ▷ Do *not* make use of bold face (`\textbf`). Use `\emph` instead to typeset an important word in italics!
- ▷ Always use the tilde ~ to connect before `\ref{`⟨*label*⟩`}`, e. g., `Sec.~\ref{label}` rather than the problematic: `Sec. \ref{label}`.
- ▷ Always use the en-dash (`--`) for ranges – without spaces – e. g., `17--34`. The hyphen (`-`) should only be used for compound words or hyphenation.
- ▷ Do *not* write abbreviations such as `e.g.` but use the macros provided by the EMISAJ class (see below). Add punctuation when necessary, for example, write `, \ie,` to achieve the correct punctuation for "id est" (i. e.) rather than `, i.e.,` which introduces two problems: A missing spacing after the first full stop and a wrong spacing after the second full stop.
- ▷ Follow the journal's style specification with respect to predefined text styles:
  - ○ Use SMALLCAPS for names of open-source projects, products and companies etc., e. g., `\textsc{eclipse}` to produce ECLIPSE. *Pay attention to lower case spelling*.

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

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

10 Abbreviations and initialisms

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

- ▷ `\eg` for e. g.
- ▷ `\ie` for i. e.
- ▷ `\cf` for cf.
- ▷ `\etal` for et al.

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

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

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

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

11 Quotation marks

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

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

12 Citations and references

\parencite The EMISAJ 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 [4] for an introduction to the citation commands. It is important to use the citation commands properly to follow the journal's style specifications.

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

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

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

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

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

13 Figures

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

14 Tables

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

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

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

tabularx

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

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

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

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

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

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

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

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

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

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

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

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

15 Source code listings

sourcecode
java

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

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

Listing 5: Example for the `java` and `sourcecode` environments

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

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

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

16 Pseudo-code and algorithms

algorithm
algorithmic

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

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

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

results in

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

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

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

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

17 Commands for use by the editorial office staff only

`\editor` Enter the corresponding editor (or editorial board member) for the article, in the format "first letter of the first name fullstop tilde last name". Example: `\editor{A.~Smith}` , `\editor{A.~Smith and B.~Meyer}`

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

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

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

`\issue` Enter the issue number and issue year of the article. Format example: `\issue{1}{2016}`

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

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

`\CCBYNCSAFour` `\CCBYNCSAThree` If an article is licensed under a Creative Commons BY-NC-SA 4.0 or 3.0 licence, the reference to the licence can be automatically displayed at the end of the article by adding `\CCBYNCSAFour` and `\CCBYNCSAThree`, respectively.

`\license,\licence` Alternatively, enter a license text using the `\license` (or `\licence`) commands.
Example: `\license{This work is licensed under LPPL 1.3c.}`

18 Example file for both, authors and editorial office

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

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

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

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

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

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

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

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

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

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

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

References

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

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

[3] Package babel: Multilingual support for Plain TEX or LATEX. 19.2

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

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

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

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

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

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

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

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

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

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

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

[15] Typeset source code listings using LaTeX. 15

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

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

[18] The LATEX 2_ε Sources. 19.10

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

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

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

[22] Package xcolor: Driver-independent color extensions for LATEX and pdfLATEX. 19.2.1

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

19 Implementation

Here, the code of the LaTeX class emisa begins.

```
1 ⟨*class⟩
```

19.1 Options

\@clearglobaloption

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

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

british option
UKenglish option

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

american option
USenglish option

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

draft option
final option
@draft switch

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

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

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

```
\DeclareOption{draft}{%
  \@drafttrue
  \overfullrule 10pt
}%
\DeclareOption{final}{%
  \@draftfalse
  \overfullrule\z@
}%
```

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.

```
\newif\if@referee
\DeclareOption{referee}{\@refereetrue}
\DeclareOption{noreferee}{\@refereefalse}
\DeclareOption{review}{\@refereetrue}
\DeclareOption{noreview}{\@refereefalse}
```

cleveref option
nocleveref option
@usecleveref switch

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

cover option
nocover option
\coveron
\coveroff
@cover switch

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

```
\newif\if@cover
\def\coveron{\@covertrue}
\def\coveroff{\@coverfalse}
\DeclareOption{cover}{\coveron}
\DeclareOption{nocover}{\coveroff}
```

```
\newif\if@microtype
\@microtypetrue
\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.

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

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

19.2 Loading the base class and packages

This class is build upon the LaTeX standard class article.

```
\LoadClass{article}[2001/06/01]%
\RequirePackage[utf8]{inputenc}%
```

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

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

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

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

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

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

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

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

```
\RequirePackage{float}
```

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

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

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

19.2.1 Colour and graphics

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

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

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

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

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

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

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

```
\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).

```
\RequirePackage[%
    style=emisa,%
    natbib=true,%
    backend=biber,%
]{biblatex}
\ExecuteBibliographyOptions{%
   maxcitenames=2,%
   maxbibnames=999,%
   terseinits=false,%
   isbn=false,%
   url=true,%
   doi=false,%
   eprint=false,%
   dashed=false,%
   bibencoding=inputenc,%
   sorting=anyt,%
   hyperref=true,%
   uniquename=minfull,%
   uniquelist=false%
}%
```

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

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

19.2.2 Helpers

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

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

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

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

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

The options' meanings are as follows:

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

`defblank` The two environments `inparablank` and `asparablank` will be defined.

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

```
\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.

```
\let\itemize\compactitem
\let\enditemize\endcompactitem
\let\enumerate\compactenum
\let\endenumerate\endcompactenum
\let\description\compactdesc
\let\enddescription\endcompactdesc
```

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

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

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

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

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

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

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

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

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

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

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

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

```
\RequirePackage{placeins}%
```

19.2.3 Scripts, fonts, and maps

```
\RequirePackage{newtxtext}
\RequirePackage{amsmath}
\RequirePackage{amssymb}
\RequirePackage{newtxmath}
\RequirePackage[zerostyle=b,straightquotes]{newtxtt}
\if@microtype
   \UseMicrotypeSet[protrusion]{basicmath} % disable protrusion for tt fonts
\fi%
```

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

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

   \RequirePackage{booktabs}
   \RequirePackage{listings}
   \lstset{basicstyle=\ttfamily\small}
   \lstnewenvironment{java}[1][]
      {\lstset{language=Java,float=*htbp,#1}}
      {}
   \lstnewenvironment{java*}[1][]
      {\lstset{language=Java,float=htbp,#1}}
      {}
   \lstnewenvironment{sourcecode}[1][]
      {\lstset{float=*htbp,#1}}
      {}
   \lstnewenvironment{sourcecode*}[1][]
      {\lstset{float=htbp,#1}}
      {}
   \RequirePackage[amsmath,standard,hyperref]{ntheorem}
```

19.3 Hypertext

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

```
\RequirePackage{url}
\urlstyle{same}
\RequirePackage[%
  colorlinks,
  breaklinks,
  pdfview=Fit,
  bookmarksopen,
  bookmarksnumbered,
```

```
  linkcolor=black,
  anchorcolor=black,
  citecolor=black,
  filecolor=black,
  urlcolor=black,
  hyperfootnotes=false
  ]{hyperref}%
\if@usecleveref%
   \RequirePackage[capitalise,nameinlink]{cleveref}
   \crefname{section}{Sec.}{Sec.}
   \Crefname{section}{Sec.}{Sec.}
   \crefname{figure}{\figurename}{\figurename}
   \Crefname{figure}{\figurename}{\figurename}
   \crefname{listing}{\lstlistingname}{\lstlistingname}
   \Crefname{listing}{\lstlistingname}{\lstlistingname}
   \crefname{table}{\tablename}{\tablename}
   \Crefname{table}{\tablename}{\tablename}
\fi%
\RequirePackage[%
   type={CC},%
   modifier={by-nc-sa},%
   version={4.0}%
]{doclicense}
```

19.4 Tools

\@ifempty
\@ifarg
\@ifnoarg

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

Syntax:

`\@ifempty{`⟨*arg*⟩`}{`⟨*Action_if_empty*⟩`}{`⟨*Action_if_not_empty*⟩`}`
`\@ifnoarg{`⟨*arg*⟩`}{`⟨*Action_if_empty*⟩`}`
`\@ifarg{`⟨*arg*⟩`}{`⟨*Action_if_not_empty*⟩`}`

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

19.5 Basic page layout

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

```
\geometry{%
  a4paper,%
  portrait,%
  twoside,%
  ignoreall,%
  hcentering,%
  textwidth      = 162.5mm,%
  textheight     = 220mm,%
  heightrounded,%
  columnsep      = 12.5mm,%
  top            = 47mm,%
  headheight     = 16mm,%
  headsep        = 13mm,%
  marginparwidth = 15mm,%
  marginparsep   = 5mm,%
  footskip       = 16mm%
  }%
\marginparpush 5mm%

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

\parindent=4mm%

\smallskipamount=.5\baselineskip
\medskipamount=2\smallskipamount
\bigskipamount=2\medskipamount

\flushbottom

\abovedisplayskip=.5\baselineskip plus .33\baselineskip
                                  minus .33\baselineskip
\belowdisplayskip=\abovedisplayskip
\abovedisplayshortskip= 0pt plus .33\baselineskip
\belowdisplayshortskip=.5\baselineskip plus .33\baselineskip
                                       minus .33\baselineskip
```

19.6 Scripts

`\pageheadfont` `\pagenumfont` `\pagefootfont`

Assigning scripts to text elements.

Page head and foot:

```
\def\pageheadfont{\normalfont}%
\def\pagenumfont{\pageheadfont\bfseries}%
\def\pagefootfont{\pageheadfont}%
```

\authorfont
\titlefont
\subtitlefont
\abstractfont

The elements of the article titles:

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

\affiliationfont
\affiliationauthorfont
\affiliationaddressfont
\affiliationemailfont

The elements of the affiliation box:

```
\def\affiliationfont{\normalfont}
\def\affiliationauthorfont{\bfseries}
\def\affiliationaddressfont{\mdseries}
\def\affiliationemailfont{\mdseries}%
```

\sectionfont
\sec@font
\para@font

Section headlines:

```
\def\sectionfont{%
  \normalfont
  \bfseries
  \boldmath}%
\def\sec@font{\sectionfont\large}%
\def\para@font{\sectionfont}%
```

\captionfont

Captions:

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

19.7 Colours

These are the colour definitions for a couple of elements.

coverbgcolor color
covertextcolor color

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

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

headtextcolor color
boxframecolor color
boxbgcolor color

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

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

19.8 Double line spacing

\displayskipstretch
\setdisplayskipstretch

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

\setstretch Line space commands.

```
\newcommand{\setstretch}[1]{%
  \def\baselinestretch{#1}%
  \@currsize
}
```

\@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.

```
\def\@setsize#1#2#3#4{%
  \@nomath#1%
  \let\@currsize#1%
  \baselineskip #2%
  \baselineskip=\baselinestretch\baselineskip
  \parskip=\baselinestretch\parskip
  \setbox\strutbox \hbox{%
    \vrule height.7\baselineskip
           depth.3\baselineskip
           width\z@}%
  \skip\footins=\baselinestretch\skip\footins
  \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).

```
\everydisplay\expandafter{%
  \the\everydisplay
  \abovedisplayskip   \displayskipstretch\abovedisplayskip
  \belowdisplayskip   \displayskipstretch\belowdisplayskip
  \abovedisplayshortskip  \displayskipstretch\abovedisplayshortskip
  \belowdisplayshortskip  \displayskipstretch\belowdisplayshortskip
}
```

19.9 Document markup

19.9.1 Declaring issue data

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

\journalname The journal name.

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

\journalsubtitle The journal's subtitle.

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

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

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

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

\volume Volume number.

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

\issue Issue number and date.

```
\def\issue#1#2{\@bsphack
  \def\@issue{#1}%
  \def\@issuedate{#2}%
  \@esphack}%
\issue{\textcolor{red}{0}}{\textcolor{red}{month 0000}}%
```

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

```
\def\specialissuetitle{\@ifstar\@sspit\@spit}%
\newcommand{\@spit}[2][]{%
  \@bsphack
  \@ifempty{#2}%
   {\let\@specialissuetitle\relax}%
   {\@ifempty{#1}%
     {\def\@specialissuetitle{\@specialissuetitleprefix#2}}%
     {\def\@specialissuetitle{#1\space#2}}}%
  \@esphack}%
\newcommand{\@sspit}[2][]{%
  \@bsphack
  \@ifempty{#2}%
   {\let\@specialissuetitle\relax}%
   {\def\@specialissuetitle{#2}}%
  \@esphack}%
\newcommand{\specialissuetitleprefix}[1]{%
  \@bsphack
  \@ifempty{#1}%
     {\let\@specialissuetitleprefix\relax}%
```

```
297      {\def\@specialissuetitleprefix{#1\space}}%
298   \@esphack}%
299 \specialissuetitle{}%
300 \specialissuetitleprefix{Special Issue on}%
```

\copyrightyear
\copyrightholder

Copyright owner and year.

```
301 \def\copyrightyear#1{\@bsphack\def\@copyrightyear{#1}\@esphack}%
302 \copyrightyear{\the\year}%
303 \def\copyrightholder#1{\@bsphack\def\@copyrightholder{#1}\@esphack}%
304 \copyrightholder{\textcolor{red}{\copyright{}holder}}%
```

\title
\subtitle
\author

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

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.

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

```
\newcommand*{\@authornostar}[1]{%
  \@bsphack
  \if@referee
    \def\@authors{}%
    \def\@shortauthors{}
  \else
      \gdef\@address@sep{}%
      \ifx\@authors\@empty
          \protected@xdef\@authors{#1}
          \protected@xappto\@shortauthors{#1}
      \else
          \protected@xappto\@authors{,\space #1}
          \protected@xappto\@shortauthors{,\space #1}
      \fi%
  \fi
  \@esphack}%
\newcommandtwoopt*{\@authorstar}[3][][]{%
    \@bsphack
    \if@referee
      \def\@authors{}%
      \def\@shortauthors{}%
      \def\@tocauthors{}%
      \def\@email{}%
    \else
      \gdef\@address@sep{}%
      \ifx\@authors\@empty
          \protected@xdef\@authors{#3\textsuperscript{*,}}
          \protected@xappto\@shortauthors{#3}
      \else
          \protected@xappto\@authors{,\space #3\textsuperscript{*,}}
          \protected@xappto\@shortauthors{,\space #3}
      \fi%
      \@ifempty{#1}{\def\@shortauthor{\@shortauthors}}{\def\@shortauthor{#1}}%
      \@ifempty{#2}{\def\@tocauthor{\@shortauthors}}{\def\@tocauthor{#2}}%
    \fi
    \@esphack
    \@ifnextchar\bgroup\email{\ClassError{emisa}{Please provide an email address for the correspo
\newcommand{\keywords}[1]{
   \@bsphack
   \def\and{\unskip\ \textbullet\ }%
   \def\@keywords{#1}%
   \@esphack}%
\newcommand{\authornote}[1]{
   \@bsphack
   \if@referee
      \def\@authornote{}%
   \else
      \def\@authornote{#1}%
   \fi%
```

```
    \@esphack}%
\newcommand{\editor}[1]{
    \@bsphack
    \def\@articleinfo@name{#1}%
    \@esphack}%
\newcommand{\received}[1]{
    \@bsphack
    \def\@articleinfo@rdate{#1}%
    \@esphack}%
\newcommand{\accepted}[2][]{
    \@bsphack
    \def\@articleinfo@rounds{#1}
    \def\@articleinfo@adate{#2}%
    \@esphack}%
\newcommand{\doitext}{DOI:}
\newcommand*{\outdoi}{%
  \begingroup
  \lccode`\~=`\#\relax
  \lowercase{\def~{\#}}%
  \lccode`\~=`\_\relax
  \lowercase{\def~{\_}}%
  \lccode`\~=`\<\relax
  \lowercase{\def~{\textless}}%
  \lccode`\~=`\>\relax
  \lowercase{\def~{\textgreater}}%
  \lccode`\~=0\relax
  \catcode`\#=\active
  \catcode`\_=\active
  \catcode`\<=\active
  \catcode`\>=\active
  \@outdoi
}
\def\@outdoi#1{%
  \let\#\relax
  \let\_\relax
  \let\textless\relax
  \let\textgreater\relax
  \edef\x{\toks0={{#1}}}%
  \x
  \edef\#{\@percentchar23}%
  \edef\_{_}%
  \edef\textless{\@percentchar3C}% instead of {\string<} for Apple
  \edef\textgreater{\@percentchar3E}% instead of {\string>} for Apple
  \edef\x{\toks1={\noexpand\href{http://dx.doi.org/#1}}}%
  \x
  \edef\x{\endgroup\doitext\the\toks1 \the\toks0}%
  \x
}
\newcommand*{\doi}[1]{
```

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

```
\author{}%
\address{}
\keywords{}%
\authornote{}%
\editor{}%
\received{}%
\accepted{}%
\doi{}%
\licence{}
\acknowledgements{}%
\def\abstract#1{\@bsphack\def\@abstract{#1}\@esphack}%
\abstract{}%
\def\@authors{}
\def\@shortauthor{}
\def\@shortauthors{}
\def\@tocauthor{}
\def\@tocauthors{}
\def\@email{}
\def\@addresses@list{}
```

`\abstract` This accepts the abstract text.

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

`\outputarticleappendix` `\@articleappendix` `\@wrap@articleappendix` `articleappendix` `articleappendix*`

The `articleappendix` and `articleappendix*` environments collect the material given within them inside an `article` environment. The collected material is accumulated and output at the article's 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.

```
\DeclareRobustCommand{\outputarticleappendix}{%
  {%
   \appendix
\@articleappendix
\global\let\@articleappendix\relax
  }%
}%
\long\def\@wrap@articleappendix#1{\gappto{\@articleappendix}{{#1}}}
\newenvironment{articleappendix}{%
  \gappto{\@articleappendix}{\clearpage}%
  \Collect@Body\@wrap@articleappendix}{}
\newenvironment{articleappendix*}{%
  \Collect@Body\@wrap@articleappendix}{}
\let\@articleappendix\relax

\def\@makefnmark{\textsu{\@thefnmark}\ }%
\renewcommand\@makefntext[1]{%
    \parindent 1em%
    \noindent%
    \@makefnmark#1}%
```

19.9.2 Page styles

This is the standard page style:

Page Head: three lines of text, `\textwidth` wide and aligned to the inner and outer text body borders, respectively, each above a black horizontal line at full sheet width. The text entries comprise:
Line 1, inner side:
- ▷ left pages: journal's subtitle;
- ▷ right pages: journal name.

outer side: no text.
Line 2, inner side: volume/number/issue date, text colour is 50 % grey;
outer side: no text.
Line 3, inner side:
- ▷ left pages: section name;
- ▷ common right pages: author's name(s);
- ▷ editorial content, both sides: section or category name;

text colour is 50 % grey;
outer side: page number in bold type, coloured black, shifted by an amount of `\headpageoffset` to the outer edge of the page.

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

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

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

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

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

```
\newlength{\headwidth}%
\newlength{\bleed}%
\newlength{\headmargin}%
\newlength{\footrulewidth}%
\newlength{\headfootruleheight}%
\setlength{\bleed}{3mm}%
\setlength{\headfootruleheight}{0.4mm}%
```

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

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

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

```
\newcommand{\headbox}[8]{\bgroup%
  \setstretch{1}%
  \reset@font\pageheadfont
  \tabcolsep\z@
  \arrayrulewidth\headfootruleheight
  \hskip-\headmargin
  \begin{tabular*}{\headwidth}[b]%
    {@{\rule{\headmargin}{\z@}}%
    >{\rule[-1.25mm]{\z@}{5mm-\arrayrulewidth}}%
    l@{\extracolsep{\textwidth minus 1fill}}r%
    @{\rule{\headmargin}{\z@}}}
    #1 & #2\\
    \hline
    #3 & #4\\
    \hline
    #5 & #6\\
    \hline
    #7 & #8\\
  \end{tabular*}%
  \hskip-\headmargin
  \egroup
}%
```

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

```
\newcommand{\theheadvolume}{%
  \begingroup%
  \hypersetup{urlcolor=headtextcolor}%
  \textcolor{headtextcolor}{%
     Vol.\,\@volume, No.\,\@issue\ (\@issuedate).%
     \ifx\@doi\@empty\else\ \outdoi{\@doi}\fi}%
  \endgroup}%
\newlength{\headpageoffset}%
\setlength{\headpageoffset}{10mm}%
\def\theoddheadpage{%
  \rlap{\makebox[\headpageoffset][r]{\pagenumfont\thepage}}}%
\def\theevenheadpage{%
  \llap{\makebox[\headpageoffset][l]{\pagenumfont\thepage}}}%
```

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

```
\newif\if@footrule%
\def\footruleoff{\global\@footrulefalse}%
\def\footruleon{\global\@footruletrue}%
\def\footrule#1{%
  \if@footrule
    \makebox[\textwidth][#1]{%
      \reset@font
      \rule[\headfootruleheight]{\footrulewidth}{\headfootruleheight}%
```

```
565       }\fi}%
```

\headmarkstyle
\markhead
\markarticle
\markeditorial

Sets the content marks in the running titles.

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

\ps@emisa

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

```
576 \def\ps@emisa{%
577   \def\@oddhead{%
578     \headbox{\@journalname}{}%
579             {\theheadvolume}{}%
580             {{\@headmarkstyle\@oddmark}}{\theoddheadpage}%
581             {\ifx\@specialissuetitle\relax\else\textcolor{headtextcolor}{\@specialissuetitle}\fi
582   }%
583   \def\@evenhead{%
584     \headbox{}{\@journalsubtitle}%
585             {}{\theheadvolume}%
586             {\theevenheadpage}{{\@headmarkstyle\@evenmark}}%
587             {}{\ifx\@specialissuetitle\relax\else\textcolor{headtextcolor}{\@specialissuetitle}\
588   }%
589   \let\@oddmark\relax
590   \let\@evenmark\relax
591   \def\@oddfoot{\footrule{r}}%
592   \def\@evenfoot{\footrule{l}}%
593 }%
```

\ps@emisaarticle
\ps@emisaeditorial

We have two minimally different page styles:

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

```
594 \def\ps@emisaarticle{%
595   \ps@emisa
596   \markarticle
597   \footruleoff
598 }%

599 \def\ps@emisaeditorial{%
600   \ps@emisa
601   \markeditorial
602   \footruleon
```

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

19.9.3 Cover and advertisement pages

\basecoverfont
\covervolumefont
\covertitlefont

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

```
\def\basecoverfont{\normalfont\sffamily}%
\def\covervolumefont{%
  \basecoverfont\fontsize{6mm}{6mm}\selectfont}%
\def\covertitlefont{%
  \basecoverfont\bfseries\fontsize{11mm}{16.5mm}\selectfont}%
```

\coverIbgname
\coverIVbgname
\sigmobislogoname
\gislogoname

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

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

\AtPageDeadCenter
\page@empty

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

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

\pagebg

Background color for one whole page plus bleed.

```
\newcommand{\pagebg}[1]{%
  \AtPageDeadCenter{%
    \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`).

```
\newcommand{\thispagebackground}[2][]{%
  \@ifarg{#1}{\thispagestyle{#1}}%
  \AddToShipoutPicture*{%
    \unitlength 1mm\relax%
    {#2}%
}}%
```

\picturepage

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

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

\inputpagegraphic

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

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

\coverpage

\coverpage is a special form of the \picturepage:

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

\thecovervolumeline
\thecovertitle

These represent the

```
\newcommand{\thecovervolumeline}{%
  \parbox[t]{130mm}{%
    \raggedright
    \color{covertextcolor}\covervolumefont%
    Volume\space\@volume
    \enspace\rule[-1mm]{0.5mm}{6mm}\enspace
    No.\,\@issue\space\textbf{\@issuedate}\\[3mm]%
    \@specialissuetitle
  }%
}%
\def\thecovertitle{%
  \parbox[t][30mm][s]{174mm}{%
    \color{covertextcolor}%
    \covertitlefont
    \raggedright\@journalname\par
    \vskip8mm
    \covervolumefont
    \raggedleft
    \textbf{An International Electronic Journal\,}}}
```

\sigmobispage

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

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

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

```
    \begin{minipage}[c][260mm][s]{\textwidth}
      \sigmobispagehead
      \medskip

      The GI-SIG-MoBIS portal provides numerous resources on enterprise
      modelling research, such as a full-text digital library, a
      bibliography, conference announcements, a glossary and evaluation
      reports.  It is intended to establish the premier forum for an
      international community in enterprise modelling.  The new version
      is based on a Content Management System allowing authorized users
      to conveniently upload content.  A \BibTeX{} interface allows for
      conveniently integrating bibliographic data.  Information about
      this journal, such as guidelines for authors, tables of content
      and full-text access to articles (for GI-SIG-MobIS members only)
      are also available on the~portal.
      \par
      \medskip

      \begin{center}
        \includegraphics{GI-SIG-MOBIS_portal}
      \end{center}

      \medskip

      GI encourages everybody who wants to participate in the
      evolution of this community knowledge base to contribute to any of
  the categories covered by the portal. Please contact Michael He\ss{}
  (\href{mailto:m.hess@uni-duisburg-essen.de}{m.hess@uni-duisburg-essen.de})
  for further~information.

      \vfill

      \sigmobispagefoot
    \end{minipage}%
  }%
}
```

\sigmobispagehead
\sigmobispagefoot
\sigmobispagerule

Elements of \sigmobispage.

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

\coverI
\coverII
\coverIII
\coverIV

Each of these prepares one of the cover pages.

```
\def\coverI#1{\@ifempty{#1}%
   {\let\@coverI\relax}%
   {\def\@coverI{\coverpage[-2]{#1}}}}%
\def\coverII#1{\@ifempty{#1}%
   {\let\@coverII\relax}%
   {\def\@coverII{\coverpage[-1]{#1}}}}%
\def\coverIII#1{\@ifempty{#1}%
   {\let\@coverIII\relax}%
   {\def\@coverIII{\coverpage{#1}}}}%
\def\coverIV#1{\@ifempty{#1}%
   {\let\@coverIV\relax}%
   {\def\@coverIV{\coverpage{#1}}}}%
```

So we prepare the four cover pages.

```
\coverI{%
  \pagebg{coverbgcolor}%
  \AtPageUpperLeft{%
    \raisebox{-\totalheight}{\includegraphics{\coverIbgname}}}%
  \AtPageUpperLeft{\put(17,-28){\mbox{%
    \includegraphics[height=19mm]{\sigmobislogoname}%
    \hspace{5mm}%
    \includegraphics[height=14.75mm]{\sigEMISAlogoname}%
    }}%
  }%
  \AtPageLowerLeft{\put(166,9){\includegraphics{\gislogoname}}}%
  \AtPageLowerLeft{\put(17,44){\thecovervolumeline}}%
  \AtTextLowerLeft{\put(-28,36){\framebox(200,62)[c]{}}}
  \AtPageLowerLeft{\put(17,112){\thecovertitle}}%
}%
\coverII{\page@empty}%
\coverIII{\AtPageCenter{\sigmobispage}}%
\coverIV{%
  \pagebg{coverbgcolor}%
  \AtPageLowerLeft{%
    \raisebox{167mm}{\includegraphics{\coverIVbgname}}}%
  \AtPageLowerLeft{%
    \put(6,9){\parbox[b]{10cm}{\raggedright\large\sffamily\@issn}}}%
  \AtPageLowerLeft{%
    \put(166,9){\includegraphics{GIS-logo_with_text-300}}}%
}%

\if@cover
  \AtBeginDocument{%
    \@coverI\@coverII
    \setcounter{page}{1}%
  }%
  \AtEndDocument{%
    \@coverIII\@coverIV
```

```
  }%
\fi
```

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

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

19.9.4 Formatting common articles

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

```
\newcounter{article}%
\@addtoreset{section}{article}%
\@addtoreset{footnote}{article}%
\@addtoreset{figure}{article}%
\@addtoreset{table}{article}%
```

article This encapsulates each article.

```
\newenvironment{article}[1]{%
  \clearpage
  \refstepcounter{article}%
  \pagestyle{emisaarticle}%
  \col@number=\tw@\relax
  #1\relax
  \l@article
```

Every `article` is its own bibliographical unit.

```
  \begin{refsection}%
  \maketitle
  \ignorespaces
  }{%
  \end{refsection}%
  \outputarticleappendix\FloatBarrier\par%
  \vspace{\baselineskip}%
  \noindent\ignorespaces
  \if@licenseset
     \edef\doclicenseURL{%
        \doclicense@baseUrlCC/%
        licenses/%
        \doclicense@modifier/%
        \doclicense@versionUsed\doclicense@UrlLangPart%
     }
     \begin{minipage}{\columnwidth}
     \parbox[t]{\dimexpr 0.975\columnwidth-\doclicense@imagewidth\relax}{\vskip 0pt\raggedright\f
```

```
        \doclicense@lang@thisDoc\space
        \href{\doclicenseURL}{\doclicenseLongType\space\enquote{\doclicense@longName}}%
        \doclicense@lang@word@license.}%
    \hfill%
    \parbox[t]{\doclicense@imagewidth}{\vskip 0pt\doclicenseImage}%
    \end{minipage}%
  \else
    \ifx\@licence\@empty\relax\else\par\noindent\@licence\fi%
  \fi%
  \onecolumn
  \ignorespacesafterend}%
```

19.9.5 Formatting editorial content

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

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

Here, section titles are a bit larger than otherwise.

```
  \def\sec@font{\sectionfont\Large}%
  \def\para@font{\sectionfont}%
  \setcounter{section}{0}%
}%
```

`editorialcontent` This encapsulates editorial content entries.

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

Every `editorialcontent` is its own bibliographical unit.

```
  \begin{refsection}%
  \ignorespaces
  }{%
  \end{refsection}%
  \onecolumn
  \ignorespacesafterend}%
```

19.9.6 Standard editorial content environments

Several types of standardized editorial contents.

`editorial` This encapsulates editorials.

`\editorialname`

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

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

Every `editorial` is its own bibliographical unit.

```
  \begin{refsection}%
  \ignorespaces
  }{%
  \end{refsection}%
  \onecolumn
  \ignorespacesafterend}%
```

`cfp` Call for papers.

`\cfpname`

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

`\imprint` Imprint.

`\imprintname`
`\imprintbody`

```
\newcommandtwoopt{\imprint}[2][\@imprintname][\@imprintbody]{%
  \onecolumn
  \edit@setup[#1]{\@journalname}%
  \l@editorialcontent
  \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
  \ignorespaces
  #2
  \onecolumn\ignorespacesafterend}%
\def\imprintname#1{\@bsphack\def\@imprintname{#1}\@esphack}%
\long\def\imprintbody#1{\@bsphack\def\@imprintbody{#1}\@esphack}%

\imprintname{Imprint}%
\imprintbody{%
  The journal \emph{\@journalname} is the official journal of the
  Special Interest Group on Modelling Business Information Systems
  within the German Informatics Society (GI-SIG MoBIS).

  The journal Enterprise Modelling and Information Systems
  Architectures is intended to provide a forum for those who prefer a
  design-oriented approach.  As the official journal of the German
  Informatics Society (GI-SIG-MoBIS), it is dedicated to promote the
  study and application of languages and methods for enterprise
  modelling -- bridging the gap between theoretical foundations and
  real world requirements.  The journal is not only aimed at
  researchers and students in Information Systems and Computer
  Science, but also at information systems professionals in industry,
  commerce and public administration who are interested in innovative
  and inspiring concepts.
```

```
858
859   The journal's editorial board consists of scholars and practitioners
860   who are renowned experts on various aspects of developing, analysing
861   and deploying enterprise models.  Besides Information Systems, they
862   cover various fields of Computer Science.
863
864   \section*{Subscription Information}
865
866   The journal is distributed free of charge for members of the
867   GI-SIG-MoBIS. Membership can be acquired through the German
868   Informatics Society (http://www.gi-ev.de/verein/mitgliedschaft/).
869   Single issues, priced at EUR\,25 each (plus shipment), can be ordered
870   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.

```
871 \newsavebox{\@editorial@box}%
872 \newlength{\editorialboxmaxheight}%
873 \setlength{\editorialboxmaxheight}{\textheight+10mm}%
874 \newcommandtwoopt{\editorialboard}[2]%
875  [\@editorialboardname][\@editorialboardbody]{%
876   \clearpage
877   \edit@setup[#1]{#1}%
878   \l@editorialcontent
879   \savebox{\@editorial@box}{%
880     \vbox{\centering%
881   \fboxsep=5mm
882   \fcolorbox{boxframecolor}{boxbgcolor}{%
883 \begin{minipage}[t]{110mm}
884   \raggedright
885   #2
886 \end{minipage}}\\*
887 }%
888   }%
889   \raisebox{15mm-\totalheight}[5mm][0mm]{\makebox[\textwidth][c]{%
890     \ifdim\ht\@editorial@box>\editorialboxmaxheight
891   \resizebox{!}{\editorialboxmaxheight}{\usebox{\@editorial@box}}%
892 \else
893   \usebox{\@editorial@box}%
894 \fi
895   }}\\*
896   \raisebox{-\textheight}[0mm][0mm]{\makebox[\textwidth][l]{%
897   \parbox[t]{\textwidth}{\raggedleft\bfseries\@issn}%
```

```
}}%
  \onecolumn\ignorespacesafterend
}%
\def\editorialboardname#1{%
  \@bsphack\def\@editorialboardname{#1}\@esphack}%
\long\def\editorialboardbody#1{%
  \@bsphack\def\@editorialboardbody{#1}\@esphack}%
\editorialboardname{Editorial Board}%
\editorialboardbody{%
  \section*{\@title}\vskip1mm
  {\Large Editors in Chief\\[1mm]}
  Ulrich Frank, University of Duisburg-Essen\\
  Manfred Reichert, Ulm University\\[1mm]
  {\Large Associate Editors\\[1mm]}
  Wil van der Aalst, Eindhoven University of Technology\\
  Witold Abramowicz, Poznan University of Economics\\
  Colin Atkinson, University of Mannheim\\
  J\"org Becker, University of M\"unster\\
  J\"org Desel, University of Hagen\\
  Werner Esswein, Dresden University of Technology\\
  Fernand Feltz, Centre de Recherche Public Gabriel Lippmann\\
  Andreas Gadatsch, Bonn-Rhine-Sieg University of Applied Sciences\\
  Martin Glinz, University of Zurich\\
  Norbert Gronau, University of Potsdam\\
  Wilhelm Hasselbring, University of Kiel\\
  Brian Henderson-Sellers, University of Technology, Sydney\\
  Stefan Jablonski, University of Bayreuth\\
  Manfred Jeusfeld, Tilburg University\\
  Reinhard Jung, University of St.\,Gallen\\
  Dimitris Karagiannis, University of Vienna\\
  John Krogstie, University of Trondheim\\
  Thomas K\"uhne, Victoria University of Wellington\\
  Frank Leymann, University of Stuttgart\\
  Stephen W. Liddle, Brigham Young University\\
  Peter Loos, Johannes Gutenberg-University of Mainz\\
  Oscar Pastor L\'opez, Universidad Polit\`ecnica de Val\`encia\\
  Heinrich C. Mayr, University of Klagenfurt\\
  Jan Mendling, Vienna University of Economics and Business\\
  Markus N\"uttgens, University of Hamburg\\
  Andreas Oberweis, University of Karlsruhe\\
  Erich Ortner, Darmstadt University of Technology\\
  Erik Proper, Radboud University Nijmegen\\
  Michael Rebstock, University of Applied Sciences Darmstadt\\
  Stefanie Rinderle-Ma, University of Vienna\\
  Michael Rosemann, Queensland University of Technology\\
  Matti Rossi, Aalto University\\
  Elmar J. Sinz, University of Bamberg\\
  Friedrich Steimann, University of Hagen\\
  Stefan Strecker, University of Hagen\\
```

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

\guidelines
\guidelinesname
\guidelinesbody

Guidelines for Authors.

```
\newcommandtwoopt{\guidelines}[2]%
 [\@guidelinesname][\@guidelinesbody]{%
  \onecolumn
  \edit@setup{#1}%
  \l@editorialcontent
  \raisebox{5.5mm}[10mm][0pt]{\sec@font\@title}\\
  \ignorespaces
  #2
  \onecolumn\ignorespacesafterend}%
\def\guidelinesname#1{%
  \@bsphack\def\@guidelinesname{#1}\@esphack}%
\long\def\guidelinesbody#1{%
  \@bsphack\def\@guidelinesbody{#1}\@esphack}%

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

```
\end{itemize}
Authors are asked for electronic submissions, which have to be sent
to the editor in chief as e-mail attachment.  In case of multiple
authors, it is required to name one author who acts as contact
person.  The submission should include a cover page with the paper's
title and the names, affiliations and e-mail addresses of all
authors.  The first page of the paper starts with the title and does
not carry the authors' names.  A manuscript must be either in MS
Word or PDF format.  It should not exceed 5.000 words -- this
includes an abstract of around 150 words.

Submitted papers will be reviewed within no more than two months.
The review process is double blind.  Authors who submit a manuscript
guarantee that it has not been published elsewhere, nor is intended
to be published elsewhere.  Papers that were accepted for
publication must be written according to the style defined for the
journal.  A comprehensive description as well as a corresponding
Word template is provided on the web portal of the GI-SIG-MobIS
(http://www.fg-mobis.gi-ev.de/).}
```

19.9.7 Making the title

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

```
\def\maketitle{%
  \begingroup
  \let\footnoterule\relax
  \let\footnote\thanks
  \let\thefootnote\relax
  \def\@makefnmark{\textsuperscript{\@thefnmark}}%
  \ifnum\col@number=\@ne
     \@maketitle
  \else
     \twocolumn[\@maketitle]%
  \fi
  \global\@topnum\z@
  \@thanks
 \endgroup
 \setcounter{footnote}{0}%
}%
```

`\@maketitle` This assembles and outputs the article title.

```
\def\@maketitle{%
  \bgroup
  \normalfont
  \pretolerance=9999
  \parskip\z@
  \parindent\z@
```

```
    \if!\@title!
    \else
    {\raggedright
        \titlefont\ignorespaces
        \strut\@title\strut\par}%
    \vskip2mm\relax
    \fi
  \if!\@subtitle!
  \vskip5mm\relax
  \else
    {\makebox[\textwidth][r]{%
      \begin{minipage}{\textwidth-15mm}
          \raggedright
          \subtitlefont\ignorespaces
          \strut\@subtitle\strut
        \end{minipage}}%
        \par}%
    \vskip5mm\relax
  \fi
  \if!\@authors!
  \else
  {\raggedright
   \authorfont\ignorespaces
   \strut\@authors
   \ifx\@email\@empty
       \ClassError{emisa}{There has to be one corresponding author!}{Please use \string\author* a
   \else
      \ignorespaces\makebox[0pt][l]{\footnote{*~Corresponding author.\newline E-mail.\ \url{\@ema
   \fi%
   \ifx\@acknowledgements\@empty
   \else
      \ignorespaces\makebox[0pt][l]{\footnote{\@acknowledgements}}%
   \fi%
   \strut\par}%
  \vskip2mm\relax
  \fi
  \if!\@addresses@list!
  \else
    {\raggedright
     \footnotesize\ignorespaces
     \strut\@addresses@list\strut\par}%
    \vskip8mm\relax
  \fi
  \if!\@authornote!
  \else
    \let\thefootnote\relax
    \ignorespaces\makebox[0pt][l]{\footnote{Note: \@authornote}}%
  \fi
  \if!\@abstract!
```

```
  \else
   {\abstractfont\ignorespaces
    \strut\textup{Abstract.\ }\@abstract\strut\par}%
    \vskip5mm\relax
  \fi
  \if!\@keywords!
    \vskip3mm\relax
  \else
   {\raggedright
    \ignorespaces
    \strut Keywords.\ \@keywords\strut\par}
    \vskip3mm\relax
  \fi
  \if!\@articleinfo@name!
    \if!\@articleinfo@rdate!
      \if!\@articleinfo@adate!
        \vskip\baselineskip\relax
      \fi
    \fi
  \else
   {\raggedright
    \small
    \ignorespaces
    \strut Communicated by\ \@articleinfo@name.%
    \if!\@articleinfo@rdate!%
    \else
       \space Received\ \@articleinfo@rdate.%
    \fi%
    \if!\@articleinfo@adate!%
    \else
       \space Accepted\ %
       \if!\@articleinfo@rounds!%
       \else%
         \ifnum\@articleinfo@rounds=1
            after \@articleinfo@rounds{} revision\space%
         \else
            after \@articleinfo@rounds{} revisions\space%
         \fi%
       \fi%
       on \@articleinfo@adate.
    \fi%
    \strut\par}
    \vskip5mm\relax
  \fi
  \egroup
}
```

19.9.8 Sectioning

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

Syntax:

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

Here is the meaning of all these parameters:

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

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

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

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

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

⟨***style***⟩ Commands to set the output style. Since he June 1996 release of LaTeX 2ε 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.

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

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

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

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

```
          \@hangfrom{\hskip #3\relax\@svsec}%
           \raggedright
           \interlinepenalty\@M
           \strut#8\strut
           \@@par}%
    \endgroup
    \csname #1mark\endcsname{#7}%
    \addcontentsline{toc}{#1}{%
      \ifnum #2>\c@secnumdepth \else
        \protect\numberline{\csname the#1\endcsname}%
      \fi
      #7}%
  \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.

```
    \def\@svsechd{%
      #6{\hskip #3\relax
      \@svsec #8}%
      \csname #1mark\endcsname{#7}%
      \addcontentsline{toc}{#1}{%
        \ifnum #2>\c@secnumdepth \else
          \protect\numberline{\csname the#1\endcsname}%
        \fi
        #7}}%
  \fi
  \@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. 48.

```
\def\@ssect#1#2#3#4#5{%
  \@tempskipa #3\relax
  \ifdim \@tempskipa>\z@
    \begingroup
      #4{\noindent%
        \hskip #1\relax
        \noindent%
        \parbox[t]{\linewidth}{%
          \raggedright\interlinepenalty\@M#5\strut}\@@par}%
    \endgroup
  \else
    \def\@svsechd{#4{\hskip #1\relax #5}}%
  \fi
  \@xsect{#3}}
```

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

```
\def\@seccntformat#1{%
  \csname the#1\endcsname%
  \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. 48.

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.

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

\subsection

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

\subsubsection

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

\paragraph

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

\subparagraph

```
\def\subparagraph{\@startsection{subparagraph}%
  {5}{\z@}%
  {-1.5mm}%
  {-1em}%
  {\para@font}}%
```

19.9.9 The table of contents

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

```
\def\tableofcontents{%
  \onecolumn
  \pagestyle{emisaeditorial}%
  \footruleon
  \title{Table of Contents}%
  \null
  \vskip10mm
  \maketitle
  \vskip15mm
  \bgroup
```

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

```
    \parindent\z@
    \parskip\z@
    \@starttoc{toc}%
  \egroup
  \onecolumn
  }
```

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

```
\newcommand*\l@article{%
  \if!\@subtitle!
    \addtocentry{\@tocauthor}{\thepage}{\@toctitle}%
  \else
    \addtocentry{\@tocauthor}{\thepage}{\@toctitle\ --\ \@tocsubtitle}%
  \fi}%
\newcommand*\l@editorialcontent{%
  \addtocentry{\@toctitle}{\thepage}{}}%
```

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

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

\emisa@tocentry `\emisa@tocentry` typesets that entry.

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

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

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

19.9.10 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.

```
\newcommand*{\emisa@abbrv}[1]{#1\@\xspace}
\newcommand*{\emisaabbrv}[2]{\gdef#1{\emisa@abbrv{#2}}}
\newcommand*{\emisa@initialism}[1]{\textsc{#1}\xspace}
\newcommand*{\emisainitialism}[2]{\gdef#1{\emisa@initialism{#2}}}
\newcommand*{\ie}{\emisa@abbrv{i.\,e.}}
\newcommand*{\eg}{\emisa@abbrv{e.\,g.}}
\newcommand*{\cf}{\emisa@abbrv{cf.}}
\newcommand*{\etal}{\emisa@abbrv{et~al.}}
\newcommand*{\OMG}{\emisa@initialism{omg}}
\newcommand*{\BPM}{\emisa@initialism{bpm}}
\newcommand*{\BPMN}{\emisa@initialism{bpmn}}
\newcommand*{\UML}{\emisa@initialism{uml}}
```

19.9.11 Other macros defined by EMISAJ

\meta \type

Macros for convience

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

19.10 Bibliographies

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

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

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

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

```
\def\@tempa#1\do\addbibresource#2\nil{%
    \ifx\relax#2\relax
    \else
    \def\@tempa##1\do\addbibresource##2\nil{\def\@preamblecmds{##1##2}}%
    \expandafter\@tempa\@preamblecmds\nil
    \fi
}
\expandafter\@tempa\@preamblecmds\do\addbibresource\nil
\AfterEndPreamble{%
   \DeclareRobustCommand{\bibliography}[1]{%
      \addbibresource{#1}}%
}%
\renewcommand{\fps@figure}{htbp}
\renewcommand{\fps@table}{htbp}
\tolerance 1414
\hbadness 1414
\emergencystretch 1.5em
\hfuzz 0.3pt
\widowpenalty=10000
\displaywidowpenalty=10000
\clubpenalty=5000
\interfootnotelinepenalty=9999
\brokenpenalty=2000
\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.

```
⟨/class⟩
⟨*biblatex⟩
```

19.10.1 The EMISAJ bibliography style

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

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

```
⟨*bbx⟩
```

We start by declaring the file name and date.

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

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

```
\RequireBibliographyStyle{authoryear}
```

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

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

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

```
\defbibenvironment{bibliography}
 {\list{}%
   {\setlength{\labelwidth}{\z@}%
    \setlength{\leftmargin}{\z@}%
    \setlength{\itemindent}{-\leftmargin}%
    \setlength{\itemsep}{.5\baselineskip\@plus.2\baselineskip\@minus.2\baselineskip}%
    \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.

```
    }%
    \let\makelabel\bibitemlabel
```

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

```
    \tolerance 9999
    \emergencystretch 3em
    \hfuzz .5\p@
    \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.

```
    \clubpenalty 4000
    \@clubpenalty\clubpenalty
    \widowpenalty 4000
```

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

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

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

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

An empty `thebibliography` environment will cause a warning.

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

```
{\item}
```

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

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

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

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

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

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

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

The following macros insert space.

`\addspace` adds a breakable interword space.

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

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

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

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

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

```
\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.

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

```
  \widowpenalty=10000\relax
  \clubpenalty=10000\relax
  \biburlsetup
  \flushbottom
  \frenchspacing
  \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.

```
\renewcommand*{\biburlsetup}{%
  \Urlmuskip=0mu plus 2mu\relax
  \mathchardef\UrlBreakPenalty=200\relax
  \mathchardef\UrlBigBreakPenalty=100\relax
  \mathchardef\UrlEmergencyPenalty=9000\relax
  \appto\UrlSpecials{%
    \do\0{\mathchar`\0\penalty\UrlEmergencyPenalty}%
    \do\1{\mathchar`\1\penalty\UrlEmergencyPenalty}%
    \do\2{\mathchar`\2\penalty\UrlEmergencyPenalty}%
    \do\3{\mathchar`\3\penalty\UrlEmergencyPenalty}%
    \do\4{\mathchar`\4\penalty\UrlEmergencyPenalty}%
    \do\5{\mathchar`\5\penalty\UrlEmergencyPenalty}%
    \do\6{\mathchar`\6\penalty\UrlEmergencyPenalty}%
    \do\7{\mathchar`\7\penalty\UrlEmergencyPenalty}%
    \do\8{\mathchar`\8\penalty\UrlEmergencyPenalty}%
    \do\9{\mathchar`\9\penalty\UrlEmergencyPenalty}}%
  \def\UrlBreaks{%
```

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

URLs are typeset in sans-serif script.

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

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.

```
\DeclareFieldFormat{citetitle}{#1}
\DeclareFieldFormat[article]{citetitle}{#1\isdot}
\DeclareFieldFormat[inbook]{citetitle}{#1\isdot}
\DeclareFieldFormat[incollection]{citetitle}{#1\isdot}
\DeclareFieldFormat[inproceedings]{citetitle}{#1\isdot}
\DeclareFieldFormat[patent]{citetitle}{#1\isdot}
\DeclareFieldFormat[thesis]{citetitle}{#1\isdot}
\DeclareFieldFormat[unpublished]{citetitle}{#1\isdot}
```

The following field formats are used for output in bibliographies.

```
\DeclareFieldFormat{booktitle}{#1\isdot}
\DeclareFieldFormat{journaltitle}{#1}
\DeclareFieldFormat{issuetitle}{#1}
```

```
\DeclareFieldFormat{maintitle}{#1}
\DeclareFieldFormat{title}{#1}
\DeclareFieldFormat[article]{title}{#1\isdot}
\DeclareFieldFormat[inbook]{title}{#1\isdot}
\DeclareFieldFormat[incollection]{title}{#1\isdot}
\DeclareFieldFormat[inproceedings]{title}{#1\isdot}
\DeclareFieldFormat[patent]{title}{#1\isdot}
\DeclareFieldFormat[thesis]{title}{#1\isdot}
\DeclareFieldFormat[unpublished]{title}{#1\isdot}
\DeclareFieldFormat{url}{\url{#1}}
\DeclareFieldFormat{urldate}{\bibstring{urlseen}\addcolon\space#1}
\DeclareFieldAlias[misc]{note}{urldate}
\DeclareFieldAlias[report]{note}{urldate}
\DeclareFieldAlias[thesis]{note}{urldate}
\DeclareFieldFormat{version}{\bibcpstring{version}~#1}
\DeclareFieldFormat{volume}{\bibcpstring{volume}~#1}
\DeclareFieldFormat{volumes}{#1~\bibcpstring{volumes}}
```

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

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

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

- ▷ ⟨*name*⟩ may contain characters such as numbers and punctuation marks but no backslash, and
- ▷ `\newbibmacro` issues just a warning message if the macro is already defined, then falls back to `\renewbibmacro`.

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

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

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

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

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

Now for the latest versions

```
{%
   \DeclareNameFormat{emisa:names}{%
      \nameparts{#1}%
      \usebibmacro{name:family-giveninit}%
         {\namepartfamily}%
```

```
            {\namepartgiveni}%
            {\namepartprefix}%
            {\namepartsuffix}%
        \usebibmacro{name:andothers}}%
}%
```

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

#1 = last name
#2 = last name (initials)
#3 = first name
#4 = first name (initials)
#5 = name prefix, a.k.a. 'von part'
#6 = name prefix (initials)
#7 = name affix, a.k.a. 'junior part'
#8 = name affix (initials)

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

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

me:last-firstinit bibmacro

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

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

Now for the latest versions

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

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

```
    \ifdefvoid{#3}{}{%
       \mkbibnameprefix{#3}%\isdot
       \ifprefchar% replaces \ifpunctmark{'}%
       {}%
       {\ifuseprefix{\addhighpenspace}{\addlowpenspace}}}%
```

. . . last name . . .

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

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

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

. . . and first name (initials).

```
    \ifdefvoid{#2}{}{\mkbibnamegiven{#2}\isdot}%
    }%
}%
```

and now for the older versions

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

Formatting: name prefix (‘von part’), . . .

```
  \ifblank{#3}{}{%
    \mkbibnameprefix{#3}%\isdot
    \ifpunctmark{'}%
      {}
      {\ifuseprefix{\addhighpenspace}{\addlowpenspace}}}%
```

. . . last name . . .

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

. . . name affix (‘junior part’), . . .

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

. . . and first name (initials).

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

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

```
\renewbibmacro*{in:}{%
  \printtext{%
    \bibcpstring{in}%
    \intitlepunct}}
```

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

`author` bibmacro

```
\renewbibmacro*{author}{%
  \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
    {\printnames{author}%
     \iffieldundef{authortype}
       {}
       {\setunit{\addspace}%
\usebibmacro{authorstrg}}}
    {}}
```

editor bibmacro

```
\renewbibmacro*{editor}{%
  \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
    {\printnames{editor}%
     \setunit{\addspace}%
     \usebibmacro{editorstrg}%
     \clearname{editor}}
    {}}
```

editor+others bibmacro

```
\renewbibmacro*{editor+others}{%
  \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
    {\printnames[emisa:names]{editor}%
     \setunit{\addspace}%
     \usebibmacro{editor+othersstrg}%
    \clearname{editor}}
    {}}
```

translator bibmacro

```
\renewbibmacro*{translator}{%
  \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
    {\printnames{translator}%
     \setunit{\addspace}%
     \usebibmacro{translatorstrg}%
     \clearname{translator}}
    {}}
```

translator+others bibmacro

```
\renewbibmacro*{translator+others}{%
  \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
    {\printnames{translator}%
     \setunit{\addspace}%
     \usebibmacro{translator+othersstrg}%
     \clearname{translator}}
    {}}
```

editor+othersstrg bibmacro

```
\renewbibmacro*{editor+othersstrg}{%
  \iffieldundef{editortype}
    {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
       {\def\abx@tempa{editors}}
       {\def\abx@tempa{editor}}}
    {\ifthenelse{\value{editor}>1\OR\ifandothers{editor}}
       {\edef\abx@tempa{\thefield{editortype}s}}
       {\edef\abx@tempa{\thefield{editortype}}}}%
  \let\abx@tempb=\empty
  \ifnamesequal{editor}{translator}
    {\appto\abx@tempa{tr}%
```

```
      \appto\abx@tempb{\clearname{translator}}}
    {}%
  \ifnamesequal{editor}{commentator}
    {\appto\abx@tempa{co}%
     \appto\abx@tempb{\clearname{commentator}}}
    {\ifnamesequal{editor}{annotator}
       {\appto\abx@tempa{an}%
\appto\abx@tempb{\clearname{annotator}}}
       {}}%
  \ifnamesequal{editor}{introduction}
    {\appto\abx@tempa{in}%
     \appto\abx@tempb{\clearname{introduction}}}
    {\ifnamesequal{editor}{foreword}
       {\appto\abx@tempa{fo}%
\appto\abx@tempb{\clearname{foreword}}}
       {\ifnamesequal{editor}{afterword}
          {\appto\abx@tempa{af}%
           \appto\abx@tempb{\clearname{afterword}}}
          {}}}%
  \ifbibxstring{\abx@tempa}
    {\bibstring[\mkbibparens]{\abx@tempa}%
     \abx@tempb}
    {\usebibmacro{editorstrg}}}%
```

emisa:url+urldate bibmacro

```
\newbibmacro*{emisa:url+urldate}{%
  \iffieldundef{url}
    {\printfield{howpublished}}
    {\printfield{url}}
  \setunit*{\addperiod\space}\newblock
  \iffieldundef{urlyear}
    {\printfield{note}}
    {\printtext[urldate]{\printurldate}}}
```

isa:url+type+version+urldate bibmacro

```
\newbibmacro*{emisa:url+type+version+urldate}{%
  \iffieldundef{url}%
    {\printfield{url}}
    {\printfield{howpublished}}%
  \setunit*{\addcomma\space}\newblock
  \printfield{type}%
  \setunit*{\addcomma\space}\newblock
  \printfield{version}%
  \setunit*{\addcomma\space}\newblock
  \iffieldundef{urlyear}
    {\printfield{note}}
    {\printtext[urldate]{\printurldate}}}
```

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

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

`finentry` bibmacro

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

`article` bibdriver

```
\DeclareBibliographyDriver{article}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author/translator+others}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{bytranslator+others}%
  \newunit\newblock
  \printfield{version}%
  \setunit{\addperiod\space}%
  \usebibmacro{in:}%
  \usebibmacro{journal+issuetitle}%
  \newunit\newblock
  \usebibmacro{editor+others}%
  \newunit\newblock
  \usebibmacro{note+pages}%
  \newunit\newblock
  \iftoggle{bbx:isbn}
    {\printfield{issn}}
    {}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

`book` bibdriver

```
\DeclareBibliographyDriver{book}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author/editor+others/translator+others}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{maintitle+title}%
  \newunit
  \printlist{language}%
```

```
  \newunit\newblock
  \usebibmacro{editor+others}%
  \setunit{\addcomma\space}%
  \newblock
  \printfield{edition}%
  \setunit{\addperiod\space}%
  \newblock
  \usebibmacro{series+number}%
  \newunit
  \newblock
  \iffieldundef{maintitle}
    {\printfield{volume}%
     \printfield{part}}
    {}%
  \newunit
  \printfield{volumes}%
  \setunit{\addperiod\space}%
  \newblock
  \printfield{note}%
  \setunit{\addperiod\space}%
  \newblock
  \usebibmacro{publisher+location+date}%
  \newunit\newblock
  \usebibmacro{chapter+pages}%
  \newunit
  \printfield{pagetotal}%
  \newunit\newblock
  \iftoggle{bbx:isbn}
    {\printfield{isbn}}
    {}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

`booklet` bibdriver

```
\DeclareBibliographyDriver{booklet}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author/editor+others/translator+others}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{editor+others}%
```

```
  \newunit\newblock
  \printfield{howpublished}%
  \newunit\newblock
  \printfield{type}%
  \newunit\newblock
  \printfield{note}%
  \newunit\newblock
  \usebibmacro{location+date}%
  \newunit\newblock
  \usebibmacro{chapter+pages}%
  \newunit
  \printfield{pagetotal}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

collection bibdriver

```
\DeclareBibliographyDriver{collection}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{editor+others}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{maintitle+title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{editor+others}%
  \setunit{\addcomma\space}%
  \newblock
  \printfield{edition}%
  \setunit{\addperiod\space}%
  \newblock
  \usebibmacro{series+number}%
\newunit
  \newblock
  \iffieldundef{maintitle}
    {\printfield{volume}%
     \printfield{part}}
    {}%
  \newunit
  \printfield{volumes}%
  \setunit{\addperiod\space}%
  \newblock
  \printfield{note}%
  \setunit{\addperiod\space}%
```

```
  \newblock
  \usebibmacro{publisher+location+date}%
  \newunit\newblock
  \usebibmacro{chapter+pages}%
  \newunit
  \printfield{pagetotal}%
  \newunit\newblock
  \iftoggle{bbx:isbn}
    {\printfield{isbn}}
    {}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

inbook bibdriver

```
\DeclareBibliographyDriver{inbook}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author/translator+others}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{in:}%
  \usebibmacro{bybookauthor}%
  \newunit\newblock
  \usebibmacro{maintitle+booktitle}%
  \newunit\newblock
  \usebibmacro{editor+others}%
  \setunit{\addcomma\space}%
  \newblock
  \printfield{edition}%
  \newunit
  \iffieldundef{maintitle}
    {\printfield{volume}%
     \printfield{part}}
    {}%
  \newunit
  \printfield{volumes}%
  \newunit\newblock
  \usebibmacro{series+number}%
  \newunit\newblock
  \printfield{note}%
  \newunit\newblock
```

```
  \usebibmacro{publisher+location+date}%
  \newunit\newblock
  \usebibmacro{chapter+pages}%
  \newunit\newblock
  \iftoggle{bbx:isbn}
    {\printfield{isbn}}
    {}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

incollection bibdriver

```
\DeclareBibliographyDriver{incollection}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author/translator+others}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \setunit{\addcomma\space}%
  \printlist{language}%
```

Period after title, if any

```
  \setunit{\addperiod\space}%
  \usebibmacro{in:}%
  \usebibmacro{editor+others}%
  \setunit{\addspace}%
  \newblock
  \usebibmacro{byauthor}%
  \newblock
  \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
  \newblock
  \printfield{edition}%
  \setunit{\addperiod\space}%
  \newblock
  \usebibmacro{series+number}%
  \newunit
  \newblock
  \iffieldundef{maintitle}
    {\printfield{volume}%
     \printfield{part}}
    {}%
  \newunit
  \printfield{volumes}%
```

```
1730    \setunit{\addperiod\space}%
1731    \newblock
1732    \printfield{note}%
1733    \setunit{\addperiod\space}%
1734    \newblock
1735    \usebibmacro{publisher+location+date}%
1736    \setunit*{\addcomma\space}%
1737    \newblock
1738    \usebibmacro{chapter+pages}%
1739    \newunit\newblock
1740    \iftoggle{bbx:isbn}
1741      {\printfield{isbn}}
1742      {}%
1743    \newunit\newblock
1744    \usebibmacro{doi+eprint+url}%
1745    \newunit\newblock
1746    \usebibmacro{addendum+pubstate}%
1747    \newunit\newblock
1748    \usebibmacro{pageref}%
1749    \usebibmacro{finentry}}
```

`inproceedings` bibdriver

```
1750 \DeclareBibliographyDriver{inproceedings}{%
1751    \usebibmacro{bibindex}%
1752    \usebibmacro{begentry}%
1753    \usebibmacro{author/translator+others}%
1754    \setunit{\labelnamepunct}%
1755    \newblock
1756    \usebibmacro{title}%
1757    \setunit{\addcomma\space}%
1758    \printlist{language}%
1759    \newblock
1760    \usebibmacro{byauthor}%
```

Period after title, if any

```
1761    \setunit{\addperiod\space}%
1762    \usebibmacro{in:}%
1763    \usebibmacro{editor+others}%
1764    \setunit{\addspace}%
1765    \newblock
1766    \usebibmacro{byauthor}%
1767    \newblock
1768    \usebibmacro{maintitle+booktitle}%
```

Colon after maintitle, if any

```
1769    \newblock
1770    \usebibmacro{event+venue+date}%
1771    \setunit{\addperiod\space}%
1772    \newblock
```

```
  \usebibmacro{series+number}%
  \newunit
  \newblock
  \iffieldundef{maintitle}
    {\printfield{volume}%
     \printfield{part}}
    {}%
  \newunit
  \printfield{volumes}%
  \setunit{\addperiod\space}%
  \newblock
  \printfield{note}%
  \setunit{\addperiod\space}%
  \newblock
  \printlist{organization}%
  \setunit{\addperiod\space}%
  \newblock
  \usebibmacro{publisher+location+date}%
  \setunit{\addcomma\space}%
  \newblock
  \usebibmacro{chapter+pages}%
  \newunit\newblock
  \iftoggle{bbx:isbn}
    {\printfield{isbn}}
    {}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

`manual` bibdriver

```
\DeclareBibliographyDriver{manual}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author/editor}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{byeditor}%
  \setunit{\addcomma\space}%
  \newblock
  \printfield{edition}%
  \newunit\newblock
  \usebibmacro{series+number}%
```

```
1820    \newunit\newblock
1821    \printfield{type}%
1822    \newunit
1823    \printfield{version}%
1824    \newunit
1825    \printfield{note}%
1826    \newunit\newblock
1827    \printlist{organization}%
1828    \newunit
1829    \usebibmacro{publisher+location+date}%
1830    \newunit\newblock
1831    \usebibmacro{chapter+pages}%
1832    \newunit
1833    \printfield{pagetotal}%
1834    \newunit\newblock
1835    \iftoggle{bbx:isbn}
1836      {\printfield{isbn}}
1837      {}%
1838    \newunit\newblock
1839    \usebibmacro{doi+eprint+url}%
1840    \newunit\newblock
1841    \usebibmacro{addendum+pubstate}%
1842    \newunit\newblock
1843    \usebibmacro{pageref}%
1844    \usebibmacro{finentry}}
```

`misc` bibdriver

```
1845 \DeclareBibliographyDriver{misc}{%
1846    \usebibmacro{bibindex}%
1847    \usebibmacro{begentry}%
1848    \usebibmacro{author/editor+others/translator+others}%
1849    \setunit{\labelnamepunct}\newblock
1850    \usebibmacro{title}%
1851    \newunit
1852    \printlist{language}%
```

Period after title, if any

```
1853    \setunit{\addperiod\space}%
1854    \usebibmacro{emisa:url+urldate}%
1855    \usebibmacro{finentry}}
```

`online` bibdriver

```
1856 \DeclareBibliographyDriver{online}{%
1857    \usebibmacro{bibindex}%
1858    \usebibmacro{begentry}%
1859    \usebibmacro{author/editor+others/translator+others}%
1860    \setunit{\labelnamepunct}\newblock
1861    \usebibmacro{title}%
1862    \newunit
```

```
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{editor+others}%
  \newunit\newblock
  \printfield{version}%
  \newunit
  \printfield{note}%
  \newunit\newblock
  \printlist{organization}%
  \newunit\newblock
  \usebibmacro{date}%
  \newunit\newblock
  \iftoggle{bbx:eprint}
    {\usebibmacro{eprint}}
    {}%
  \newunit\newblock
  \usebibmacro{url+urldate}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

patent bibdriver

```
\DeclareBibliographyDriver{patent}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \printfield{type}%
  \setunit*{\addspace}%
  \printfield{number}%
  \iflistundef{location}
    {}
    {\setunit*{\addspace}%
     \printtext[parens]{%
       \printlist[][-\value{listtotal}]{location}}}%
  \newunit\newblock
  \usebibmacro{byholder}%
  \newunit\newblock
  \printfield{note}%
  \newunit\newblock
  \usebibmacro{date}%
  \newunit\newblock
  \iftoggle{bbx:url}
```

```
    {\usebibmacro{url+urldate}}
    {}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

periodical bibdriver

```
\DeclareBibliographyDriver{periodical}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{editor}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title+issuetitle}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{byeditor}%
  \newunit\newblock
  \printfield{note}%
  \newunit\newblock
  \iftoggle{bbx:isbn}
    {\printfield{issn}}
    {}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

proceedings bibdriver

```
\DeclareBibliographyDriver{proceedings}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{editor+others}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{maintitle+title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \usebibmacro{event+venue+date}%
  \newunit\newblock
  \usebibmacro{editor+others}%
  \setunit{\addperiod\space}%
  \newblock
```

```
  \usebibmacro{series+number}%
  \newunit
  \newblock
  \iffieldundef{maintitle}
    {\printfield{volume}%
     \printfield{part}}
    {}%
  \newunit
  \printfield{volumes}%
  \setunit{\addperiod\space}%
  \newblock
  \printfield{note}%
  \setunit{\addperiod\space}%
  \newblock
  \printlist{organization}%
  \setunit{\addperiod\space}%
  \newblock
  \usebibmacro{publisher+location+date}%
  \newblock
  \usebibmacro{chapter+pages}%
  \newunit
  \printfield{pagetotal}%
  \newunit\newblock
  \iftoggle{bbx:isbn}
    {\printfield{isbn}}
    {}%
  \newunit\newblock
  \usebibmacro{doi+eprint+url}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

Technical reports

author
title
year
type
number
institution
address
url
note

`report` bibdriver

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

```
  \usebibmacro{begentry}%
  \usebibmacro{author}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \setunit{\addperiod\space}%
  \printfield{type}%
  \newunit
  \printfield{number}%
  \setunit{\addperiod\space}%
  \printlist{institution}%
  \setunit*{\addperiod\space}\newblock
  \printlist{location}%
  \setunit*{\addperiod\space}\newblock
  \printfield{url}%
  \setunit*{\addperiod\space}\newblock
  \printfield{note}%
  \newunit\newblock
  \usebibmacro{finentry}}%
\DeclareBibliographyAlias{techreport}{report}%
```

`thesis` bibdriver

```
\DeclareBibliographyDriver{thesis}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \newunit
  \printlist{language}%
```

Period after title, if any

```
  \setunit{\addperiod\space}%
  \printfield{type}%
  \setunit*{\addcomma\space}%
  \usebibmacro{institution+location+date}%
  \setunit{\addperiod\space}%
  \usebibmacro{chapter+pages}%
  \newunit
  \printfield{pagetotal}%
  \newunit\newblock
  \printfield{url}%
  \setunit*{\addperiod\space}\newblock
  \printfield{note}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

unpublished bibdriver

```
\DeclareBibliographyDriver{unpublished}{%
  \usebibmacro{bibindex}%
  \usebibmacro{begentry}%
  \usebibmacro{author}%
  \setunit{\labelnamepunct}\newblock
  \usebibmacro{title}%
  \newunit
  \printlist{language}%
  \newunit\newblock
  \printfield{howpublished}%
  \newunit\newblock
  \printfield{note}%
  \newunit\newblock
  \usebibmacro{date}%
  \newunit\newblock
  \iftoggle{bbx:url}
    {\usebibmacro{url+urldate}}
    {}%
  \newunit\newblock
  \usebibmacro{addendum+pubstate}%
  \newunit\newblock
  \usebibmacro{pageref}%
  \usebibmacro{finentry}}
```

intitle+booktitle bibmacro

```
\renewbibmacro*{maintitle+booktitle}{%
  \iffieldundef{maintitle}
   {}
   {\usebibmacro{maintitle}%
    \addspace
    \newblock
    \iffieldundef{volume}
     {}
     {\printfield{volume}%
      \printfield{part}%
      \addspace
   }}%
  \usebibmacro{booktitle}%
  \newunit}
```

ournal+issuetitle bibmacro

```
\renewbibmacro*{journal+issuetitle}{%
  \usebibmacro{journal}%
  \setunit*{\addspace}%
  \iffieldundef{series}
    {}
    {\newunit
```

```
      \printfield{series}%
      \setunit{\addspace}}%
  \printfield{volume}%
  \printfield[parens]{number}%
  \setunit{\addcomma\space}%
  \printfield{eid}%
  \setunit{\addspace}%
  \usebibmacro{issue+date}%
  \setunit{\addcolon\space}%
  \usebibmacro{issue}%
  \newunit}
```

isa:doi+eprint+url

bibmacro

```
\newbibmacro*{emisa:doi+eprint+url}{%
  \iftoggle{bbx:doi}
    {\printfield{doi}}
    {}%
  \newunit\newblock
  \iftoggle{bbx:eprint}
    {\usebibmacro{eprint}}
    {}%
  \newunit\newblock
  \iftoggle{bbx:url}
    {\usebibmacro{emisa:url+urldate}}
    {}}
```

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

```
\renewbibmacro*{author}{%
  \ifthenelse{\ifuseauthor\AND\NOT\ifnameundef{author}}
   {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
                \NOT\iffirstonpage\AND
                \(\NOT\boolean{bbx@inset}\OR
                \iffieldequalstr{entrysetcount}{1}\)}
     {\bibnamedash}
     {\usebibmacro{bbx:savehash}%
      \printnames[emisa:names]{author}%
      \iffieldundef{authortype}
       {\setunit{\addspace}}
       {\setunit{\addcomma\space}%
        \usebibmacro{authorstrg}%
        \setunit{\addspace}}}%
   }{%
```

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

bbx:editor bibmacro

```
\renewbibmacro*{bbx:editor}[1]{%
  \ifthenelse{\ifuseeditor\AND\NOT\ifnameundef{editor}}
    {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
                \NOT\iffirstonpage\AND
                \(\NOT\boolean{bbx@inset}\OR
                \ifieldequalstr{entrysetcount}{1}\)}
      {\bibnamedash}
      {\printnames[emisa:names]{editor}%
       \setunit{\addcomma\space}%
       \usebibmacro{bbx:savehash}}%
     \usebibmacro{#1}%
     \clearname{editor}%
     \setunit{\addspace}%
    }{\global\undef\bbx@lasthash
     \usebibmacro{labeltitle}%
     \setunit*{\addspace}%
    }%
% \usebibmacro{date+extrayear}%
  }
```

bbx:translator bibmacro

```
\renewbibmacro*{bbx:translator}[1]{%
  \ifthenelse{\ifusetranslator\AND\NOT\ifnameundef{translator}}
    {\ifthenelse{\iffieldequals{fullhash}{\bbx@lasthash}\AND
                \NOT\iffirstonpage\AND
 \(\NOT\boolean{bbx@inset}\OR
   \ifieldequalstr{entrysetcount}{1}\)}
       {\bibnamedash}
       {\printnames[emisa:names]{translator}%
\setunit{\addcomma\space}%
\usebibmacro{bbx:savehash}}%
     \usebibmacro{translator+othersstrg}%
     \clearname{translator}%
     \setunit{\addspace}}%
    {\global\undef\bbx@lasthash
     \usebibmacro{labeltitle}%
     \setunit*{\addspace}}%
  \usebibmacro{date+extrayear}}
```

blisher+location+date bibmacro

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

```
2156   \setunit*{\addcomma\space}%
2157   \printlist{location}%
2158   \newunit}
```

stitution+location+date

bibmacro

```
2159 \renewbibmacro*{institution+location+date}{%
2160   \printlist{institution}%
2161   \setunit*{\addcomma\space}%
2162   \printlist{location}%
2163   \newunit}
```

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

Localization

```
2164 \DefineBibliographyStrings{english}{%
2165 urlseen = {Last Access},
2166 techreport = {},%
2167 }%

2168 \DefineBibliographyStrings{german}{%
2169 urlseen = {Letzter Zugriff},%
2170 techreport = {},%
2171 }%

2172 \DefineBibliographyStrings{ngerman}{%
2173 urlseen = {Letzter Zugriff},%
2174 techreport = {},%
2175 }%
```

Unlocalization

```
2176 % year/month/day
2177 \protected\def\mkbibdateiso#1#2#3{%
2178   \iffieldundef{#1}{}{%
2179     \thefield{#1}%
2180     \iffieldundef{#2}{}{-}}%
2181   \iffieldundef{#2}{}{%
2182     \mkdatezeros{\thefield{#2}}%
2183     \iffieldundef{#3}{}{-}}%
2184   \mkdatezeros{\thefield{#3}}%
2185 }%

2186 \DefineBibliographyExtras{english}{\let\mkbibdateshort\mkbibdateiso}%
2187 \DefineBibliographyExtras{german}{\let\mkbibdateshort\mkbibdateiso}%
2188 \DefineBibliographyExtras{ngerman}{\let\mkbibdateshort\mkbibdateiso}%
```

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

2189 ⟨/bbx⟩

19.10.2 The EMISAJ citation style

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

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

2190 ⟨*cbx⟩

```
2191 \ProvidesFile{emisa.cbx}[2016/07/18 2.1.1 EMISA citation style]
2192 \RequireCitationStyle{authoryear-comp}
2193 \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".

```
2194 \DeclareRangeChars*{f}
```

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

2195 ⟨/cbx⟩
2196 ⟨/biblatex⟩
2197 ⟨*class⟩

Here, the LaTeX class EMISAJ ends.

2198 ⟨/class⟩

19.11 Examples and templates

19.11.1 Document templates

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

2199 ⟨*template⟩
2200 ⟨*article⟩

```
2201 \documentclass[american]{emisa}
2202 %% You can use the following additional class options:
2203 %% referee, review -- Use for submission to peer-review process.
2204 %% draft -- mark overfull lines
2205 %% british, UKenglish -- British English hyphenation and quotation marks
2206 %% american, USenglish -- American English hyphenation and quotation marks
```

```
⟨/article⟩
⟨issue⟩\documentclass[final,cover]{emisa}
⟨*article | issue⟩
%% The following package imports are recommended, but not obligatory;
%% you might want take a look into their respective manuals if you
%% don't know what they do.
\usepackage{amsmath,amssymb,mathtools}
\usepackage{algorithmic,algorithm}
%% Additional package imports go here:
%% \usepackage{}
⟨/article | issue⟩
⟨*issue⟩
%% Insert here issue data:
\volume{}% Volume No.
\issue{}{}% Issue No. and Issue Date
%% If there are any bibliography data bases to be used globally
%% please indicate here:
\bibliography{}
%% Insert here any (relative or absolute) path to be searched for
%% graphics files:
\graphicspath{{./figs_base/},{}}
%% Here you can alter the cover pages; e.g. this:
%% \coverII{\AtPageDeadCenter{Something}}
%% typesets the word "Something" centered on the inner side of the
%% front sheet.
%% You can also delete any cover pages at all by defining them empty,
%% see below:
\coverII{}
%% This outputs the SIG-MOBIS page on the inner side of the back
%% sheet:
\coverIII{\AtPageCenter{\sigmobispage}}
⟨/issue⟩
⟨*article | issue⟩
%% Here, the normal text begins.
\begin{document}
⟨/article | issue⟩
⟨*issue⟩
\tableofcontents

\begin{editorial}
%% Please insert editorial text here.

\end{editorial}
⟨/issue⟩
⟨*article | issue⟩
\begin{article}{%
%% Please declare the title elements of your article here.  Unused
%% elements can either be deleted or commented out, or else just let
%% empty.  In either case they are not typeset.
```

```
%% If the option referee or review is given, all author tags, address,
%% e-mail and acknowledgements will be likewise omitted.
  \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 ve
  %% Author with a different address
  \author{FirstName LastName}
  \address{Enter affiliation of second and further authors here. Add further authors following th
  %% Author with an already used address
  \author{FirstName LastName}
  \address[Letter of already used address]{}
  %% 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
  %% Please declare here the bibliography data base(s) you want to use
  %% in this article (make sure to add the file extension, e.g. .bib):
  \bibliography{}
  %% Take note of the following closing bracket!
  }
⟨/article | issue⟩
⟨*issue⟩
  \editor{My self}
  \received{24 Octover 2014}
  \accepted[2]{1 November 2015}
  \doi{10.5073/EMISA.2011.11.1}
  \license{License information}
  %% or
  \CCBYNCSAThree
  %% or
  \CCBYNCSAFour
⟨/issue⟩
⟨*article | issue⟩
%% Please insert your article text here.
\section{Introduction}
\subsection{The research problem}
%% Remember to provide a unique label for each section, table, figure, listing and algorithm for
%%
%% This directive typesets the bibliography.  To achieve this, one has
%% to run the biber program on the corresponding auxiliary file
%% generated in the previous LaTeX run; you can just use the job name
%% (the name of this file without ".tex")", e.g.: biber emisa-author-template
\printbibliography
%
\end{article}
⟨/article | issue⟩
⟨*issue⟩
```

```
%% Please insert as much article environments here as are needed.
\begin{article}{%
   \title{}
   \subtitle{}
   \author*{<Name>}{<Email address>}
   \address{address line 1\\address line 2}
   % Author with unique address
   \author{<Name>}
   \address{address line 1\\address line 2}
   % Author with the same address as another author
   \author{<Name>}
   \address[a]{}
   \abstract{<Insert abstract>}
   \keywords{Keyword 1 \and keyword 2 \and keyword 3}
   \authornote{This article extends an earlier conference paper, see ...}
   \acknowledgements{}
   \editor{My self}
   \received{24 Octover 2014}
   \accepted[2]{1 November 2015}
   \doi{10.5073/EMISA.2011.11.1}
   \bibliography{}
  }


\printbibliography
\end{article}

\begin{cfp}
%% Please insert your Call for papers here.
\end{cfp}

\imprint
\editorialboard
\guidelines
⟨/issue⟩
⟨article | issue⟩\end{document}
⟨/template⟩
```