The bidi *Package*

Source documentation for version 25.09.22

to my Master, ***Ferdowsi The Great***

If you want to report any bugs or typos and corrections in the documentation, or ask for any new features, or suggest any improvements, or ask any questions about the package, then please use the issue tracker:

`https://github.com/xepersian/bidi/issues`

In doing so, please always explain your issue well enough, and always include a minimal working example showing the issue.

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The bidi *Package*

Bidirectional typesetting with plain TEX and LATEX formats in XeTeX and LuaTeX engines

Source documentation for version 25.09.22

Vafa Khalighi*

September 22, 2025

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*Thanks to the bidi-tex GitHub organization consisted of David Carlisle and other members of the LATEX team for maintaining the package in the period 2018–2020.

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1 File amsart-xetex-bidi.def

```
\ProvidesFile{amsart-xetex-bidi.def}[2017/08/09 v1.1 bidi adaptations for amsart class for
\def\@tocline#1#2#3#4#5#6#7{\relax
  \ifnum #1>\c@tocdepth % then omit
  \else
    \par \addpenalty\@secpenalty\addvspace{#2}%
    \begingroup \hyphenpenalty\@M
    \@ifempty{#4}{%
      \@tempdima\csname r@tocindent\number#1\endcsname\relax
    }{%
      \@tempdima#4\relax
    }%
    \parindent\z@ \if@RTL\rightskip\else\leftskip\fi#3\relax \advance\if@RTL\rightskip\else
    \if@RTL\leftskip\else\rightskip\fi\@pnumwidth plus4em \parfillskip-\@pnumwidth
    #5\leavevmode\hskip-\@tempdima #6\nobreak\relax
    \hfil\hbox to\@pnumwidth{\@tocpagenum{#7}}\par
    \nobreak
    \endgroup
  \fi}
\renewcommand\thesubsection    {\thesection\@SepMark\arabic{subsection}}
\renewcommand\thesubsubsection {\thesubsection \@SepMark\arabic{subsubsection}}
\renewcommand\theparagraph     {\thesubsubsection\@SepMark\arabic{paragraph}}
\renewcommand\thesubparagraph  {\theparagraph\@SepMark\arabic{subparagraph}}
\def\part{\@startsection{part}{0}%
  \z@{\linespacing\@plus\linespacing}{.5\linespacing}%
  {\normalfont\bfseries\if@RTL\raggedleft\else\raggedright\fi}}
\def\right@footnoterule{%
  \kern-.4\p@
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-5pc\relax \hrulefill }
  \kern11\p@\kern-\footnotesep}
\def\left@footnoterule{\kern-.4\p@
        \hrule\@width 5pc\kern11\p@\kern-\footnotesep}


\long\def\@footnotetext#1{%
  \insert\footins{%
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
    \reset@font%
    \bidi@@footnotetext@font% \normalfont\footnotesize
    \interlinepenalty\interfootnotelinepenalty
    \splittopskip\footnotesep \splitmaxdepth \dp\strutbox
    \floatingpenalty\@MM \hsize\columnwidth
    \@parboxrestore \parindent\normalparindent \sloppy
    \protected@edef\@currentlabel{%
      \csname p@footnote\endcsname\@thefnmark}%
    \@makefntext{%
      \rule\z@\footnotesep\ignorespaces#1\unskip\strut\par}}}

\long\def\@RTLfootnotetext#1{%
  \insert\footins{%
    \@RTLtrue%
    \reset@font%
    \bidi@@RTLfootnotetext@font% \normalfont\footnotesize
```

```
    \interlinepenalty\interfootnotelinepenalty
    \splittopskip\footnotesep \splitmaxdepth \dp\strutbox
    \floatingpenalty\@MM \hsize\columnwidth
    \@parboxrestore \parindent\normalparindent \sloppy
    \protected@edef\@currentlabel{%
      \csname p@footnote\endcsname\@thefnmark}%
    \@makefntext{%
      \rule\z@\footnotesep\ignorespaces#1\unskip\strut\par}}}


\long\def\@LTRfootnotetext#1{%
  \insert\footins{%
    \@RTLfalse%
    \reset@font%
    \bidi@@LTRfootnotetext@font% \normalfont\footnotesize
    \interlinepenalty\interfootnotelinepenalty
    \splittopskip\footnotesep \splitmaxdepth \dp\strutbox
    \floatingpenalty\@MM \hsize\columnwidth
    \@parboxrestore \parindent\normalparindent \sloppy
    \protected@edef\@currentlabel{%
      \csname p@footnote\endcsname\@thefnmark}%
    \@makefntext{%
      \rule\z@\footnotesep\ignorespaces#1\unskip\strut\par}}}


\footdir@temp\footdir@ORG@bidi@amsart@footnotetext\@footnotetext{\bidi@footdir@footnote}%
\footdir@temp\footdir@ORG@bidi@amsart@RTLfootnotetext\@RTLfootnotetext{R}%
\footdir@temp\footdir@ORG@bidi@amsart@LTRfootnotetext\@LTRfootnotetext{L}%

\renewenvironment{thebibliography}[1]{%
  \@bibtitlestyle
  \normalfont\bibliofont\labelsep .5em\relax
  \renewcommand\theenumiv{\arabic{enumiv}}\let\p@enumiv\@empty
  \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
  \bidi@@thebibliography@font@hook%
  \list{\@biblabel{\theenumiv}}{\settowidth\labelwidth{\@biblabel{#1}}%
    \leftmargin\labelwidth \advance\leftmargin\labelsep
    \usecounter{enumiv}}%
  \sloppy \clubpenalty\@M \widowpenalty\clubpenalty
  \sfcode`\.=\@m
}{%
  \def\@noitemerr{\@latex@warning{Empty `thebibliography' environment}}%
  \endlist
}
\def\theindex{\@restonecoltrue\if@twocolumn\@restonecolfalse\fi
  \columnseprule\z@ \columnsep 35\p@
  \@indextitlestyle
  \thispagestyle{plain}%
  \let\item\@idxitem
  \parindent\z@  \parskip\z@\@plus.3\p@\relax
  \if@RTL\raggedleft\else\raggedright\fi
  \hyphenpenalty\@M
  \footnotesize}
```

```
\def\@idxitem{\par\hangindent \if@RTL-\fi2em}
\def\subitem{\par\hangindent \if@RTL-\fi2em\hspace*{1em}}
\def\subsubitem{\par\hangindent \if@RTL-\fi3em\hspace*{2em}}
\def\maketitle{\par
  \@topnum\z@ % this prevents figures from falling at the top of page 1
  \@setcopyright
  \thispagestyle{firstpage}% this sets first page specifications
  \uppercasenonmath\shorttitle
  \ifx\@empty\shortauthors \let\shortauthors\shorttitle
  \else \andify\shortauthors
  \fi
  \@maketitle@hook
  \begingroup
  \@maketitle
  \toks@\@xp{\shortauthors}\@temptokena\@xp{\shorttitle}%
  \toks4{\def\\{ \ignorespaces}}% defend against questionable usage
  \edef\@tempa{%
    \@nx\markboth{\the\toks4
      \@nx\MakeUppercase{\the\toks@}}{\the\@temptokena}}%
  \@tempa
  \endgroup
  \c@footnote\z@
  \@cleartopmattertags
}
```

2 File adjmulticol-xetex-bidi.def

```
\ProvidesFile{adjmulticol-xetex-bidi.def}[2015/04/25 v0.1 bidi adaptations for adjmulticol
\def\adjmulticols#1#2#3{\col@number#1\relax
  \def\@tempa{#2}%
  \ifx\@tempa\@empty\adjmc@inner\z@\else\adjmc@inner#2\fi
  \def\@tempa{#3}%
  \ifx\@tempa\@empty\adjmc@outer\z@\else\adjmc@outer#3\fi
  \ifnum\col@number<\@ne
     \PackageWarning{adjmulticol}%
      {Using `\number\col@number'
       columns doesn't seem a good idea.^^J
       I therefore use one columns instead}%
     \col@number\@ne\fi
  \ifnum\col@number>10
     \PackageError{adjmulticol}%
      {Too many columns}%
      {Current implementation doesn't
       support more than 10 columns.%
       \MessageBreak
       I therefore use 10 columns instead}%
     \col@number10 \fi
     \ifx\@footnotetext\mult@footnotetext\else
       \let\orig@footnotetext\@footnotetext
       \let\@footnotetext\mult@footnotetext
     \fi
     \ifx\@LTRfootnotetext\mult@LTRfootnotetext\else
       \let\orig@LTRfootnotetext\@LTRfootnotetext
       \let\@LTRfootnotetext\mult@LTRfootnotetext
```

```
    \fi
    \ifx\@RTLfootnotetext\mult@RTLfootnotetext\else
      \let\orig@RTLfootnotetext\@RTLfootnotetext
      \let\@RTLfootnotetext\mult@RTLfootnotetext
    \fi
  \@ifnextchar[\adjmult@cols{\adjmult@cols[]}}
\let\adjmc@page@sofar@orig=\page@sofar
```

3 File algorithm2e-xetex-bidi.def

```
\ProvidesFile{algorithm2e-xetex-bidi.def}[2025/01/03 v0.3 bidi adaptations for algorithm2e
\expandafter\ifx\csname algocf@within\endcsname\relax% if \algocf@within doesn't exist
\else%                                          else
\renewcommand\thealgocf{\csname the\algocf@within\endcsname\@SepMark\@arabic\c@algocf}%
\fi
\ApplyPatchIfPackageLoadedF{color}{%
  \bidi@patchcmd{\@algocf@start}{\bgroup}{%
    \bgroup
    \if@RTL
      \beginR
    \else
      \beginL
    \fi
  }{}{}
  \bidi@patchcmd{\@algocf@finish}{\egroup\end{lrbox}}{%
    \if@RTL
      \endR
    \else
      \endL
    \fi
    \egroup
    \end{lrbox}%
  }{}{}
  \bidi@patchcmd{\algocf@makecaption}{\hbox}{%
    \if@RTL
      \hboxR
    \else
      \hboxL
    \fi
  }{}{}
}

\@ifpackagewith{algorithm2e}{algonl}{%
\renewcommand{\theAlgoLine}{\expandafter\csname the\algocf@float\endcsname\@SepMark\arabic{
}{}

\@ifpackagewith{algorithm2e}{algopart}{\renewcommand{\algocf@within}{part}}{}

\@ifpackagewith{algorithm2e}{algochapter}{\renewcommand{\algocf@within}{chapter}}{}

\@ifpackagewith{algorithm2e}{algosection}{\renewcommand{\algocf@within}{section}}{}
```

4 File amsbook-xetex-bidi.def

```
\ProvidesFile{amsbook-xetex-bidi.def}[2017/08/09 v1.2 bidi adaptations for amsbook class fo
\def\@tocline#1#2#3#4#5#6#7{\relax
  \ifnum #1>\c@tocdepth % then omit
  \else
    \par \addpenalty\@secpenalty\addvspace{#2}%
    \begingroup \hyphenpenalty\@M
    \@ifempty{#4}{%
      \@tempdima\csname r@tocindent\number#1\endcsname\relax
    }{%
      \@tempdima#4\relax
    }%
    \parindent\z@ \if@RTL\rightskip\else\leftskip\fi#3\relax \advance\if@RTL\rightskip\else
    \if@RTL\leftskip\else\rightskip\fi\@pnumwidth plus4em \parfillskip-\@pnumwidth
    #5\leavevmode\hskip-\@tempdima #6\nobreak\relax
    \hfil\hbox to\@pnumwidth{\@tocpagenum{#7}}\par
    \nobreak
    \endgroup
  \fi}
\renewcommand\thesubsection    {\thesection\@SepMark\arabic{subsection}}
\renewcommand\thesubsubsection {\thesubsection \@SepMark\arabic{subsubsection}}
\renewcommand\theparagraph     {\thesubsubsection\@SepMark\arabic{paragraph}}
\renewcommand\thesubparagraph  {\theparagraph\@SepMark\arabic{subparagraph}}
\def\theindex{\@restonecoltrue\if@twocolumn\@restonecolfalse\fi
  \columnseprule\z@ \columnsep 35\p@
  \@indextitlestyle
  \thispagestyle{plain}%
  \let\item\@idxitem
  \parindent\z@  \parskip\z@\@plus.3\p@\relax
  \if@RTL\raggedleft\else\raggedright\fi
  \hyphenpenalty\@M
  \footnotesize}
\def\@idxitem{\par\hangindent \if@RTL-\fi2em}
\def\subitem{\par\hangindent \if@RTL-\fi2em\hspace*{1em}}
\def\subsubitem{\par\hangindent \if@RTL-\fi3em\hspace*{2em}}
\def\right@footnoterule{%
  \kern-.4\p@
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-5pc\relax \hrulefill }
  \kern11\p@\kern-\footnotesep}
\def\left@footnoterule{\kern-.4\p@
        \hrule\@width 5pc\kern11\p@\kern-\footnotesep}

\long\def\@footnotetext#1{%
  \insert\footins{%
   \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
   \reset@font%
    \bidi@@footnotetext@font% \normalfont\footnotesize
    \interlinepenalty\interfootnotelinepenalty
    \splittopskip\footnotesep \splitmaxdepth \dp\strutbox
    \floatingpenalty\@MM \hsize\columnwidth
    \@parboxrestore \parindent\normalparindent \sloppy
    \protected@edef\@currentlabel{%
      \csname p@footnote\endcsname\@thefnmark}%
    \@makefntext{%
      \rule\z@\footnotesep\ignorespaces#1\unskip\strut\par}}}
```

```
260
261 \long\def\@RTLfootnotetext#1{%
262   \insert\footins{%
263    \@RTLtrue%
264    \reset@font%
265     \bidi@@RTLfootnotetext@font% \normalfont\footnotesize
266     \interlinepenalty\interfootnotelinepenalty
267     \splittopskip\footnotesep \splitmaxdepth \dp\strutbox
268     \floatingpenalty\@MM \hsize\columnwidth
269     \@parboxrestore \parindent\normalparindent \sloppy
270     \protected@edef\@currentlabel{%
271       \csname p@footnote\endcsname\@thefnmark}%
272     \@makefntext{%
273       \rule\z@\footnotesep\ignorespaces#1\unskip\strut\par}}}
274
275
276 \long\def\@LTRfootnotetext#1{%
277   \insert\footins{%
278    \@RTLfalse%
279    \reset@font%
280     \bidi@@LTRfootnotetext@font% \normalfont\footnotesize
281     \interlinepenalty\interfootnotelinepenalty
282     \splittopskip\footnotesep \splitmaxdepth \dp\strutbox
283     \floatingpenalty\@MM \hsize\columnwidth
284     \@parboxrestore \parindent\normalparindent \sloppy
285     \protected@edef\@currentlabel{%
286       \csname p@footnote\endcsname\@thefnmark}%
287     \@makefntext{%
288       \rule\z@\footnotesep\ignorespaces#1\unskip\strut\par}}}
289
290
291
292 \footdir@temp\footdir@ORG@bidi@amsbook@footnotetext\@footnotetext{\bidi@footdir@footnote}%
293 \footdir@temp\footdir@ORG@bidi@amsbook@RTLfootnotetext\@RTLfootnotetext{R}%
294 \footdir@temp\footdir@ORG@bidi@amsbook@LTRfootnotetext\@LTRfootnotetext{L}%
295
296 \renewenvironment{thebibliography}[1]{%
297   \@bibtitlestyle
298   \normalfont\bibliofont\labelsep .5em\relax
299   \renewcommand\theenumiv{\arabic{enumiv}}\let\p@enumiv\@empty
300   \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
301   \bidi@@thebibliography@font@hook%
302   \list{\@biblabel{\theenumiv}}{\settowidth\labelwidth{\@biblabel{#1}}%
303     \leftmargin\labelwidth \advance\leftmargin\labelsep
304     \usecounter{enumiv}}%
305   \sloppy \clubpenalty\@M \widowpenalty\clubpenalty
306   \sfcode`\.=\@m
307 }{%
308   \def\@noitemerr{\@latex@warning{Empty `thebibliography' environment}}%
309   \endlist
310 }
311 \def\@makechapterhead#1{\global\topskip 7.5pc\relax
312   \begingroup
313   \fontsize{\@xivpt}{18}\bfseries\centering
```

```
    \ifnum\c@secnumdepth>\m@ne
      \leavevmode \hskip-\if@RTL\rightskip\else\leftskip\fi
      \rlap{\vbox to\z@{\vss
          \centerline{\normalsize\mdseries
              \uppercase\@xp{\chaptername}\enspace\thechapter}
          \vskip 3pc}}\hskip\if@RTL\rightskip\else\leftskip\fi\fi
     #1\par \endgroup
  \skip@34\p@ \advance\skip@-\normalbaselineskip
  \vskip\skip@ }
\def\maketitle{\par
  \@topnum\z@ % this prevents figures from falling at the top of page 1
  \begingroup
  \@maketitle
  \endgroup
  \c@footnote\z@
  \def\do##1{\let##1\relax}%
  \do\maketitle \do\@maketitle \do\title \do\@xtitle \do\@title
  \do\author \do\@xauthor \do\address \do\@xaddress
  \do\email \do\@xemail \do\curraddr \do\@xcurraddr
  \do\dedicatory \do\@dedicatory \do\thanks \do\thankses
  \do\keywords \do\@keywords \do\subjclass \do\@subjclass
}
```

5 File amsmath-xetex-bidi.def

```
\ProvidesFile{amsmath-xetex-bidi.def}[2020/05/16 v1.2 bidi adaptations for amsmath package
\let\veqno=\eqno
\iftagsleft@ \let\veqno=\leqno \fi
\renewcommand{\numberwithin}[3][\arabic]{%
  \@ifundefined{c@#2}{\@nocounterr{#2}}{%
    \@ifundefined{c@#3}{\@nocnterr{#3}}{%
      \@addtoreset{#2}{#3}%
      \@xp\xdef\csname the#2\endcsname{%
        \@xp\@nx\csname the#3\endcsname \@nx\@SepMark\@nx#1{#2}}}}%
}
\def\tagform@#1{\maketag@@@{\if@nonlatin\beginR\fi(\kern\z@\ignorespaces#1\unskip\@@italicc

\bidi@patchcmd\math@cr@@@align\place@tag{%
    \place@tag
  \else
    \place@tag
}{}{}

```

6 File amstext-xetex-bidi.def

```
\ProvidesFile{amstext-xetex-bidi.def}[2016/09/12 v0.2 bidi adaptations for amstext package
\def\textdef@#1#2#3{\hbox{{%
                    \everymath{#1}%
                    \let\f@size#2\selectfont
                    \if@nonlatin\beginR\fi#3\if@nonlatin\endR\fi}}}
```

7 File amsthm-xetex-bidi.def

```
\ProvidesFile{amsthm-xetex-bidi.def}[2010/07/25 v0.1 bidi adaptations for amsthm package fo
\def\@thmcountersep{\@SepMark}
```

8 File array-xetex-bidi.def

```
\ProvidesFile{array-xetex-bidi.def}[2025/09/11 v0.7 bidi adaptations for array package for
\def\@testpach{\@chclass
 \ifnum \@lastchclass=6 \@ne \@chnum \@ne \else
  \ifnum \@lastchclass=7 5 \else
   \ifnum \@lastchclass=8 \tw@ \else
    \ifnum \@lastchclass=9 \thr@@
   \else \z@
   \ifnum \@lastchclass = 10 \else
   \edef\@nextchar{\expandafter\string\@nextchar}%
   \@chnum
   \if \@nextchar c\z@ \else
    \if \@nextchar \if@RTLtab r\else l\fi\@ne \else
     \if \@nextchar \if@RTLtab l\else r\fi\tw@ \else
   \z@ \@chclass
   \if\@nextchar |\@ne \else
    \if \@nextchar !6 \else
     \if \@nextchar @7 \else
      \if \@nextchar <8 \else
       \if \@nextchar >9 \else
  10
  \@chnum
  \if \@nextchar m\thr@@ \else
   \if \@nextchar p4 \else
    \if \@nextchar b5 \else
   \z@ \@chclass \z@ \@preamerr \z@ \fi \fi \fi \fi
   \fi \fi  \fi  \fi  \fi  \fi  \fi \fi \fi \fi \fi \fi \fi}
\def\@tabular{%
  \leavevmode
  \UseTaggingSocket{tbl/hmode/begin}%
  \hbox \bgroup\if@RTLtab\beginR \fi
    \MathCollectFalse$\MathCollectTrue
    \col@sep\tabcolsep \let\d@llarbegin\begingroup
                                    \let\d@llarend\endgroup
   \@kernel@tabular@init
  \@tabarray}
\def\endtabular{\endarray\m@th $\if@RTLtab\endR\fi\egroup
  \UseTaggingSocket{tbl/hmode/end}%
}
\expandafter\let\csname endtabular*\endcsname=\endtabular
\ExplSyntaxOn
\def\@array[#1]#2{
  \@tempdima \ht \strutbox
  \advance \@tempdima by\extrarowheight
  \setbox \@arstrutbox \hbox{\vrule
             \@height \arraystretch \@tempdima
             \@depth \arraystretch \dp \strutbox
             \@width \z@}%
  \tbl_save_outer_table_cols:
  \begingroup
```

```
  \@mkpream{#2}%
  \tbl_count_table_cols:
  \xdef\@preamble{
    \noexpand \ar@ialign
    \@halignto
       \bgroup \@arstrut
      \UseTaggingSocket{tbl/row/begin}
      \tbl_init_cell_data_for_row:
      \@preamble
      \tabskip \z@ \cr}
  \endgroup
  \@arrayleft
  \if #1t\vtop \else \if#1b\vbox \else \vcenter \fi \fi
  \bgroup
  \let \@sharp ##\let \protect \relax
  \lineskip \z@
  \baselineskip \z@
  \mathsurround \z@
  \let\\\@arraycr \let\tabularnewline\\\let\par\@empty
  \if@RTLtab\hbox\bgroup\beginR\@hboxRconstructtrue\if #1t\vtop \else \vbox  \fi\bgroup\fi
  \UseTaggingSocket{tbl/init}
  \@preamble
}
\let\@@array\@array
\def\endarray {
  \tbl_crcr:n{endarray}
  \tag_socket_use_expandable:n { math/luamml/array/save }
  \egroup
  \tag_socket_use:n { tbl/finalize }
  \tbl_restore_outer_cell_data:
  \if@RTLtab\egroup\endR\egroup\fi
  \egroup
  \tag_socket_use:n { math/luamml/array/finalize }
  \@arrayright \gdef\@preamble{}%
}
\def\array{\col@sep\arraycolsep
  \def\d@llarbegin{$\tag_socket_use:n { math/luamml/array/initcol }}
  \def\d@llarend
   {
     \tag_socket_use:nn { math/luamml/save/nn }{{}{mtd}}
     $
     \tag_socket_use:nn { math/luamml/array/finalizecol}{\the\@chnum}
   }
  \def\@halignto{}%
  \@RTLtabfalse
  \@tabarray}
\ExplSyntaxOff
```

9 File article-xetex-bidi.def

```
\ProvidesFile{article-xetex-bidi.def}[2025/09/08 v1.1 bidi adaptations for standard article
\IfClassLoadedT{svmult}{\endinput}
\if@titlepage
  \renewcommand\maketitle{\begin{titlepage}%
```

```
  \let\footnotesize\small
  \let\right@footnoterule\relax
  \let\left@footnoterule\relax
  \let\textwidth@footnoterule\relax
  \let \footnote \thanks
  \let \LTRfootnote \LTRthanks
  \let \RTLfootnote \RTLthanks
  \null\vfil
  \vskip 60\p@
  \begin{center}%
    {\LARGE \@title \par}%
    \vskip 3em%
    {\large
     \lineskip .75em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
      \vskip 1.5em%
    {\large \@date \par}%       % Set date in \large size.
  \end{center}\par
  \@thanks
  \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\LTRthanks\relax
  \global\let\RTLthanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\else
\renewcommand\maketitle{\par
  \begingroup
    \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext##1{\parindent 1em\noindent
            \hb@xt@1.8em{%
                \hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@   % Prevents figures from going at top of page.
```

```
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\LTRthanks\relax
  \global\let\RTLthanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
  \let \footnote \thanks
  \let \LTRfootnote \LTRthanks
  \let \RTLfootnote \RTLthanks
    {\LARGE \@title \par}%
    \vskip 1.5em%
    {\large
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty\@secpenalty
    \addvspace{2.25em \@plus\p@}%
    \setlength\@tempdima{3em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
       \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
       \nobreak
       \if@compatibility
         \global\@nobreaktrue
         \everypar{\global\@nobreakfalse\everypar{}}%
```

```
      \fi
    \endgroup
  \fi}
\renewcommand*\l@section[2]{%
  \ifnum \c@tocdepth >\z@
    \addpenalty\@secpenalty
    \addvspace{1.0em \@plus\p@}%
    \setlength\@tempdima{1.5em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      \leavevmode \bfseries
      \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
      \hskip -\if@RTL\rightskip\else\leftskip\fi
      #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
    \endgroup
  \fi}
\renewcommand\left@footnoterule{%
  \kern-3\p@
  \hrule\@width.4\columnwidth
  \kern2.6\p@}
\renewcommand\right@footnoterule{%
  \kern-3\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern2.6\p@}
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}
\ApplyPatchIfPackageLoaded{nameref}{%
  \bidi@patchcmd\NR@part\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\NR@part' failed}}%
  \bidi@patchcmd\NR@spart\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\NR@spart' failed}}%
}{%
  \bidi@patchcmd\@part\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\@part' failed}}%
  \bidi@patchcmd\@spart\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\@spart' failed}}%
}
\renewenvironment{thebibliography}[1]
     {\section*{\refname}%
      \@mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
```

```
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand\theenumiv{\@arabic\c@enumiv}}%
      \sloppy
      \clubpenalty4000
      \@clubpenalty \clubpenalty
      \widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
\renewenvironment{theindex}
               {\if@twocolumn
                  \@restonecolfalse
                \else
                  \@restonecoltrue
                \fi
                \columnseprule \z@
                \columnsep 35\p@
                \twocolumn[\section*{\indexname}]%
                \@mkboth{\MakeUppercase\indexname}%
                        {\MakeUppercase\indexname}%
                \thispagestyle{plain}\parindent\z@
                \parskip\z@ \@plus .3\p@\relax
                \let\item\@idxitem}
               {\if@restonecol\onecolumn\else\clearpage\fi}
```

10 File artikel1-xetex-bidi.def

```
\ProvidesFile{artikel1-xetex-bidi.def}[2017/06/09 v0.4 bidi adaptations for artikel1 class
\renewenvironment{theindex}{%
  \if@twocolumn
    \@restonecolfalse
  \else
    \@restonecoltrue
  \fi
  \columnseprule \z@
  \columnsep 35\p@
  \twocolumn[\section*{\indexname}]%
  \@mkboth{\MakeUppercase{\indexname}}{\MakeUppercase{\indexname}}%
  \thispagestyle{plain}\parindent\z@
  \parskip\z@ \@plus .3\p@\relax
  \let\item\@idxitem
  }{%
  \if@restonecol\onecolumn\else\clearpage\fi}
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
\if@titlepage
  \renewenvironment{abstract}{%
      \titlepage
      \null\vfil
      \section*{\SectFont\abstractname}
```

```
      \noindent\ignorespaces}
     {\par\vfil\null\endtitlepage}
\else
  \renewenvironment{abstract}{%
      \if@twocolumn
        \section*{\abstractname}%
      \else
        \bgroup\if@RTL\leftskip\else\rightskip\fi=\unitindent
        \section*{\small\SectFont\abstractname}%
        \noindent\ignorespaces
      \fi}
      {\if@twocolumn\else\par\egroup\fi}
\fi
\renewcommand*\@regtocline[3]{%
  \ifnum #1>\c@tocdepth
  \else
    \vskip\z@\@plus.2\p@
    {\hangindent\z@ \@afterindenttrue \interlinepenalty\@M
     \if@RTL\rightskip\else\leftskip\fi\unitindent
     \if@RTL\leftskip\else\rightskip\fi\unitindent\@plus 1fil
     \parfillskip\z@
     \@tempdima\unitindent
     \parindent\z@
     \leavevmode
     \hbox{}\hskip -\if@RTL\rightskip\else\leftskip\fi\relax#2\nobreak
     \hskip 1em \nobreak{\slshape #3}\par
     }%
  \fi}
\if@oldtoc
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty\@secpenalty
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
        \nobreak
       \if@compatibility
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
      \fi
    \endgroup
  \fi}
\else
   \renewcommand*\l@part{%
     \ifnum \c@tocdepth >-2\relax
     \addpenalty\@secpenalty
     \addvspace{2.25em \@plus \p@}%
     \@regtocline{0}%
   \fi}
\fi
```

```
\if@oldtoc
\renewcommand*\l@section[2]{%
    \addpenalty\@secpenalty
    \addvspace{1.0em \@plus\p@}%
    \setlength\@tempdima{1.5em}%
    \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode \bfseries
    \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
    \hskip -\if@RTL\rightskip\else\leftskip\fi
    #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
   \endgroup}
\else
   \renewcommand*\l@section{\@regtocline{1}}
\fi
\renewcommand*\thesubsection{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand*\theparagraph{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*\thesubparagraph{\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewenvironment{thebibliography}[1]
     {\section*{\refname}%
       \@mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand*\theenumiv{\@arabic\c@enumiv}}%
      \sloppy\clubpenalty4000\widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
\renewcommand*\left@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hrule\@width\unitindent
  \kern.4\baselineskip
}
\renewcommand*\right@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\unitindent\relax \hrulefill }
  \kern.4\baselineskip}
\if@titlepage
\renewcommand*\TitleFont{\rmfamily}
\renewcommand*\maketitle{%
  \begin{titlepage}%
    \let\footnotesize\small
```

```
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let \footnote \thanks
    \long\def\@makefntext##1{\parindent\z@
         \def\labelitemi{\textendash}\@revlabeltrue
         \leavevmode\@textsuperscript{\@thefnmark}\kern1em\relax ##1}
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \if@compatibility\setcounter{page}{0}\fi
    \null\vfil
    \vskip 60\p@
    \begin{center}%
      \TitleFont
      {\LARGE \def\\{\penalty -\@M}
        \if@allcaps
          \expandafter\uc@nothanks\@title\thanks\relax
        \else
          \@title
        \fi\par}%
      \vskip 3em%
      {\large
        \lineskip .75em \parindent\z@
        \begin{tabular}[t]{c}%
          \if@allcaps
            \expandafter\uc@authornothanks\@author\and\relax
          \else
            \@author
          \fi
        \end{tabular}\par}%
      \vskip 1.5em%
      {\large
        \if@allcaps
          \uppercase\expandafter{\@date}%
        \else
          \@date
        \fi\par}%
      \end{center}\par
    \@thanks
    \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\uc@nothanks#1\thanks{\uppercase{#1}\futurelet\@tempa\uc@tx}
\def\uc@authornothanks#1\and{\uc@nothanks#1\thanks\relax
```

```
    \futurelet\@tempa\uc@ax}
\def\uc@ax{%
  \ifx\@tempa\relax
  \else
    \\ \andname \\ \expandafter\uc@authornothanks
  \fi}
\def\uc@tx{\ifx\@tempa\relax
    \else \expandafter\uc@ty \fi}
\def\uc@ty#1{\thanks{#1}\uc@nothanks}
\else
\renewcommand*\maketitle{\par
  \begingroup
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{%
      \@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext{\@xmakefntext{%
      \@textsuperscript{\normalfont\@thefnmark}}}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
  }
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
    \let \footnote \thanks
    {\LARGE \TitleFont \@title \par}%
    \vskip 1.5em%
    {\large \TitleFont
      \lineskip .5em%
      \begin{tabular}[t]{c}%
```

```
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \TitleFont \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi
```

11 File artikel2-xetex-bidi.def

```
\ProvidesFile{artikel2-xetex-bidi.def}[2017/06/09 v0.4 bidi adaptations for artikel2 class
\renewenvironment{theindex}{%
  \if@twocolumn
    \@restonecolfalse
  \else
    \@restonecoltrue
  \fi
  \columnseprule \z@
  \columnsep 35\p@
  \twocolumn[\section*{\indexname}]%
  \@mkboth{\MakeUppercase{\indexname}}{\MakeUppercase{\indexname}}%
  \thispagestyle{plain}\parindent\z@
  \parskip\z@ \@plus .3\p@\relax
  \let\item\@idxitem
  }{%
  \if@restonecol\onecolumn\else\clearpage\fi}
\renewcommand*\@regtocline[3]{%
  \ifnum #1>\c@tocdepth
  \else
    \vskip\z@\@plus.2\p@
    {\hangindent\z@ \@afterindenttrue \interlinepenalty\@M
     \if@RTL\rightskip\else\leftskip\fi\unitindent
     \if@RTL\leftskip\else\rightskip\fi\unitindent\@plus 1fil
     \parfillskip\z@
     \@tempdima\unitindent
     \advance\@tempdima by \othermargin
     \parindent\z@
     \leavevmode
     \hbox{}\hskip -\if@RTL\rightskip\else\leftskip\fi\relax#2\nobreak
     \hskip 1em \nobreak{\slshape #3}\par
     }%
  \fi}
\if@oldtoc
\renewcommand*\l@section[2]{%
    \addpenalty\@secpenalty
    \addvspace{1.0em \@plus\p@}%
    \setlength\@tempdima{1.5em}%
    \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode \bfseries
    \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
    \hskip -\if@RTL\rightskip\else\leftskip\fi
```

```
    #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
   \endgroup}
\else
   \renewcommand*\l@section{\@regtocline{1}}
\fi
\if@oldtoc
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty\@secpenalty
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
        \nobreak
       \if@compatibility
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
      \fi
    \endgroup
  \fi}
\else
   \renewcommand*\l@part{%
     \ifnum \c@tocdepth >-2\relax
     \addpenalty\@secpenalty
     \addvspace{2.25em \@plus \p@}%
     \@regtocline{0}%
   \fi}
\fi
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
\if@titlepage
  \renewenvironment{abstract}{%
      \titlepage
      \null\vfil
      \section*{\SectFont\abstractname}%
      \noindent\ignorespaces}
     {\par\vfil\null\endtitlepage}
\else
  \renewenvironment{abstract}{%
      \if@twocolumn
        \section*{\abstractname}%
      \else
        \section*{\hskip\unitindent\small\SectFont\abstractname}%
        \list{}{\setlength\listparindent{\unitindent}%
                \setlength\parindent    {\z@}%
                \setlength\leftmargin   {\unitindent}%
                \setlength\rightmargin  {\unitindent}%
                \setlength\parsep       {\z@}}%
        \item[]%
```

```
      \fi}
      {\if@twocolumn\else\par\endlist\fi}
\fi
\renewcommand*\thesubsection{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand*\theparagraph{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*\thesubparagraph{\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewcommand*\left@footnoterule{%
  \kern-3\p@
  \hrule\@width 3\unitindent
  \kern 2.6\p@
}
\renewcommand*\right@footnoterule{%
  \kern-3\p@
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-3\unitindent\relax \hrulefill }
  \kern 2.6\p@}
\renewenvironment{thebibliography}[1]
     {\section*{\refname}%
       \@mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand*\theenumiv{\@arabic\c@enumiv}}%
      \sloppy\clubpenalty4000\widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
\if@titlepage
\renewcommand*\TitleFont{\rmfamily}
\renewcommand*\maketitle{%
  \begin{titlepage}%
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let \footnote \thanks
    \long\def\@makefntext##1{\parindent\z@
         \def\labelitemi{\textendash}\@revlabeltrue
         \leavevmode\@textsuperscript{\@thefnmark}\kern1em\relax ##1}
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \if@compatibility\setcounter{page}{0}\fi
    \null\vfil
    \vskip 60\p@
    \begin{center}%
      \TitleFont
      {\LARGE \def\\{\penalty -\@M}
        \if@allcaps
```

```
          \expandafter\uc@nothanks\@title\thanks\relax
        \else
          \@title
        \fi\par}%
      \vskip 3em%
      {\large
        \lineskip .75em \parindent\z@
        \begin{tabular}[t]{c}%
          \if@allcaps
            \expandafter\uc@authornothanks\@author\and\relax
          \else
            \@author
          \fi
        \end{tabular}\par}%
      \vskip 1.5em%
      {\large
        \if@allcaps
          \uppercase\expandafter{\@date}%
        \else
          \@date
        \fi\par}%
      \end{center}\par
    \@thanks
    \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\uc@nothanks#1\thanks{\uppercase{#1}\futurelet\@tempa\uc@tx}
\def\uc@authornothanks#1\and{\uc@nothanks#1\thanks\relax
    \futurelet\@tempa\uc@ax}
\def\uc@ax{%
  \ifx\@tempa\relax
  \else
    \\ \andname \\ \expandafter\uc@authornothanks
  \fi}
\def\uc@tx{\ifx\@tempa\relax
    \else \expandafter\uc@ty \fi}
\def\uc@ty#1{\thanks{#1}\uc@nothanks}
\else
\renewcommand*\maketitle{\par
  \begingroup
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \long\def\@makefntext##1{\parindent\z@
      \def\labelitemi{\textendash}%
```

```
      \leavevmode\hb@xt@.5\unitindent{%
        \@textsuperscript{\normalfont\@thefnmark}\hfil}##1}
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
  }
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
    \let \footnote \thanks
    {\LARGE \TitleFont \@title \par}%
    \vskip 1.5em%
    {\large \TitleFont
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \TitleFont \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi
```

12 File artikel3-xetex-bidi.def

```
\ProvidesFile{artikel3-xetex-bidi.def}[2017/06/09 v0.5 bidi adaptations for artikel3 class
\renewenvironment{theindex}{%
  \if@twocolumn
    \@restonecolfalse
```

```
  \else
    \@restonecoltrue
  \fi
  \columnseprule \z@
  \columnsep 35\p@
  \twocolumn[\section*{\indexname}]%
  \@mkboth{\MakeUppercase{\indexname}}{\MakeUppercase{\indexname}}%
  \thispagestyle{plain}\parindent\z@
  \parskip\z@ \@plus .3\p@\relax
  \let\item\@idxitem
  }{%
  \if@restonecol\onecolumn\else\clearpage\fi}
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
\renewcommand*\@regtocline[3]{%
  \ifnum #1>\c@tocdepth
  \else
    \vskip\z@\@plus.2\p@
    {\hangindent\z@ \@afterindenttrue \interlinepenalty\@M
     \if@RTL\rightskip\else\leftskip\fi\unitindent
     \if@RTL\leftskip\else\rightskip\fi\unitindent\@plus 1fil
     \parfillskip\z@
     \@tempdima\unitindent
     \parindent\z@
     \leavevmode
     \hbox{}\hskip -\if@RTL\rightskip\else\leftskip\fi\relax#2\nobreak
     \hskip 1em \nobreak{\slshape #3}\par
     }%
  \fi}
\if@oldtoc
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty\@secpenalty
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
        \nobreak
       \if@compatibility
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
      \fi
    \endgroup
  \fi}
\else
   \renewcommand*\l@part{%
     \ifnum \c@tocdepth >-2\relax
     \addpenalty\@secpenalty
     \addvspace{2.25em \@plus \p@}%
```

```
      \@regtocline{0}%
    \fi}
\fi

\if@oldtoc
\renewcommand*\l@section[2]{%
    \addpenalty\@secpenalty
    \addvspace{1.0em \@plus\p@}%
    \setlength\@tempdima{1.5em}%
    \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode \bfseries
    \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
    \hskip -\if@RTL\rightskip\else\leftskip\fi
    #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
   \endgroup}
\else
   \renewcommand*\l@section{\@regtocline{1}}
\fi
\if@titlepage
  \renewenvironment{abstract}{%
      \titlepage
      \null\vfil
      \section*{\SectFont\abstractname}%
      \noindent\ignorespaces}
     {\par\vfil\null\endtitlepage}
\else
  \renewenvironment{abstract}{%
      \if@twocolumn
        \section*{\abstractname}%
      \else
        \bgroup\if@RTL\leftskip\else\rightskip\fi=\unitindent
        \section*{\small\SectFont\abstractname}%
        \noindent\ignorespaces
      \fi}
      {\if@twocolumn\else\par\egroup\fi}
\fi
\renewcommand*\left@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hrule\@width\unitindent
  \kern.4\baselineskip
}
\renewcommand*\right@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\unitindent\relax \hrulefill }
  \kern.4\baselineskip}
\renewcommand*\thesubsection{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand*\theparagraph{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*\thesubparagraph{\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewenvironment{thebibliography}[1]
```

```
    {\section*{\refname}%
      \@mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}%
     \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
     \bidi@@thebibliography@font@hook%
     \list{\@biblabel{\@arabic\c@enumiv}}%
          {\settowidth\labelwidth{\@biblabel{#1}}%
           \leftmargin\labelwidth
           \advance\leftmargin\labelsep
           \@openbib@code
           \usecounter{enumiv}%
           \let\p@enumiv\@empty
           \renewcommand*\theenumiv{\@arabic\c@enumiv}}%
     \sloppy\clubpenalty4000\widowpenalty4000%
     \sfcode`\.\@m}
    {\def\@noitemerr
      {\@latex@warning{Empty `thebibliography' environment}}%
     \endlist}
\if@titlepage
\renewcommand*\TitleFont{\rmfamily}
\renewcommand*\maketitle{%
  \begin{titlepage}%
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let \footnote \thanks
    \long\def\@makefntext##1{\parindent\z@
         \def\labelitemi{\textendash}\@revlabeltrue
         \leavevmode\@textsuperscript{\@thefnmark}\kern1em\relax ##1}
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \if@compatibility\setcounter{page}{0}\fi
    \null\vfil
    \vskip 60\p@
    \begin{center}%
      \TitleFont
      {\LARGE \def\\{\penalty -\@M}
        \if@allcaps
          \expandafter\uc@nothanks\@title\thanks\relax
        \else
          \@title
        \fi\par}%
      \vskip 3em%
      {\large
        \lineskip .75em \parindent\z@
        \begin{tabular}[t]{c}%
          \if@allcaps
            \expandafter\uc@authornothanks\@author\and\relax
          \else
            \@author
          \fi
        \end{tabular}\par}%
      \vskip 1.5em%
      {\large
        \if@allcaps
```

```
          \uppercase\expandafter{\@date}%
        \else
          \@date
        \fi\par}%
      \end{center}\par
    \@thanks
    \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\uc@nothanks#1\thanks{\uppercase{#1}\futurelet\@tempa\uc@tx}
\def\uc@authornothanks#1\and{\uc@nothanks#1\thanks\relax
    \futurelet\@tempa\uc@ax}
\def\uc@ax{%
  \ifx\@tempa\relax
  \else
    \\ \andname \\ \expandafter\uc@authornothanks
  \fi}
\def\uc@tx{\ifx\@tempa\relax
    \else \expandafter\uc@ty \fi}
\def\uc@ty#1{\thanks{#1}\uc@nothanks}
\else
\renewcommand*\maketitle{\par
  \begingroup
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{%
      \@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext{\@xmakefntext{%
      \@textsuperscript{\normalfont\@thefnmark}}}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
```

```
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
  }
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
\if@titlecentered
  \begin{center}%
    \let \footnote \thanks
    {\LARGE \TitleFont \@title \par}%
    \vskip 1.5em%
    {\large \TitleFont
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \TitleFont \@date}%
  \end{center}%
 \else
     {\LARGE \TitleFont \head@style \@title \par} \vskip 1.5em
     {\large \TitleFont \lineskip .5em \tabcolsep\z@
              \def\and{%%% \begin{tabular} has already started
                       \end{tabular}\hskip 1em plus .17fil
                       \if@RTL\begin{tabular}[t]{r}\else\begin{tabular}[t]{l}\fi}%% \end{tab
              \if@RTL\begin{tabular}[t]{r}\else\begin{tabular}[t]{l}\fi\@author\end{tabular}
     \vskip 1em {\large \TitleFont \@date}
 \fi
  \par
  \vskip 1.5em}
\fi
```

13 File arydshln-xetex-bidi.def

```
\ProvidesFile{arydshln-xetex-bidi.def}[2025/01/03 v0.3 bidi adaptations for arydshln packag
\def\endarray{\adl@endarray \egroup \adl@arrayrestore \if@RTLtab\egroup\endR\egroup\fi\egro
\def\endtabular{\endarray $\if@RTLtab\endR\fi\egroup}
\expandafter\let\csname endtabular*\endcsname\endtabular
\let\adl@array\@array
\def\@array{\adl@everyvbox\everyvbox
        \everyvbox{\adl@arrayinit \the\adl@everyvbox \everyvbox\adl@everyvbox}%
        \ifadl@inactive \adl@inactivate \else \adl@activate \fi
        \let\adl@noalign\noalign
        \adl@array}
\ifadl@usingarypkg
```

```
\def\@testpach{\@chclass
 \ifnum \@lastchclass=6 \@ne \@chnum \@ne \else
  \ifnum \@lastchclass=7 5 \else
   \ifnum \@lastchclass=8 \tw@ \else
    \ifnum \@lastchclass=9 \thr@@
   \else \z@
   \ifnum \@lastchclass = 10 \else
   \edef\@nextchar{\expandafter\string\@nextchar}%
   \@chnum
   \if \@nextchar c\z@ \else
    \if \@nextchar \if@RTLtab r\else l\fi\@ne \else
     \if \@nextchar \if@RTLtab l\else r\fi\tw@ \else
   \z@ \@chclass
   \if\@nextchar |\@ne \let\@arrayrule\adl@arrayrule \else
   \if\@nextchar :\@ne \let\@arrayrule\adl@arraydashrule \else
   \if\@nextchar ;\@ne \let\@arrayrule\adl@argarraydashrule \else
    \if \@nextchar !6 \else
     \if \@nextchar @7 \else
      \if \@nextchar <8 \else
       \if \@nextchar >9 \else
  10
  \@chnum
  \if \@nextchar m\thr@@\else
   \if \@nextchar p4 \else
    \if \@nextchar b5 \else
   \z@ \@chclass \z@ \@preamerr \z@ \fi \fi \fi \fi \fi \fi
   \fi \fi  \fi  \fi  \fi  \fi  \fi \fi \fi \fi \fi \fi}

\def\@classz{\@classx
   \@tempcnta \count@
   \prepnext@tok
   \@addtopreamble{\ifcase \@chnum
      \hfil
      \adl@putlrc{\d@llarbegin \insert@column \d@llarend}\hfil \or
      \hskip1sp\adl@putlrc{\d@llarbegin \insert@column \d@llarend}\hfil \or
      \hfil\hskip1sp\adl@putlrc{\d@llarbegin \insert@column \d@llarend}\or
   \setbox\adl@box\hbox \adl@startmbox{\@nextchar}\insert@column
        \adl@endmbox\or
   \setbox\adl@box\vtop \@startpbox{\@nextchar}\insert@column \@endpbox \or
   \setbox\adl@box\vbox \@startpbox{\@nextchar}\insert@column \@endpbox
  \fi}\prepnext@tok}
\def\adl@class@start{4}
\def\adl@class@iiiorvii{7}

\else
\def\@testpach#1{\@chclass \ifnum \@lastchclass=\tw@ 4\relax \else
        \ifnum \@lastchclass=\thr@@ 5\relax \else
                \z@ \if #1c\@chnum \z@ \else
                    \if \if@RTLtab#1r\else#1l\fi\@chnum \@ne \else
                    \if \if@RTLtab#1l\else#1r\fi\@chnum \tw@ \else
                \@chclass
                    \if #1|\@ne \let\@arrayrule\adl@arrayrule \else
                    \if #1:\@ne \let\@arrayrule\adl@arraydashrule \else
                    \if #1;\@ne \let\@arrayrule\adl@argarraydashrule \else
```

```
                    \if #1@\tw@ \else
                    \if #1p\thr@@ \else \z@ \@preamerr 0\fi
        \fi  \fi  \fi  \fi  \fi  \fi  \fi  \fi  \fi}

\def\@arrayclassz{\ifcase \@lastchclass \@acolampacol \or \@ampacol \or
                \or \or \@addamp \or
                \@acolampacol \or \@firstampfalse \@acol \fi
        \edef\@preamble{\@preamble
                \ifcase \@chnum
                    \hfil\adl@putlrc{$\relax\@sharp$}\hfil
                \or \adl@putlrc{$\relax\@sharp$}\hfil
                \or \hfil\adl@putlrc{$\relax\@sharp$}\hfil\fi}}
\def\@tabclassz{\ifcase \@lastchclass \@acolampacol \or \@ampacol \or
                \or \or \@addamp \or
                \@acolampacol \or \@firstampfalse \@acol \fi
        \edef\@preamble{\@preamble
        \ifcase \@chnum
                    \hfil\adl@putlrc{\@sharp\unskip}\hfil
                \or \adl@putlrc{\@sharp\unskip}\hfil
                \or \hfil\hskip\z@ \adl@putlrc{\@sharp\unskip}\fi}}
\def\adl@class@start{6}
\def\adl@class@iiiorvii{3}
\fi
\ApplyPatchCodeToPackage{colortbl}{%
\def\adl@inactivate{\adl@org@inactivate \let\CT@setup\adl@CT@setup}
\def\adl@activate{\adl@org@activate \let\CT@setup\adl@act@CT@setup
        \let\@endpbox\adl@org@endpbox}
\let\adl@CT@setup\CT@setup
\def\CT@setup{\adl@CT@setup
        \@tempdima\ht\z@ \advance\@tempdima\minrowclearance
        \ifdim\adl@height<\@tempdima \global\adl@height\@tempdima \fi
        \ifdim\adl@depth<\dp\z@ \global\adl@depth\dp\z@\fi}
\let\adl@act@CT@setup\CT@setup
\def\@classz{\@classx
        \@tempcnta\count@ \prepnext@tok
        \expandafter\CT@extract\the\toks\@tempcnta\columncolor!\@nil
        \expandafter\adl@extract@arc\the\toks\@tempcnta\arrayrulecolor!\@nil
        \expandafter\adl@extract@drsc
                \the\toks\@tempcnta\doublerulesepcolor!\@nil
        \expandafter\adl@extract@dgc\the\toks\@tempcnta\dashgapcolor!\@nil
        \@addtopreamble{\if@RTL\beginL\fi%
                \setbox\z@\hbox\bgroup\bgroup\if@RTL\beginR\fi
                \ifcase \@chnum
                        \hskip\stretch{.5}\kern\z@
                        \d@llarbegin
                        \insert@column
                        \d@llarend\hskip\stretch{.5}%
                \or \d@llarbegin \insert@column \d@llarend \hfill
                \or \hfill \kern\z@ \d@llarbegin \insert@column \d@llarend
                \or  $\vcenter
                        \@startpbox{\@nextchar}\insert@column \@endpbox $%
                \or  \vtop \@startpbox{\@nextchar}\insert@column \@endpbox
                \or  \vbox \@startpbox{\@nextchar}\insert@column \@endpbox
                \fi
```

```
                \if@RTL\endR\fi\egroup\egroup
                \begingroup
                        \CT@setup
                        \CT@column@color
                        \CT@row@color
                        \CT@cell@color
                        \CT@do@color
                \endgroup
                \@tempdima\ht\z@
                \advance\@tempdima\minrowclearance
                \vrule\@height\@tempdima\@width\z@
                \unhbox\z@\if@RTL\endL\fi}%
        \prepnext@tok}
\let\adl@act@classz\@classz
\let\adl@org@classz\@classz
}
```

14 File beamer-xetex-bidi.def

```
\ProvidesFile{beamer-xetex-bidi.def}[2022/06/07 v0.3 bidi adaptations for beamer class for
\AtBeginDocument{%
  \if@RTLmain
    \raggedleft
  \else
    \raggedright
  \fi
}

\renewcommand*{\bidi@beamer@ragged}{%
  \if@RTL
    \raggedleft
  \else
    \raggedright
  \fi
}


```

15 File beamerbaseauxtemplates-xetex-bidi.def

```
\ProvidesFile{beamerbaseauxtemplates-xetex-bidi.def}[2025/01/03 v0.5 bidi adaptations for b
\bidi@csundef{beamer@@tmpop@subsection in toc@sections numbered}

\bidi@csundef{beamer@@tmpop@subsubsection in toc@sections numbered}

\bidi@csundef{beamer@@tmpop@section in toc@subsections numbered}

\bidi@csundef{beamer@@tmpop@subsection in toc@subsections numbered}

\bidi@csundef{beamer@@tmpop@subsubsection in toc@subsections numbered}

\defbeamertemplate{subsection in toc}{sections numbered}
{\leavevmode\bidi@beamer@leftskip=2.5em\inserttocsubsection\par}

```

```
\defbeamertemplate{subsubsection in toc}{sections numbered}
{\leavevmode\normalsize\usebeamerfont{subsection in toc}\bidi@beamer@leftskip=3.5em\usebeam
  \inserttocsubsubsection\par}

\defbeamertemplate{section in toc}{subsections numbered}
{\leavevmode\bidi@beamer@leftskip=2em\inserttocsection\par}

\defbeamertemplate{subsection in toc}{subsections numbered}
{\leavevmode\bidi@beamer@leftskip=2em\rlap{\hskip-2em\inserttocsectionnumber.\inserttocsubs

\defbeamertemplate{subsubsection in toc}{subsections numbered}
{\leavevmode\normalsize\usebeamerfont{subsection in
    toc}\bidi@beamer@leftskip=3em\usebeamerfont{subsubsection in toc}%
  \inserttocsubsubsection\par}

\bidi@csundef{beamer@@tmpop@section in toc@circle}

\bidi@csundef{beamer@@tmpop@subsection in toc@circle}

\bidi@csundef{beamer@@tmpop@subsubsection in toc@circle}

\defbeamertemplate{section in toc}{circle}
{\leavevmode\bidi@beamer@leftskip=2ex%
  \llap{%
    \usebeamerfont*{section number projected}%
    \usebeamercolor{section number projected}%
    \begin{pgfpicture}{-1ex}{0ex}{1ex}{2ex}
      \color{bg}
      \pgfpathcircle{\pgfpoint{0pt}{.75ex}}{1.2ex}
      \pgfusepath{fill}
      \pgftext[base]{\color{fg}\inserttocsectionnumber}
    \end{pgfpicture}\kern1.25ex%
  }%
  \inserttocsection\par}

\defbeamertemplate{subsection in toc}{circle}
{\leavevmode\bidi@beamer@leftskip=2em\inserttocsubsection\par}

\defbeamertemplate{subsubsection in toc}{circle}
{\leavevmode\normalsize\usebeamerfont{subsection in
    toc}\bidi@beamer@leftskip=3em\usebeamerfont{subsubsection in toc}%
  \inserttocsubsubsection\par}

\bidi@csundef{beamer@@tmpop@section in toc@square}

\bidi@csundef{beamer@@tmpop@subsection in toc@square}

\bidi@csundef{beamer@@tmpop@subsubsection in toc@square}

\bidi@csundef{beamer@@tmpop@enumerate item@square}

\bidi@csundef{beamer@@tmpop@enumerate subitem@square}

\bidi@csundef{beamer@@tmpop@enumerate subsubitem@square}
```

```
1631
1632 \bidi@csundef{beamer@@tmpop@enumerate mini template@square}
1633
1634 \defbeamertemplate{section in toc}{square}
1635 {\leavevmode\bidi@beamer@leftskip=3ex%
1636   \llap{{%
1637     \usebeamerfont*{section number projected}%
1638     \usebeamercolor[bg]{section number projected}%
1639     \if@RTL
1640     \else
1641       \vrule width2.25ex height1.85ex depth.4ex%
1642       \hskip-2.25ex%
1643     \fi
1644     \hbox to2.25ex{{\hfil\color{fg}\inserttocsectionnumber\hfil}}%
1645     \if@RTL
1646       \hskip-2.25ex%
1647       \vrule width2.25ex height1.85ex depth.4ex%
1648     \fi
1649     }\kern1.25ex}%
1650   \inserttocsection\par}
1651
1652 \defbeamertemplate{subsection in toc}{square}
1653 {\leavevmode\bidi@beamer@leftskip=5ex\llap{{%
1654     \usebeamercolor[bg]{subsection number projected}%
1655     \vrule width1ex height1ex\kern1ex}}\inserttocsubsection\par}
1656
1657 \defbeamertemplate{subsubsection in toc}{square}
1658 {\leavevmode\normalsize\usebeamerfont{subsection in
1659     toc}\bidi@beamer@leftskip=7ex\usebeamerfont{subsubsection in toc}%
1660   \llap{{%
1661     \usebeamercolor[bg]{subsubsection number projected}%
1662     \vrule width0.75ex height0.75ex\kern1ex}}\inserttocsubsubsection\par}
1663
1664 \defbeamertemplate{enumerate item}{square}
1665 {
1666   \hbox{{%
1667     \usebeamerfont*{item projected}%
1668     \usebeamercolor[bg]{item projected}%
1669     \if@RTL
1670     \else
1671       \vrule width2.25ex height1.85ex depth.4ex%
1672       \hskip-2.25ex%
1673     \fi
1674     \hbox to2.25ex{{%
1675       \hfil%
1676       \color{fg}\insertenumlabel%
1677       \hfil}}%
1678       \if@RTL
1679         \hskip-2.25ex%
1680         \vrule width2.25ex height1.85ex depth.4ex%
1681       \fi
1682   }}%
1683 }
1684 [action]
```

```
{\setbeamerfont{item projected}{size=\scriptsize}}

\defbeamertemplate{enumerate subitem}{square}
{
  \hbox{{%
    \usebeamerfont*{subitem projected}%
    \usebeamercolor[bg]{subitem projected}%
    \if@RTL
    \else
      \vrule width2.25ex height1.85ex depth.4ex%
      \hskip-2.25ex%
    \fi
    \hbox to2.25ex{{%
      \hfil%
      \color{fg}\insertsubenumlabel%
      \hfil}}%
      \if@RTL
        \hskip-2.25ex%
        \vrule width2.25ex height1.85ex depth.4ex%
      \fi
  }}%
}

\defbeamertemplate{enumerate subsubitem}{square}
{
  \hbox{{%
    \usebeamerfont*{subitem projected}%
    \usebeamercolor[bg]{subsubitem projected}%
    \if@RTL
    \else
      \vrule width2.25ex height1.85ex depth.4ex%
      \hskip-2.25ex%
    \fi
    \hbox to2.25ex{{%
      \hfil%
      \color{fg}\insertsubsubenumlabel%
      \hfil}}%
      \if@RTL
        \hskip-2.25ex%
        \vrule width2.25ex height1.85ex depth.4ex%
      \fi
  }}%
}

\defbeamertemplate{enumerate mini template}{square}
{
  \hbox{{%
    \usebeamerfont*{\beameritemnestingprefix item projected}%
    \usebeamercolor[bg]{\beameritemnestingprefix item projected}%
    \if@RTL
    \else
      \vrule width2.25ex height1.85ex depth.4ex%
      \hskip-2.25ex%
    \fi
```

```
    \hbox to2.25ex{{%
      \hfil%
      \color{fg}\insertenumlabel%
      \hfil}}%
      \if@RTL
        \hskip-2.25ex%
        \vrule width2.25ex height1.85ex depth.4ex%
      \fi
  }}%
}

\bidi@csundef{beamer@@tmpop@section in toc@ball unnumbered}

\bidi@csundef{beamer@@tmpop@subsection in toc@ball unnumbered}

\bidi@csundef{beamer@@tmpop@subsubsection in toc@ball unnumbered}

\defbeamertemplate{section in toc}{ball unnumbered}
{\leavevmode\bidi@beamer@leftskip=2.25ex%
  \llap{%
    \raise0.1ex\beamer@usesphere{section number projected}{bigsphere}\kern1.25ex}%
  \inserttocsection\par}

\defbeamertemplate{subsection in toc}{ball unnumbered}
{\leavevmode\bidi@beamer@leftskip=5.1ex\llap{%
    \raise0.2ex\beamer@usesphere{subsection number projected}{smallsphere}\kern1ex}\insertt

\defbeamertemplate{subsubsection in toc}{ball unnumbered}
{\leavevmode\normalsize\usebeamerfont{subsection in
    toc}\bidi@beamer@leftskip=8.2ex\usebeamerfont{subsubsection in toc}%
  \llap{%
    \beamer@usesphere{subsubsection number projected}{smallsphere}\kern0.75ex}\inserttocsub

\bidi@csundef{beamer@@tmpop@section in toc@ball}

\bidi@csundef{beamer@@tmpop@subsection in toc@ball}

\bidi@csundef{beamer@@tmpop@subsubsection in toc@ball}

\defbeamertemplate{section in toc}{ball}
{\leavevmode\bidi@beamer@leftskip=2.75ex%
  \llap{%
    \normalsize%
    \begin{pgfpicture}{-1ex}{-0.7ex}{1ex}{1ex}
      \pgftext{\beamer@usesphere{section number projected}{tocsphere}}
      \pgftext{%
        \usebeamerfont*{section number projected}%
        \usebeamercolor{section number projected}%
        \color{fg!90!bg}%
        \inserttocsectionnumber}
    \end{pgfpicture}%
    \kern1.25ex}%
  \inserttocsection\par
}
```

```
[action]
{\setbeamerfont{section number projected}{size=\scriptsize}}

\defbeamertemplate{subsection in toc}{ball}
{\leavevmode\bidi@beamer@leftskip=5ex%
  \llap{\raise0.1ex\beamer@usesphere{subsection number projected}{bigsphere}\kern1ex}%
  \inserttocsubsection\par%
}

\defbeamertemplate{subsubsection in toc}{ball}
{\leavevmode\normalsize\usebeamerfont{subsection in
    toc}\bidi@beamer@leftskip=7ex\usebeamerfont{subsubsection in toc}%
  \llap{\beamer@usesphere{subsubsection number projected}{bigsphere}\kern0.75ex}%
  \inserttocsubsubsection\par%
}

\bidi@csundef{beamer@@tmpop@block begin@rounded}

\bidi@csundef{beamer@@tmpop@block alerted begin@rounded}

\bidi@csundef{beamer@@tmpop@block example begin@rounded}

\defbeamertemplate{block begin}{rounded}[1][shadow=false]
{%
  \par\vskip\medskipamount%
  \begin{beamerboxesrounded}[upper=block title,lower=block body,#1]%
    {\raggedright\usebeamerfont*{block title}\insertblocktitle}%
    \bidi@beamer@ragged%
    \usebeamerfont{block body}%
}

\defbeamertemplate{block alerted begin}{rounded}[1][shadow=false]
{%
  \par\vskip\medskipamount%
  \begin{beamerboxesrounded}[upper=block title alerted,lower=block body alerted,#1]%
    {\raggedright\usebeamerfont*{block title alerted}\insertblocktitle}%
    \bidi@beamer@ragged%
    \usebeamerfont{block body alerted}%
}%

\defbeamertemplate{block example begin}{rounded}[1][shadow=false]
{%
  \par\vskip\medskipamount%
  \begin{beamerboxesrounded}[upper=block title example,lower=block body example,#1]
    {\raggedright\usebeamerfont*{block title example}\insertblocktitle}%
    \bidi@beamer@ragged%
    \usebeamerfont{block body example}%
}%

\bidi@csundef{beamer@@tmpop@caption@numbered}

\defbeamertemplate{caption}{numbered}
{%
  \leavevmode
```

```
  \bidi@beamer@ragged
  {%
    \usebeamercolor[fg]{caption name}%
    \usebeamerfont*{caption name}%
    \insertcaptionname~\insertcaptionnumber
    \usebeamertemplate{caption label separator}%
  }%
  \insertcaption\par
}

\bidi@csundef{beamer@@tmpop@caption@caption name own line}

\defbeamertemplate{caption}{caption name own line}
{%
  \begin{minipage}{\textwidth}
    \leavevmode
    \bidi@beamer@ragged
  {%
    \usebeamercolor[fg]{caption name}%
    \usebeamerfont*{caption name}%
    \insertcaptionname%
    }\\
      \insertcaption
    \end{minipage}
}

\ApplyPatchCodeToPackage{caption}{%
  \DeclareCaptionFont{beamer@font}{%
    \usebeamerfont*{caption}%
%    \usebeamercolor[fg]{caption}%
  }
  \SetCaptionDefault{font}{beamer@font}
  \DeclareCaptionJustification{bidi@beamer@ragged}{\bidi@beamer@ragged}
  \SetCaptionDefault{justification}{bidi@beamer@ragged}
}
```

16 File beamerbaseboxes-xetex-bidi.def

```
\ProvidesFile{beamerbaseboxes-xetex-bidi.def}[2022/06/01 v0.1 bidi adaptations for beamerba
\renewcommand\beamerboxesrounded[2][]{%
  \global\let\beamer@firstlineitemizeunskip=\relax%
  \vbox\bgroup%
  \setkeys{beamerboxes}{upper=block title,lower=block body,width=\textwidth,shadow=false}%
  \setkeys{beamerboxes}{#1}%
  {%
    \usebeamercolor{\bmb@lower}%
    \globalcolorstrue%
    \colorlet{lower.bg}{bg}%
  }%
  {%
    \usebeamercolor{\bmb@upper}%
    \globalcolorstrue%
    \colorlet{upper.bg}{bg}%
```

```
}%
%
% Typeset head
%
\vskip4bp
\setbox\bmb@box=\hbox{%
  \begin{minipage}[b]{\bmb@width}%
    \usebeamercolor[fg]{\bmb@upper}%
    #2%
  \end{minipage}}%
\ifdim\wd\bmb@box=0pt%
  \setbox\bmb@box=\hbox{}%
  \ht\bmb@box=1.5pt%
  \bmb@prevheight=-4.5pt%
\else%
  \wd\bmb@box=\bmb@width%
  \bmb@temp=\dp\bmb@box%
  \ifdim\bmb@temp<1.5pt%
    \bmb@temp=1.5pt%
  \fi%
  \setbox\bmb@box=\hbox{\raise\bmb@temp\hbox{\box\bmb@box}}%
  \dp\bmb@box=0pt%
  \bmb@prevheight=\ht\bmb@box%
\fi%
\bmb@temp=\bmb@width%
\bmb@dima=\bmb@temp\advance\bmb@dima by2.2bp%
\bmb@dimb=\bmb@temp\advance\bmb@dimb by4bp%
\hbox{%
  \begin{pgfpicture}{0bp}{+-\ht\bmb@box}{0bp}{+-\ht\bmb@box}
    \ifdim\wd\bmb@box=0pt%
      \color{lower.bg}%
    \else%
      \color{upper.bg}%
    \fi%
    \pgfpathqmoveto{-4bp}{-1bp}
    \pgfpathqcurveto{-4bp}{1.2bp}{-2.2bp}{3bp}{0bp}{3bp}
    \pgfpathlineto{\pgfpoint{\bmb@temp}{3bp}}
    \pgfpathcurveto%
    {\pgfpoint{\bmb@dima}{3bp}}%
    {\pgfpoint{\bmb@dimb}{1.2bp}}%
    {\pgfpoint{\bmb@dimb}{-1bp}}%
    \bmb@dima=-\ht\bmb@box%
    \advance\bmb@dima by-2pt%
    \pgfpathlineto{\pgfpoint{\bmb@dimb}{\bmb@dima}}
    \pgfpathlineto{\pgfpoint{-4bp}{\bmb@dima}}
    \pgfusepath{fill}
  \end{pgfpicture}%
  \copy\bmb@box%
}%
\nointerlineskip%
\vskip-1pt%
\ifdim\wd\bmb@box=0pt%
\else%
\hbox{%
```

```
    \begin{pgfpicture}{0pt}{0pt}{\bmb@width}{6pt}
      \bmb@dima=\bmb@width%
      \advance\bmb@dima by8bp%
      \pgfpathrectangle{\pgfpoint{-4bp}{-1bp}}{\pgfpoint{\bmb@dima}{8bp}}
      \pgfusepath{clip}
      {\pgftransformshift{\pgfpoint{-4bp}{0bp}}\pgftext[left,base]{\pgfuseshading{bmb@trans
    \end{pgfpicture}%
  }%
  \nointerlineskip%
  \vskip-0.5pt%
  \fi%
  \setbox\bmb@colorbox=\hbox{{\pgfpicturetrue\pgfsetcolor{lower.bg}}}%
  \setbox\bmb@box=\hbox\bgroup\begin{minipage}[b]{\bmb@width}%
    \vskip2pt%
    \usebeamercolor[fg]{\bmb@lower}%
    \colorlet{beamerstructure}{upper.bg}%
    \colorlet{structure}{upper.bg}%
    %\color{.}%
    \@bidi@list@minipage@parboxfalse
  }

\bidi@patchcmd{\endbeamerboxesrounded}{\begingroup}{%
  \begingroup
  \@RTLfalse
}{}{}


```

17 File beamerbasecolor-xetex-bidi.def

```
\ProvidesFile{beamerbasecolor-xetex-bidi.def}[2022/06/07 v0.2 bidi adaptations for beamerba
\renewenvironment{beamercolorbox}[2][]{%
  \def\beamer@vmode{\leavevmode}%
  \setkeys{beamercolbox}{wd=\textwidth,ht={},dp={},%
    leftskip=0pt,rightskip=0pt plus1fil,%
    sep=0pt,colsep=0pt,colsep*=0pt,%
    shadow=false,rounded=false,ignorebg=false}%
  \if@RTL
    \setkeys{beamercolbox}{rightskip=0pt,leftskip=0pt plus1fil}%
  \else
    \setkeys{beamercolbox}{leftskip=0pt,rightskip=0pt plus1fil}%
  \fi
  \setkeys{beamercolbox}{#1}%
  \ifbeamercolorempty[bg]{#2}{\@tempswafalse}{\@tempswatrue}%
  \ifbeamer@colbox@ignorebg\@tempswafalse\fi%
  \def\beamer@colbox@color{#2}%
  \setbox\beamer@tempbox=\hbox\bgroup\color@begingroup
    \ifbeamer@colbox@ignorebg%
      \colorlet{beamer@temp@color}{bg}%
      \usebeamercolor[fg]{#2}%
      \colorlet{bg}{beamer@temp@color}%
    \else%
      \usebeamercolor[fg]{#2}%
    \fi%
```

```
    \beginL
    \vbox\bgroup%
    \hsize=\beamer@colbox@wd%
    \@arrayparboxrestore%
    \leftskip=\beamer@colbox@ls%
    \ifdim\beamer@colbox@sep>\z@\advance\leftskip\beamer@colbox@sep\fi%
    \rightskip=\beamer@colbox@rs%
    \ifdim\beamer@colbox@sep>\z@\advance\rightskip\beamer@colbox@sep\fi%
    \if@tempswa\ifdim\beamer@colbox@colsep>\z@%
      \advance\leftskip by\beamer@colbox@colsep%
      \advance\rightskip by\beamer@colbox@colsep%
      \vskip\beamer@colbox@colsep%
    \fi%
      \ifdim\beamer@colbox@colseps>\z@\vskip\beamer@colbox@colseps\fi%
    \fi%
    \ifdim\beamer@colbox@sep>\z@\vskip\beamer@colbox@sep\fi%
    \beamer@vmode\ignorespaces}{%
    \ifdim\beamer@colbox@sep>\z@\vskip\beamer@colbox@sep\fi%
    \if@tempswa
      \ifdim\beamer@colbox@colsep>\z@\vskip\beamer@colbox@colsep\fi%
      \ifdim\beamer@colbox@colseps>\z@\vskip\beamer@colbox@colseps\fi%
    \fi%
  \egroup\endL\color@endgroup\egroup%
  \wd\beamer@tempbox=\beamer@colbox@wd%
  \ifx\beamer@colbox@ht\@empty\else\ht\beamer@tempbox=\beamer@colbox@ht\fi%
  \ifx\beamer@colbox@dp\@empty\else\dp\beamer@tempbox=\beamer@colbox@dp\fi%
  \ifbeamer@colbox@rounded%
    \if@tempswa%
      \begin{beamerboxesrounded}[%
        shadow=\beamer@colbox@shadow,%
        lower=\beamer@colbox@color,%
        upper=normal text,%
        width=\beamer@colbox@wd]{}%
        \box\beamer@tempbox%
      \end{beamerboxesrounded}%
    \else%
      \ifdim\wd\beamer@tempbox>\textwidth%
        \setbox\beamer@tempbox=\hbox to\textwidth{\hss\box\beamer@tempbox\hss}%
      \fi%
      \box\beamer@tempbox%
    \fi%
  \else%
    \if@tempswa\setbox\beamer@tempbox=\hbox{%
      \usebeamercolor{\beamer@colbox@color}%
      \hskip-\beamer@colbox@colseps%
      \fboxsep=\z@\colorbox{bg}{%
        \hskip\beamer@colbox@colseps%
        \box\beamer@tempbox%
        \hskip\beamer@colbox@colseps%
      }%
      \hskip-\beamer@colbox@colseps%
      }\fi%
    \ifdim\wd\beamer@tempbox>\textwidth%
      \setbox\beamer@tempbox=\hbox to\textwidth{\hskip0pt minus\beamer@leftmargin\relax\box
```

```
    \fi%
    \box\beamer@tempbox%
  \fi%
}


```

18 File beamerbasecompatibility-xetex-bidi.def

```
\ProvidesFile{beamerbasecompatibility-xetex-bidi.def}[2022/06/27 v0.1 bidi adaptations for
\def\insertvrule#1#2{\hbox{{\color{#2}\hskip-\Gm@lmargin\vrule width \paperwidth height #1\


```

19 File beamerbaseframecomponents-xetex-bidi.def

```
\ProvidesFile{beamerbaseframecomponents-xetex-bidi.def}[2024/12/28 v0.7 bidi adaptations fo
\renewcommand{\setbeamersize}[1]{%
  \beamer@dogeometryfalse%
  \setkeys{beamer@margin}{#1}%
  \ifbeamer@dogeometry%
    % Reset left margin now
    \beamer@tempdim=\beamer@leftmargin%
    \advance\beamer@tempdim by\beamer@leftsidebar%
    \if@RTLmain
      \geometry{right=\the\beamer@tempdim}%
    \else
      \geometry{left=\the\beamer@tempdim}%
    \fi
    % Reset right margin now
    \beamer@tempdim=\beamer@rightmargin%
    \advance\beamer@tempdim by\beamer@rightsidebar%
    \if@RTLmain
      \geometry{left=\the\beamer@tempdim}%
    \else
      \geometry{right=\the\beamer@tempdim}%
    \fi
  \fi%
}

\newcommand*{\bidi@beamer@Gm@lmargin}{%
  \if@RTLmain
    \Gm@rmargin
  \else
    \Gm@lmargin
  \fi
}

\newcommand*{\bidi@beamer@Gm@rmargin}{%
  \if@RTLmain
    \Gm@lmargin
  \else
    \Gm@rmargin
  \fi
```

```
}

\def\ps@navigation{
  \def\@oddhead{%
    \begingroup%
    \setbox\beamer@tempbox=\hbox{\usebeamertemplate***{background canvas}\hyper@pagetransit
    \beamer@tempdim=\ht\beamer@tempbox%
    \setbox\beamer@tempbox=\hbox{\lower\beamer@tempdim\hbox{\box\beamer@tempbox}}%
    \wd\beamer@tempbox=0pt\ht\beamer@tempbox=0pt\dp\beamer@tempbox=0pt%
    \setbox\@tempboxa=\hbox{\usebeamertemplate***{background}}%
    \beamer@tempdim=\ht\@tempboxa%
    \setbox\@tempboxa=\hbox{\lower\beamer@tempdim\hbox{\box\@tempboxa}}%
    \wd\@tempboxa=0pt\ht\@tempboxa=0pt\dp\@tempboxa=0pt%
    \vbox{\hbox{\hskip-\bidi@beamer@Gm@lmargin\box\beamer@tempbox\box\@tempboxa}%
      \hbox{%
        {%
          \setbox\beamer@tempbox=\hbox{\hskip-\bidi@beamer@Gm@lmargin%
          \if@RTLmain
                      {%
              \vbox to \sidebarheight{%
                \usebeamertemplate***{sidebar left}%
                \vfil%
            }}%
            \ApplyPatchIfPackageLoadedF{beamerinnerthemeinmargin}{%
              \hskip-\textwidth
            }%
            \fi
            {\setbox\beamer@tempbox=\hbox{\vbox to \sidebarheight{%
                  \usebeamercolor*{sidebar left}%
                  \usebeamertemplate{sidebar canvas left}%
                  \vss%
                }}%
              \wd\beamer@tempbox=0pt\ht\beamer@tempbox=0pt\dp\beamer@tempbox=0pt%
              \box\beamer@tempbox}%
              \if@RTLmain
              \else
            {%
              \vbox to \sidebarheight{%
                \usebeamertemplate***{sidebar left}%
                \vfil%
            }}\fi}%
          \beamer@tempdim=\ht\beamer@tempbox%
          \setbox\beamer@tempbox=\hbox{{\lower\beamer@tempdim\hbox{\box\beamer@tempbox}}}%
          \wd\beamer@tempbox=0pt\ht\beamer@tempbox=0pt\dp\beamer@tempbox=0pt%
          \box\beamer@tempbox%
        }%
        {% print right sidebar first, since it should be overwritten by headline
          \setbox\beamer@tempbox=\hbox{\hskip\textwidth\hskip\beamer@rightmargin%
          \if@RTLmain
                      {%
              \vbox to \sidebarheight{%
                \usebeamertemplate***{sidebar right}%
                \vfil%
            }}%
```

```
            \hskip-\textwidth
            \fi
            {\setbox\beamer@tempbox=\hbox{\vbox to \sidebarheight{%
                  \usebeamercolor*{sidebar right}%
                  \usebeamertemplate{sidebar canvas right}%
                  \vss%
                }}%
              \wd\beamer@tempbox=0pt\ht\beamer@tempbox=0pt\dp\beamer@tempbox=0pt%
              \box\beamer@tempbox}%
              \if@RTLmain
              \else
            {%
              \vbox to \sidebarheight{%
                \usebeamertemplate***{sidebar right}%
                \vfil%
            }}\fi}%
          \beamer@tempdim=\ht\beamer@tempbox%
          \setbox\beamer@tempbox=\hbox{{\lower\beamer@tempdim\hbox{\box\beamer@tempbox}}}%
          \wd\beamer@tempbox=0pt\ht\beamer@tempbox=0pt\dp\beamer@tempbox=0pt%
          \box\beamer@tempbox%
        }%
        \beamer@typesetheadorfoot{headline}%
      }%
      \hfil}%
    \endgroup}
  \def\@oddfoot{%
    \vbox{\offinterlineskip\hbox{\beamer@typesetheadorfoot{footline}%
    \hfil}\hbox{}}\hfil
  }%
  \let\@evenhead\@oddhead
  \let\@evenfoot\@oddfoot}

\AtBeginDocument{%
  \pagestyle{navigation}%
}

\def\beamer@typesetheadorfoot#1{% typeset the head or footline
  {\parskip0pt\offinterlineskip%
    \hbox{%
      \hskip-\bidi@beamer@Gm@lmargin%
      \hbox{%
        \vbox{%
          \@tempdima=\textwidth%
          \textwidth=\paperwidth%
          \hsize=\textwidth%
          \def\\{,}%
          \usebeamertemplate***{#1}%
        }}%
      \hskip-\bidi@beamer@Gm@rmargin%
    }}\hfil%
}

\def\ps@empty{%
  \let\@mkboth\@gobbletwo%
```

```
  \def\@oddhead{\begingroup%
    \setbox\beamer@tempbox=\hbox{\usebeamertemplate***{background canvas}\hyper@pagetransit
    \beamer@tempdim=\ht\beamer@tempbox%
    \setbox\beamer@tempbox=\hbox{\lower\beamer@tempdim\hbox{\box\beamer@tempbox}}%
    \wd\beamer@tempbox=0pt\ht\beamer@tempbox=0pt\dp\beamer@tempbox=0pt%
    \setbox\@tempboxa=\hbox{\usebeamertemplate***{background}}%
    \beamer@tempdim=\ht\@tempboxa%
    \setbox\@tempboxa=\hbox{\lower\beamer@tempdim\hbox{\box\@tempboxa}}%
    \wd\@tempboxa=0pt\ht\@tempboxa=0pt\dp\@tempboxa=0pt%
    \vbox{\hbox{\hskip-\Gm@lmargin\raise\headheight\box\beamer@tempbox\raise\headheight\box
    \endgroup%
  }
  \def\@oddfoot{{\normalcolor{\hfil%
    \setbox\beamer@tempbox=\hbox{\usebeamertemplate***{navigation symbols}\hskip-\bidi@beam
    \ht\beamer@tempbox=0pt%
    \dp\beamer@tempbox=0pt%
    \box\beamer@tempbox}}}
  \let\@evenhead\@oddhead\let\@evenfoot\@oddfoot}

\renewenvironment<>{beamer@columnenv}[2][\beamer@colmode]{%
  \beamer@colclose\def\beamer@colclose{}%
  \begin{actionenv}#3%
    \setkeys{beamer@col}{#1}%
    \begin{minipage}[\beamer@colalign]{#2}%
      \leavevmode\bidi@beamer@ragged\beamer@colheadskip\ignorespaces}
    {\end{minipage}\hfill\end{actionenv}\@ignoretrue}
\let\endcolumn\endbeamer@columnenv

\renewcommand<>\beamer@columncom[2][\beamer@colmode]{%
  \beamer@colclose%
  \def\beamer@colclose{\end{minipage}\hfill\end{actionenv}\ignorespaces}%
\begin{actionenv}#3%
  \setkeys{beamer@col}{#1}%
  \begin{minipage}[\beamer@colalign]{#2}%
    \leavevmode\bidi@beamer@ragged\beamer@colheadskip\ignorespaces}

\renewenvironment<>{columns}[1][]{%
  \begin{actionenv}#2%
  \ifbeamer@onlytextwidth
    \def\beamer@colentrycode{\hbox to\textwidth\bgroup\ignorespaces}%
    \def\beamer@colexitcode{\unskip\egroup}
  \else%
    \def\beamer@colentrycode{%
      \hbox to\textwidth\bgroup%
      \leavevmode%
      \hskip-\beamer@leftmargin%
      \nobreak%
      \beamer@tempdim=\textwidth%
      \advance\beamer@tempdim by\beamer@leftmargin%
      \advance\beamer@tempdim by\beamer@rightmargin%
      \hbox to\beamer@tempdim\bgroup%
      \hbox{}\hfill\ignorespaces}%
    \def\beamer@colexitcode{\egroup%
      \nobreak%
```

```
      \hskip-\beamer@rightmargin\egroup}%
  \fi%
  \ifbeamer@centered\setkeys{beamer@col}{c}\else\setkeys{beamer@col}{t}\fi%
  \setkeys{beamer@col}{#1}%
  \par%
  \leavevmode
  \beamer@colentrycode%
  \def\beamer@colclose{}\ignorespaces}%
  {\beamer@colclose\def\beamer@colclose{}\beamer@colexitcode\end{actionenv}}%


\def\@makeRTLfntext#1{%
  \def\insertfootnotetext{#1}%
  \def\insertfootnotemark{\@makefnmark}%
  \usebeamertemplate***{RTLfootnote}}

\def\@makeLTRfntext#1{%
  \def\insertfootnotetext{#1}%
  \def\insertfootnotemark{\@makefnmark}%
  \usebeamertemplate***{LTRfootnote}}

\renewcommand<>\beamer@framefootnotetext[1]{%
  \global\setbox\beamer@footins\vbox{%
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
    \hsize\framewidth
    \textwidth\hsize
    \columnwidth\hsize
    \unvbox\beamer@footins
    \reset@font
    \bidi@@footnotetext@font
    \@parboxrestore
    \protected@edef\@currentlabel
         {\csname p@footnote\endcsname\@thefnmark}%
    \color@begingroup
      \uncover#2{\@makefntext{%
        \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}}%
    \color@endgroup}}

\renewcommand<>\beamer@frameRTLfootnotetext[1]{%
  \global\setbox\beamer@footins\vbox{%
    \@RTLtrue
    \hsize\framewidth
    \textwidth\hsize
    \columnwidth\hsize
    \unvbox\beamer@footins
    \reset@font
    \bidi@@RTLfootnotetext@font
    \@parboxrestore
    \protected@edef\@currentlabel
         {\csname p@footnote\endcsname\@thefnmark}%
    \color@begingroup
      \uncover#2{\@makeRTLfntext{%
        \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}}%
    \color@endgroup}}
```

```
2321
2322 \renewcommand<>\beamer@frameLTRfootnotetext[1]{%
2323   \global\setbox\beamer@footins\vbox{%
2324     \@RTLfalse
2325     \hsize\framewidth
2326     \textwidth\hsize
2327     \columnwidth\hsize
2328     \unvbox\beamer@footins
2329     \reset@font
2330     \bidi@@LTRfootnotetext@font
2331     \@parboxrestore
2332     \protected@edef\@currentlabel
2333          {\csname p@footnote\endcsname\@thefnmark}%
2334     \color@begingroup
2335       \uncover#2{\@makeLTRfntext{%
2336         \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}}%
2337     \color@endgroup}}
2338
2339 \renewcommand<>\@mpfootnotetext[1]{%
2340 \ifbidi@autofootnoterule\ifnum\c@mpfootnote=\@ne\if@RTL@footnote\global\let\bidi@mpfootnote
2341   \global\setbox\@mpfootins\vbox{%
2342     \unvbox\@mpfootins
2343     \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
2344     \reset@font
2345     \bidi@@footnotetext@font
2346     \hsize\columnwidth
2347     \@parboxrestore
2348     \protected@edef\@currentlabel
2349          {\csname p@mpfootnote\endcsname\@thefnmark}%
2350     \color@begingroup
2351       \uncover#2{\@makefntext{%
2352         \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}}%
2353     \color@endgroup}}
2354
2355 \renewcommand<>\@mpRTLfootnotetext[1]{%
2356 \ifbidi@autofootnoterule\ifnum\c@mpfootnote=\@ne\global\let\bidi@mpfootnoterule\right@mpfoo
2357   \global\setbox\@mpfootins\vbox{%
2358      \unvbox\@mpfootins
2359      \@RTLtrue
2360     \reset@font
2361     \bidi@@RTLfootnotetext@font
2362     \hsize\columnwidth
2363     \@parboxrestore
2364     \protected@edef\@currentlabel
2365          {\csname p@mpfootnote\endcsname\@thefnmark}%
2366     \color@begingroup
2367       \uncover#2{\@makeRTLfntext{%
2368         \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}}%
2369     \color@endgroup}}
2370
2371 \renewcommand<>\@mpLTRfootnotetext[1]{%
2372 \ifbidi@autofootnoterule\ifnum\c@mpfootnote=\@ne\global\let\bidi@mpfootnoterule\left@footno
2373   \global\setbox\@mpfootins\vbox{%
2374   \unvbox\@mpfootins
```

```
  \@RTLfalse
    \reset@font
    \bidi@@LTRfootnotetext@font
    \hsize\columnwidth
    \@parboxrestore
    \protected@edef\@currentlabel
         {\csname p@mpfootnote\endcsname\@thefnmark}%
    \color@begingroup
      \uncover#2{\@makeLTRfntext{%
        \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}}%
    \color@endgroup}}

\let\@footnotetext=\beamer@framefootnotetext
\let\@RTLfootnotetext=\beamer@frameRTLfootnotetext
\let\@LTRfootnotetext=\beamer@frameLTRfootnotetext

\footdir@temp\footdir@ORG@bidi@beamer@footnotetext\@footnotetext{\bidi@footdir@footnote}%
\footdir@temp\footdir@ORG@bidi@beamer@RTLfootnotetext\@RTLfootnotetext{R}%
\footdir@temp\footdir@ORG@bidi@beamer@LTRfootnotetext\@LTRfootnotetext{L}%

\renewcommand<>{\footnote}[1][]{%
  \let\beamer@footnotetext=\@footnotetext%
  \let\beamer@mpfn=\@mpfn%
  \let\beamer@thempfn=\thempfn%
  \let\beamer@kvorig=\KV@errx%
  \let\beamer@xkvorig=\XKV@err
  \def\beamer@footarg{}%
  \def\KV@errx##1{\edef\beamer@footarg{\@tempa}}%
  \def\XKV@err##1{\edef\beamer@footarg{\XKV@tkey}}%
  \setkeys{beamerfootnote}{#1}%
  \let\KV@errx=\beamer@kvorig%
  \let\XKV@errx=\beamer@xkvorig
  \ifx\beamer@footarg\@empty%
    \def\beamer@next{\stepcounter\beamer@mpfn
      \protected@xdef\@thefnmark{\beamer@thempfn}%
      \@footnotemark\beamer@footnotetext#2}%
  \else%
    \def\beamer@next{%
      \begingroup
        \csname c@\beamer@mpfn\endcsname\beamer@footarg\relax
        \unrestored@protected@xdef\@thefnmark{\beamer@thempfn}%
      \endgroup
      \@footnotemark\beamer@footnotetext#2}%
  \fi%
  \beamer@next}

\renewcommand<>{\RTLfootnote}[1][]{%
  \let\beamer@RTLfootnotetext=\@RTLfootnotetext%
  \let\beamer@mpfn=\@mpfn%
  \let\beamer@thempfn=\thempfn%
  \let\beamer@kvorig=\KV@errx%
  \let\beamer@xkvorig=\XKV@err
  \def\beamer@footarg{}%
  \def\KV@errx##1{\edef\beamer@footarg{\@tempa}}%
```

```
  \def\XKV@err##1{\edef\beamer@footarg{\XKV@tkey}}%
  \setkeys{beamerfootnote}{#1}%
  \let\KV@errx=\beamer@kvorig%
  \let\XKV@errx=\beamer@xkvorig
  \ifx\beamer@footarg\@empty%
    \def\beamer@next{\stepcounter\beamer@mpfn
      \protected@xdef\@thefnmark{\beamer@thempfn}%
      \@footnotemark\beamer@RTLfootnotetext#2}%
  \else%
    \def\beamer@next{%
      \begingroup
        \csname c@\beamer@mpfn\endcsname\beamer@footarg\relax
        \unrestored@protected@xdef\@thefnmark{\beamer@thempfn}%
      \endgroup
      \@footnotemark\beamer@RTLfootnotetext#2}%
  \fi%
  \beamer@next}

\renewcommand<>{\LTRfootnote}[1][]{%
  \let\beamer@LTRfootnotetext=\@LTRfootnotetext%
  \let\beamer@mpfn=\@mpfn%
  \let\beamer@thempfn=\thempfn%
  \let\beamer@kvorig=\KV@errx%
  \let\beamer@xkvorig=\XKV@err
  \def\beamer@footarg{}%
  \def\KV@errx##1{\edef\beamer@footarg{\@tempa}}%
  \def\XKV@err##1{\edef\beamer@footarg{\XKV@tkey}}%
  \setkeys{beamerfootnote}{#1}%
  \let\KV@errx=\beamer@kvorig%
  \let\XKV@errx=\beamer@xkvorig
  \ifx\beamer@footarg\@empty%
    \def\beamer@next{\stepcounter\beamer@mpfn
      \protected@xdef\@thefnmark{\beamer@thempfn}%
      \@footnotemark\beamer@LTRfootnotetext#2}%
  \else%
    \def\beamer@next{%
      \begingroup
        \csname c@\beamer@mpfn\endcsname\beamer@footarg\relax
        \unrestored@protected@xdef\@thefnmark{\beamer@thempfn}%
      \endgroup
      \@footnotemark\beamer@LTRfootnotetext#2}%
  \fi%
  \beamer@next}
```

20 File beamerbaseframesize-xetex-bidi.def

```
\ProvidesFile{beamerbaseframesize-xetex-bidi.def}[2022/06/27 v0.1 bidi adaptations for beam
\def\beamer@framezoom<#1><#2>[#3](#4,#5)(#6,#7){%
  \par\nointerlineskip%
  \global\beamer@slidehaszoomtrue%
  \advance\beamer@zoomcount by1\relax%
  \def\beamer@zoomborderwidth{0}%
```

```
\edef\beamer@labelzoomed{beamer@labelzoomed@\the\beamer@zoomframecount @\the\beamer@zoomc
\setkeys{beamerzoom}{#3}%
\only<#1>{%
  {\hypersetup{pdfhighlight={/P},pdfborder={0 0 \beamer@zoomborderwidth}}%
  \global\setbox\@tempboxa=\vbox{\hyperlink{\beamer@labelzoomed}{%
    \expandafter\ifx\csname XeTeXrevision\endcsname\relax
      \vbox to #7{%
        \hbox to#6{\hfil}%
        \vfil%
      }%
    \else%
      \begingroup%
        \normalsize%
        \begin{pgfpicture}{0pt}{0pt}{#6}{#7}%
          \pgfsetfillopacity{0}
          \pgftext[x=0cm,y=3pt]{.}
          \pgftext[x=#6,y=\dimexpr#7-\baselineskip+3pt]{.}
        \end{pgfpicture}%
      \endgroup%
    \fi%
  }}}%
  \ht\@tempboxa=0pt%
  \wd\@tempboxa=0pt%
  \dp\@tempboxa=0pt%
  \setbox\@tempboxa=\vbox{\if@RTL\moveleft\else\moveright\fi#4\hbox{\lower#5\vbox{\box\@t
  \ht\@tempboxa=0pt%
  \wd\@tempboxa=0pt%
  \dp\@tempboxa=0pt%
  \global\setbox\beamer@zoombox=\vbox to0pt{\unvbox\beamer@zoombox\box\@tempboxa}%
}%
\only<#2>{%
  \@ifundefined{\beamer@labelzoomed}%
  {%
    \hypertarget{\beamer@labelzoomed}{}%
    \expandafter\gdef\csname\beamer@labelzoomed\endcsname{}%
  }{}%
  \gdef\beamer@zoomer{%
    % compute zoom factor
    \@tempdima=\beamer@frametextheight%
    \@tempdimb=#7\relax%
    \@tempcnta=\@tempdimb%
    \divide\@tempcnta by4096\relax%
    \multiply\@tempdima by16\relax%
    \divide\@tempdima by\@tempcnta%
    \@tempdimb=\paperwidth%
    \ifbeamer@plainframe%
    \else%
      \advance\@tempdimb by-\beamer@leftsidebar%
      \advance\@tempdimb by-\beamer@rightsidebar\relax%
    \fi%
    \@tempdimc=#6\relax%
    \@tempcntb=\@tempdimc%
    \divide\@tempcntb by4096\relax%
    \multiply\@tempdimb by16\relax%
```

```
\divide\@tempdimb by\@tempcntb%
\ifdim\@tempdimb<\@tempdima%
  \@tempdima=\@tempdimb%
\fi%
\edef\beamer@temp{\strip@pt\@tempdima}%
\@tempdimc=\beamer@frametextheight%
\advance\@tempdimc by4pt%
\@tempdimb=\paperwidth%
\ifbeamer@plainframe%
\else%
  \advance\@tempdimb by-\beamer@leftsidebar%
  \advance\@tempdimb by-\beamer@rightsidebar\relax%
\fi%
\setbox\@tempboxa=\vbox{\hsize=\@tempdimb\Acrobatmenu{GoBack}{\vbox to
    \beamer@frametextheight{\hbox to\@tempdimb{\hfil}\vfil}}}%
\ht\@tempboxa=0pt%
\wd\@tempboxa=0pt%
\dp\@tempboxa=0pt%
\setbox\beamer@framebox=\vbox to\beamer@frametextheight{{%
    \ifbeamer@plainframe\beamer@leftmargin=\Gm@lmargin\fi%
    \if@RTL
    \begin{pgfpicture}{\paperwidth-\beamer@leftmargin}{-\beamer@frametextheight}{\pap
      \pgftext[right,top]{\box\@tempboxa}
      \pgfpathrectangle{\pgfpoint{0pt}{-\@tempdimc}}{\pgfpoint{\@tempdimb}{\@tempdimc
      \pgfusepath{clip}
      \begingroup
        \pgftransformscale{\beamer@temp}
        \@tempdima=#4\relax%
        \@tempdimb=#5\relax%
        {\pgftransformshift{\pgfpoint{\@tempdima+#6}{\@tempdimb}}%
        \pgftext[right,top]{\vbox{\vbox{}\nointerlineskip\unvbox\beamer@framebox}}}
      \endgroup
    \end{pgfpicture}%
    \else
    \begin{pgfpicture}{\beamer@leftmargin}{-\beamer@frametextheight}{\beamer@leftmarg
      \pgftext[left,top]{\box\@tempboxa}
      \pgfpathrectangle{\pgfpoint{0pt}{-\@tempdimc}}{\pgfpoint{\@tempdimb}{\@tempdimc
      \pgfusepath{clip}
      \begingroup
        \pgftransformscale{\beamer@temp}
        \@tempdima=#4\relax%
        \@tempdimb=#5\relax%
        {\pgftransformshift{\pgfpoint{-\@tempdima}{\@tempdimb}}%
        \pgftext[left,top]{\vbox{\vbox{}\nointerlineskip\unvbox\beamer@framebox}}}
      \endgroup
    \end{pgfpicture}%
    \fi
  }}%
\setbox\beamer@framebox=\vbox{%
  \nobreak\vbox{}\nobreak\par\nobreak\beamer@entrycode\nobreak%
  \nointerlineskip\unvbox\beamer@frametitlebox%
  \nobreak%
  \box\beamer@framebox%
  \nobreak%
```

```
        \vss%
        \beamer@exitcode%
      }%
      \global\setbox\beamer@footins=\box\voidb@x% no footnotes in zoomed slides
    }%
  }%
}


```

21 File beamerbaselocalstructure-xetex-bidi.def

```
\ProvidesFile{beamerbaselocalstructure-xetex-bidi.def}[2022/05/24 v0.1 bidi adaptations for
\def\beamer@enum@{%
  \beamer@computepref\@itemdepth% sets \beameritemnestingprefix
  \usebeamerfont{itemize/enumerate \beameritemnestingprefix body}%
  \bgroup
  \usebeamercolor[fg]{itemize/enumerate \beameritemnestingprefix body}%
  \usebeamertemplate{itemize/enumerate \beameritemnestingprefix body begin}%
  \egroup
  \expandafter
    \list
      {\usebeamertemplate{\beamer@enumtempl}}
      {\usecounter\@enumctr%
        \def\makelabel##1{{\hss\llap{{%
                \usebeamerfont*{enumerate \beameritemnestingprefix item}%
                \usebeamercolor[fg]{enumerate \beameritemnestingprefix item}##1}}}}}%
  \beamer@cramped%
  \bidi@beamer@ragged%
  \beamer@firstlineitemizeunskip%
}

\renewcommand{\itemize}[1][]{%
  \ifblank{#1}{}{\def\beamer@defaultospec{#1}}%
  \ifnum \@itemdepth >2\relax\@toodeep\else
    \advance\@itemdepth\@ne
    \beamer@computepref\@itemdepth% sets \beameritemnestingprefix
    \usebeamerfont{itemize/enumerate \beameritemnestingprefix body}%
    \bgroup
    \usebeamercolor[fg]{itemize/enumerate \beameritemnestingprefix body}%
    \usebeamertemplate{itemize/enumerate \beameritemnestingprefix body begin}%
    \egroup
    \list
      {\usebeamertemplate{itemize \beameritemnestingprefix item}}
      {\def\makelabel##1{%
          {%
            \hss\llap{{%
                \usebeamerfont*{itemize \beameritemnestingprefix item}%
                \usebeamercolor[fg]{itemize \beameritemnestingprefix item}##1}}%
          }%
        }%
      }
  \fi%
  \beamer@cramped%
```

```
  \bidi@beamer@ragged%
  \beamer@firstlineitemizeunskip%
}

\def\@@description{%
  \advance\beamer@descdefault by \labelsep%
  \usebeamerfont{description body}%
  \bgroup
  \usebeamercolor[fg]{description body}%
  \usebeamertemplate{description body begin}%
  \egroup
  \list
  {}
  {\labelwidth\beamer@descdefault\leftmargin\beamer@descdefault\let\makelabel\beamer@descri
  \beamer@cramped%
  \bidi@beamer@ragged
  \beamer@firstlineitemizeunskip%
}

\renewenvironment{thebibliography}[1]
{%\leavevmode\unskip%
\if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
\bidi@@thebibliography@font@hook%
  \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\beamer@biblabeltemplate{\@biblabel{#1}}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \itemsep=0pt%
            \partopsep=0pt%
            \topsep=0pt%
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand\theenumiv{\@arabic\c@enumiv}
            \let\makelabel\beamer@biblabeltemplate}%
      \sloppy\bidi@beamer@ragged
      \clubpenalty10000
      \@clubpenalty \clubpenalty
      \widowpenalty10000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \ifhmode\unskip\fi\endlist}


```

22 File beamerbasemisc-xetex-bidi.def

```
\ProvidesFile{beamerbasemisc-xetex-bidi.def}[2022/06/27 v0.1 bidi adaptations for beamerbas
\define@key{beamerst}{width}{%
  \def\beamer@ststart{%
    \begin{minipage}[t]{#1}%
      \bidi@beamer@ragged
      \beamer@stalign
      \beamer@stlinebreakrule
```

```
2690    }%
2691  \def\beamer@stend{\end{minipage}}}
2692
2693
```

23 File beamerbasenavigation-xetex-bidi.def

```
2694 \ProvidesFile{beamerbasenavigation-xetex-bidi.def}[2022/06/27 v0.2 bidi adaptations for bea
2695 \def\slideentry#1#2#3#4#5#6{%
2696   %section number, subsection number, slide number, first/last frame, page number, part num
2697   \ifnum#6=\c@part\ifnum#1>0\ifnum#3>0%
2698     \ifbeamer@compress%
2699       \advance\beamer@xpos by1\relax%
2700     \else%
2701       \ifnum#2=0%
2702         \beamer@ypos@offset=1\relax%
2703       \fi
2704       \beamer@xpos=#3\relax%
2705       \beamer@ypos=#2\relax%
2706       \advance\beamer@ypos by \beamer@ypos@offset\relax
2707     \fi%
2708   \hbox to 0pt{%
2709     \beamer@tempdim=-\beamer@vboxoffset%
2710     \advance\beamer@tempdim by-\beamer@boxsize%
2711     \multiply\beamer@tempdim by\beamer@ypos%
2712     \advance\beamer@tempdim by -.05cm%
2713     \raise\beamer@tempdim\hbox{%
2714       \beamer@tempdim=\beamer@boxsize%
2715       \multiply\beamer@tempdim by\beamer@xpos%
2716       \advance\beamer@tempdim by -\beamer@boxsize%
2717       \advance\beamer@tempdim by 1pt%
2718       \kern\beamer@tempdim
2719       \global\beamer@section@min@dim\beamer@tempdim
2720       \hbox{\beamer@link(#4){{%
2721           \usebeamerfont{mini frame}%
2722           \ifnum\c@section=#1%
2723             \ifnum\c@subsection=#2%
2724               \usebeamercolor[fg]{mini frame}%
2725               \ifnum\c@subsectionslide=#3%
2726                 \usebeamertemplate{mini frame}%\beamer@minislidehilight%
2727               \else%
2728                 \usebeamertemplate{mini frame in current subsection}%\beamer@minisliderowhi
2729               \fi%
2730             \else%
2731               \usebeamercolor{mini frame}%
2732               %\color{fg!50!bg}%
2733               \usebeamertemplate{mini frame in other subsection}%\beamer@minislide%
2734             \fi%
2735           \else%
2736             \usebeamercolor{mini frame}%
2737             %\color{fg!50!bg}%
2738             \usebeamertemplate{mini frame in other subsection}%\beamer@minislide%
2739           \fi%
2740         }}}}\hskip-10cm plus 1fil%
```

```
  }\fi\fi%
  \else%
  \fakeslideentry{#1}{#2}{#3}{#4}{#5}{#6}%
  \fi\ignorespaces
  }

\pgfdefobject{bidi@beamer@RTL@gotosymbol}{\pgfpoint{0pt}{-1pt}}{\pgfpoint{5pt}{5pt}}
{
  \pgfpathqmoveto{3.5bp}{0.5bp}
  \pgfpathqlineto{1.5bp}{2bp}
  \pgfpathqlineto{3.5bp}{3.5bp}
  \pgfusepathqfill
}

\def\insertgotosymbol{%
\if@RTL
  \begin{pgfpicture}{-1pt}{0pt}{4pt}{5pt}
    \pgfuseobject{bidi@beamer@RTL@gotosymbol}%
  \end{pgfpicture}%
\else
  \begin{pgfpicture}{1pt}{0pt}{6pt}{5pt}
    \pgfuseobject{beamergotosymbol}%
  \end{pgfpicture}%
\fi
}

\pgfdefobject{bidi@beamer@RTL@skipsymbol}{\pgfpoint{0pt}{-1pt}}{\pgfpoint{7pt}{5pt}}
{
  \pgfpathqmoveto{5.5bp}{0.5bp}
  \pgfpathqlineto{3.5bp}{2bp}
  \pgfpathqlineto{5.5bp}{3.5bp}
  \pgfpathqmoveto{3.5bp}{0.5bp}
  \pgfpathqlineto{1.5bp}{2bp}
  \pgfpathqlineto{3.5bp}{3.5bp}
  \pgfusepathqfill
}

\def\insertskipsymbol{%
\if@RTL
  \begin{pgfpicture}{-1pt}{0pt}{6pt}{5pt}
    \pgfuseobject{bidi@beamer@RTL@skipsymbol}%
  \end{pgfpicture}%
\else
  \begin{pgfpicture}{1pt}{0pt}{8pt}{5pt}
    \pgfuseobject{beamerskipsymbol}%
  \end{pgfpicture}%
\fi
}

\pgfdefobject{bidi@beamer@RTL@returnsymbol}{\pgfpoint{0pt}{-1pt}}{\pgfpoint{5pt}{5pt}}
{
  \pgfpathqmoveto{1.5bp}{0.5bp}
  \pgfpathqlineto{3.5bp}{2bp}
  \pgfpathqlineto{1.5bp}{3.5bp}
```

```
  \pgfusepathqfill
}

\def\insertreturnsymbol{%
\if@RTL
  \begin{pgfpicture}{-1pt}{0pt}{4pt}{5pt}
    \pgfuseobject{bidi@beamer@RTL@returnsymbol}%
  \end{pgfpicture}%
\else
  \begin{pgfpicture}{1pt}{0pt}{6pt}{5pt}
    \pgfuseobject{beamerreturnsymbol}%
  \end{pgfpicture}%
\fi
}
```

24 File beamerbaseoverlay-xetex-bidi.def

```
\ProvidesFile{beamerbaseoverlay-xetex-bidi.def}[2022/06/10 v0.1 bidi adaptations for beamer
\renewcommand<>{\color}{\alt#1{\beameroriginal{\color}}{\beamer@gobbleoptionalinsp}}
```

25 File beamerinnerthemedefault-xetex-bidi.def

```
\ProvidesFile{beamerinnerthemedefault-xetex-bidi.def}[2022/06/27 v0.6 bidi adaptations for
\newcommand*{\bidi@beamer@leftskip}{%
  \if@RTL
    \rightskip
  \else
    \leftskip
  \fi
}

\newcommand*{\bidi@beamer@rightskip}{%
  \if@RTL
    \leftskip
  \else
    \rightskip
  \fi
}

\bidi@csundef{beamer@@tmpop@subsection in toc@default}

\bidi@csundef{beamer@@tmpop@subsubsection in toc@default}

\defbeamertemplate*{subsection in toc}{default}
{\leavevmode\bidi@beamer@leftskip=1.5em\inserttocsubsection\par}

\defbeamertemplate*{subsubsection in toc}{default}
{\leavevmode\normalsize\usebeamerfont{subsection in toc}\bidi@beamer@leftskip=3em%
  \usebeamerfont{subsubsection in toc}\inserttocsubsubsection\par}
```

```
\newcommand*{\bidi@beamer@blacktriangle}{%
  \if@RTL
    $\blacktriangleleft$%
  \else
    $\blacktriangleright$%
  \fi
}

\bidi@csundef{beamer@@tmpop@itemize item@default}

\bidi@csundef{beamer@@tmpop@itemize subitem@default}

\bidi@csundef{beamer@@tmpop@itemize subsubitem@default}

\defbeamertemplate*{itemize item}{default}{\usebeamerfont*{itemize item}\raise1.25pt\hbox{\
\defbeamertemplate*{itemize subitem}{default}{\usebeamerfont*{itemize subitem}\raise1.5pt\h
\defbeamertemplate*{itemize subsubitem}{default}{\usebeamerfont*{itemize subsubitem}\raise1

\bidi@undef\beamer@@tmpop@footnote@default

\defbeamertemplate*{footnote}{default}
{
  \parindent 1em\noindent%
  \bidi@beamer@ragged
  \hbox to 1.8em{\hfil\insertfootnotemark}\insertfootnotetext\par%
}

\defbeamertemplate*{RTLfootnote}{default}
{
  \parindent 1em\noindent%
  \raggedleft
  \hbox to 1.8em{\hfil\insertfootnotemark}\insertfootnotetext\par%
}

\defbeamertemplate*{LTRfootnote}{default}
{
  \parindent 1em\noindent%
  \raggedright
  \hbox to 1.8em{\hfil\insertfootnotemark}\insertfootnotetext\par%
}

\bidi@undef\beamer@@tmpop@caption@default

\defbeamertemplate*{caption}{default}
{%
  \bidi@beamer@ragged
  {%
    \leavevmode
    \usebeamercolor[fg]{caption name}%
    \usebeamerfont*{caption name}%
    \insertcaptionname
    \usebeamertemplate{caption label separator}%
  }%
  \insertcaption\par
```

```
}

\bidi@csundef{beamer@@tmpop@block begin@default}

\bidi@csundef{beamer@@tmpop@block alerted begin@default}

\bidi@csundef{beamer@@tmpop@block example begin@default}

\defbeamertemplate*{block begin}{default}
{
  \par\vskip\medskipamount%
  \begin{beamercolorbox}[colsep*=.75ex]{block title}
    \usebeamerfont*{block title}\insertblocktitle%
  \end{beamercolorbox}%
  {\parskip0pt\par}%
  \ifbeamercolorempty[bg]{block title}
  {}
  {\ifbeamercolorempty[bg]{block body}{}{\nointerlineskip\vskip-0.5pt}}%
  \usebeamerfont{block body}%
  \begin{beamercolorbox}[colsep*=.75ex,vmode]{block body}%
    \ifbeamercolorempty[bg]{block body}{\vskip-.25ex}{\leavevmode\vskip-\dimexpr.75ex+\base
}

\defbeamertemplate*{block alerted begin}{default}
{
  \par\vskip\medskipamount%
  \begin{beamercolorbox}[colsep*=.75ex]{block title alerted}
    \usebeamerfont*{block title alerted}\insertblocktitle%
  \end{beamercolorbox}%
  {\parskip0pt\par}%
  \ifbeamercolorempty[bg]{block title alerted}
  {}
  {\ifbeamercolorempty[bg]{block body alerted}{}{\nointerlineskip\vskip-0.5pt}}%
  \usebeamerfont{block body alerted}%
  \begin{beamercolorbox}[colsep*=.75ex,vmode]{block body alerted}%
    \ifbeamercolorempty[bg]{block body alerted}{\vskip-.25ex}{\leavevmode\vskip-\dimexpr.75
}

\defbeamertemplate*{block example begin}{default}
{
  \par\vskip\medskipamount%
  \begin{beamercolorbox}[colsep*=.75ex]{block title example}
    \usebeamerfont*{block title example}\insertblocktitle%
  \end{beamercolorbox}%
  {\parskip0pt\par}%
  \ifbeamercolorempty[bg]{block title example}
  {}
  {\ifbeamercolorempty[bg]{block body example}{}{\nointerlineskip\vskip-0.5pt}}%
  \usebeamerfont{block body example}%
  \begin{beamercolorbox}[colsep*=.75ex,vmode]{block body example}%
    \ifbeamercolorempty[bg]{block body example}{\vskip-.25ex}{\leavevmode\vskip-\dimexpr.75
}

\bidi@csundef{beamer@@tmpop@abstract begin@default}
```

```
2951
2952 \defbeamertemplate*{abstract begin}{default}
2953 {\beamercolorbox[vmode]{abstract}\bidi@beamer@leftskip2em\bidi@beamer@rightskip2em plus 1fi
2954
2955 \bidi@undef\beamer@@tmpop@button@default
2956
2957 \defbeamertemplate*{button}{default}
2958 {%
2959   \setbox\beamer@tempbox=\hbox{{\insertbuttontext}}%
2960   \ht\beamer@tempbox=6pt%
2961   \dp\beamer@tempbox=0pt%
2962   \setbox\beamer@tempbox=\vbox{\box\beamer@tempbox\vskip2pt}%
2963   \beamer@tempdim=\wd\beamer@tempbox%
2964   \beamer@dima=\beamer@tempdim\advance\beamer@dima by2.2pt
2965   \beamer@dimb=\beamer@tempdim\advance\beamer@dimb by4pt
2966   \if@RTL
2967     \kern4pt%
2968     \box\beamer@tempbox%
2969     \hskip-\beamer@tempdim%
2970   \fi
2971   \begin{pgfpicture}{-4pt}{0pt}{\the\beamer@tempdim}{8pt}
2972     \color{bg}
2973     \pgfsetlinewidth{0.8pt}
2974     \pgfpathqmoveto{0pt}{0pt}
2975     \pgfpathqcurveto{-2.2pt}{0pt}{-4pt}{1.8pt}{-4pt}{4pt}
2976     \pgfpathqcurveto{-4pt}{6.2pt}{-2.2pt}{8pt}{0pt}{8pt}
2977     \pgfpathlineto{\pgfpoint{\the\beamer@tempdim}{8pt}}
2978     \pgfpathcurveto%
2979     {\pgfpoint{\the\beamer@dima}{8pt}}%
2980     {\pgfpoint{\the\beamer@dimb}{6.2pt}}%
2981     {\pgfpoint{\the\beamer@dimb}{4pt}}
2982     \pgfpathcurveto%
2983     {\pgfpoint{\the\beamer@dimb}{1.8pt}}%
2984     {\pgfpoint{\the\beamer@dima}{0pt}}%
2985     {\pgfpoint{\the\beamer@tempdim}{0pt}}
2986     \pgfpathclose
2987     \pgfusepathqfill
2988     \colorlet{bg}{parent.bg}
2989     \usebeamercolor[fg]{button border}
2990     \pgfpathqmoveto{0pt}{0pt}
2991     \pgfpathqcurveto{-2.2pt}{0pt}{-4pt}{1.8pt}{-4pt}{4pt}
2992     \pgfpathqcurveto{-4pt}{6.2pt}{-2.2pt}{8pt}{0pt}{8pt}
2993     \pgfpathlineto{\pgfpoint{\the\beamer@tempdim}{8pt}}
2994     \pgfpathcurveto%
2995     {\pgfpoint{\the\beamer@dima}{8pt}}%
2996     {\pgfpoint{\the\beamer@dimb}{6.2pt}}%
2997     {\pgfpoint{\the\beamer@dimb}{4pt}}
2998     \pgfpathcurveto%
2999     {\pgfpoint{\the\beamer@dimb}{1.8pt}}%
3000     {\pgfpoint{\the\beamer@dima}{0pt}}%
3001     {\pgfpoint{\the\beamer@tempdim}{0pt}}
3002     \pgfpathclose
3003     \pgfusepathqstroke
3004   \end{pgfpicture}%
```

```
  \if@RTL
  \else
    \hskip-\beamer@tempdim%
    \box\beamer@tempbox%
    \kern4pt%
  \fi
}
```

26 File beamerinnerthemecircles-xetex-bidi.def

```
\ProvidesFile{beamerinnerthemecircles-xetex-bidi.def}[2022/06/06 v0.1 bidi adaptations for
\setbeamertemplate{sections/subsections in toc}[circle]
```

27 File beamerinnerthemefocus-xetex-bidi.def

```
\ProvidesFile{beamerinnerthemefocus-xetex-bidi.def}[2022/06/13 v0.1 bidi adaptations for be
\setbeamertemplate{section in toc}[square]
\setbeamertemplate{subsection in toc}[square]

\setbeamertemplate{itemize items}[square]
\setbeamertemplate{itemize subitem}[triangle]

\bidi@csundef{beamer@@tmpop@title page@focus}

\defbeamertemplate*{title page}{focus}{%
    {%
        \usebeamercolor{frametitle}\colorlet{focus@@temp}{bg}%
        \begin{tikzpicture}[overlay, remember picture]
            \fill[color=focus@@temp] (current page.north west) rectangle ([shift = {(0, -0.
    \end{tikzpicture}
    }

    \vspace{-1.65\baselineskip}
    \begin{minipage}[b][0.35\paperheight]{\textwidth}
        \vspace{\baselineskip}
        \usebeamerfont{title}
        \usebeamercolor[fg]{frametitle}
        \inserttitle
    \end{minipage}

    \begin{minipage}[t][0.1\paperheight]{\textwidth}
        \usebeamerfont{subtitle}
        \usebeamercolor[fg]{frametitle}
        \insertsubtitle
    \end{minipage}

    % Set the title graphic in a zero-height box, so that
    % the position of other elements is not affected.
    {\vfuzz=9999pt\vbox to 0pt {
        \if@RTL
          \raggedright
```

```
        \else
          \raggedleft
        \fi
        \inserttitlegraphic
    }}

    \begin{minipage}[t]{\textwidth}
        \usebeamerfont{author}
        \insertauthor
    \end{minipage}

    \vspace*{\baselineskip}
    \begin{minipage}[t]{\textwidth}
        \usebeamerfont{institute}
        \insertinstitute
    \end{minipage}

    \vspace*{\baselineskip}
    \begin{minipage}[t]{\textwidth}
        \usebeamerfont{date}
        \insertdate
    \end{minipage}

    \vspace*{0pt plus 100fill}

    \addtocounter{framenumber}{-1}
    \addtocounter{realframenumber}{-1}
}
```

28 File beamerinnerthemeinmargin-xetex-bidi.def

```
\ProvidesFile{beamerinnerthemeinmargin-xetex-bidi.def}[2022/06/09 v0.1 bidi adaptations for
\AtBeginDocument{%
  \setbeamersize{sidebar width left=.25\paperwidth}%
}

\bidi@csundef{beamer@@tmpop@section in toc@inmargin}

\bidi@csundef{beamer@@tmpop@title page@inmargin}

\bidi@csundef{beamer@@tmpop@block begin@inmargin}

\bidi@csundef{beamer@@tmpop@block end@inmargin}

\bidi@csundef{beamer@@tmpop@block alerted begin@inmargin}

\bidi@csundef{beamer@@tmpop@block alerted end@inmargin}

\bidi@csundef{beamer@@tmpop@block example begin@inmargin}

\bidi@csundef{beamer@@tmpop@block example end@inmargin}
```

```
3104
3105 \defbeamertemplate*{section in toc}{inmargin}
3106 {\leavevmode
3107   \beamer@putleft{{\usebeamercolor[fg]{section in toc}\inserttocsection}\strut}{2.5ex}}
3108
3109 \defbeamertemplate*{title page}{inmargin}
3110 {
3111   \begin{block}{\inserttitleindicator}
3112     \bgroup\usebeamercolor[fg]{title}\usebeamerfont{title}\inserttitle\egroup\par
3113     \usebeamercolor[fg]{subtitle}\usebeamerfont{subtitle}\insertsubtitle
3114   \end{block}
3115   \vfill
3116   \ifx\insertauthor\@empty
3117   \else
3118   \begin{block}{\insertauthorindicator}
3119     \bgroup\usebeamercolor[fg]{author}\usebeamerfont{author}\insertauthor\egroup\par
3120   \end{block}
3121   \fi
3122   \ifx\insertinstitute\@empty
3123   \else
3124   \begin{block}{\insertinstituteindicator}
3125     \bgroup\usebeamercolor[fg]{institute}\usebeamerfont{institute}\insertinstitute\egroup\p
3126   \end{block}
3127   \fi
3128   \ifx\insertdate\@empty
3129   \else
3130   \begin{block}{\insertdateindicator}
3131     \bgroup\usebeamercolor[fg]{date}\usebeamerfont{date}\insertdate\egroup\par
3132   \end{block}
3133   \fi
3134 }
3135
3136 \defbeamertemplate*{block begin}{inmargin}
3137 {
3138   \par\vskip\medskipamount%
3139   \leavevmode%
3140   \beamer@putleft{\normalfont{\usebeamercolor[fg]{block title}\usebeamerfont*{block title}\
3141   \beginL\beamer@putright
3142   %\usebeamercolor[fg]{block body}% to be done!
3143 }
3144
3145 \defbeamertemplate*{block end}{inmargin}
3146 {\endbeamer@putright\endL\vskip\smallskipamount}
3147
3148 \defbeamertemplate*{block alerted begin}{inmargin}
3149 {
3150   \par\vskip\medskipamount%
3151   \leavevmode%
3152   \beamer@putleft{\normalfont{\usebeamercolor[fg]{block title alerted}\usebeamerfont*{block
3153   \beginL\beamer@putright
3154   %\usebeamercolor[fg]{block body alerted}% to be done!
3155 }
3156
3157 \defbeamertemplate*{block alerted end}{inmargin}
```

```
{\endbeamer@putright\endL\vskip\smallskipamount}

\defbeamertemplate*{block example begin}{inmargin}
{
  \par\vskip\medskipamount%
  \leavevmode%
  \beamer@putleft{\normalfont{\usebeamercolor[fg]{block title example}\usebeamerfont*{block
  \beginL\beamer@putright
  %\usebeamercolor[fg]{block body example}% to be done
}

\defbeamertemplate*{block example end}{inmargin}
{\endbeamer@putright\endL\vskip\smallskipamount}

\bidi@AfterFile{beamerinnerthemerectangles-xetex-bidi.def}{%
  \setbeamertemplate{section in toc}[inmargin]%
  \setbeamertemplate{subsection in toc}[inmargin]%
  \setbeamertemplate{subsubsection in toc}[inmargin]%
}
```

29 File beamerinnerthememetropolis-xetex-bidi.def

```
\ProvidesFile{beamerinnerthememetropolis-xetex-bidi.def}[2022/06/13 v0.1 bidi adaptations f
\setbeamertemplate{title}{
  \bidi@beamer@ragged%
  \linespread{1.0}%
  \inserttitle%
  \par%
  \vspace*{0.5em}
}

\setbeamertemplate{subtitle}{
  \bidi@beamer@ragged%
  \insertsubtitle%
  \par%
  \vspace*{0.5em}
}

\bidi@csundef{beamer@@tmpop@section page@progressbar}

\defbeamertemplate{section page}{progressbar}{
  \centering
  \begin{minipage}{22em}
    \bidi@beamer@ragged
    \usebeamercolor[fg]{section title}
    \usebeamerfont{section title}
    \insertsectionhead\\[-1ex]
    \usebeamertemplate*{progress bar in section page}
    \par
    \ifx\insertsubsectionhead\@empty\else%
      \usebeamercolor[fg]{subsection title}%
      \usebeamerfont{subsection title}%
```

```
      \insertsubsectionhead
    \fi
  \end{minipage}
  \par
  \vspace{\baselineskip}
}

\setbeamertemplate{progress bar in section page}{
  \setlength{\metropolis@progressonsectionpage}{%
    \textwidth * \ratio{\insertframenumber pt}{\inserttotalframenumber pt}%
  }%
  \begin{tikzpicture}
    \fill[bg] (0,0) rectangle (\textwidth, \metropolis@progressonsectionpage@linewidth);
\if@RTLmain
    \fill[fg] (\textwidth-\metropolis@progressonsectionpage,0) rectangle (\textwidth, \metr
\else
    \fill[fg] (0,0) rectangle (\metropolis@progressonsectionpage, \metropolis@progressonsec
\fi
  \end{tikzpicture}%
}

\renewcommand{\metropolis@block}[1]{
  \par\vskip\medskipamount%
  \setlength{\parskip}{0pt}
  \ifbeamercolorempty[bg]{block title#1}{%
    \if@RTL
      \begin{beamercolorbox}[leftskip=0pt plus 4em]{block title#1}%
    \else
      \begin{beamercolorbox}[rightskip=0pt plus 4em]{block title#1}%
    \fi
  }{%
  \ifbeamercolorempty[bg]{block title}{%
    \if@RTL
      \begin{beamercolorbox}[leftskip=0pt plus 4em]{block title#1}%
    \else
      \begin{beamercolorbox}[rightskip=0pt plus 4em]{block title#1}%
    \fi
  }%
  {%
  \if@RTL
    \begin{beamercolorbox}[
      sep=\dimexpr\metropolis@blocksep-\metropolis@blockadjust\relax,
      rightskip=\metropolis@blockadjust,
      leftskip=\dimexpr\metropolis@blockadjust plus 4em\relax
    ]{block title#1}%
    \else
    \begin{beamercolorbox}[
      sep=\dimexpr\metropolis@blocksep-\metropolis@blockadjust\relax,
      leftskip=\metropolis@blockadjust,
      rightskip=\dimexpr\metropolis@blockadjust plus 4em\relax
    ]{block title#1}%
    \fi
  }}%
      \usebeamerfont*{block title#1}%
```

```
      \metropolis@strut%
      \insertblocktitle%
      \metropolis@strut%
  \end{beamercolorbox}%
  \nointerlineskip%
  \ifbeamercolorempty[bg]{block body#1}{%
    \begin{beamercolorbox}[vmode]{block body#1}}{
  \ifbeamercolorempty[bg]{block body}{%
    \begin{beamercolorbox}[vmode]{block body#1}%
  }{%
    \begin{beamercolorbox}[sep=\metropolis@blocksep, vmode]{block body#1}%
    \vspace{-\metropolis@parskip}
  }}%
      \usebeamerfont{block body#1}%
      \setlength{\parskip}{\metropolis@parskip}%
}


\setbeamertemplate{footnote}{%
  \parindent 0em\noindent%
  \bidi@beamer@ragged
  \usebeamercolor{footnote}\hbox to 0.8em{\hfil\insertfootnotemark}\insertfootnotetext\par%
}

\setbeamertemplate{RTLfootnote}{%
  \parindent 0em\noindent%
  \raggedleft
  \usebeamercolor{footnote}\hbox to 0.8em{\hfil\insertfootnotemark}\insertfootnotetext\par%
}

\setbeamertemplate{LTRfootnote}{%
  \parindent 0em\noindent%
  \raggedright
  \usebeamercolor{footnote}\hbox to 0.8em{\hfil\insertfootnotemark}\insertfootnotetext\par%
}

\setbeamertemplate{itemize items}{\textbullet}

\setbeamertemplate{section page}[progressbar]
```

30 File beamerinnerthemerectangles-xetex-bidi.def

```
\ProvidesFile{beamerinnerthemerectangles-xetex-bidi.def}[2022/06/06 v0.1 bidi adaptations f
\setbeamertemplate{sections/subsections in toc}[square]
\setbeamertemplate{items}[square]
```

31 File beamerinnerthemerounded-xetex-bidi.def

```
\ProvidesFile{beamerinnerthemerounded-xetex-bidi.def}[2022/06/01 v0.1 bidi adaptations for
\setbeamertemplate{blocks}[rounded][shadow=\beamer@themerounded@shadow]
\setbeamertemplate{items}[ball]
```

```
\setbeamertemplate{sections/subsections in toc}[ball]

```

32 File beamerouterthemedefault-xetex-bidi.def

```
\ProvidesFile{beamerouterthemedefault-xetex-bidi.def}[2022/06/27 v0.2 bidi adaptations for
\def\beamer@fteleft{\if@RTLmain\vskip0.35cm\advance\leftskip by 1.7cm\advance\rightskip by1

\def\beamer@fteright{\if@RTLmain\else\vskip0.35cm\advance\leftskip by 1.7cm\advance\rightsk

\AtBeginDocument{%
  \if@RTLmain
    \setbeamertemplate{frametitle}[default][right]
  \fi
}

\bidi@csundef{beamer@@tmpop@note page@default}

\newcommand*{\bidi@beamer@today}{%
\the\year-\ifnum\month<10\relax0\fi\the\month-\ifnum\day<10\relax0\fi\the\day}

\defbeamertemplate*{note page}{default}
{%
  {%
    \scriptsize
    \usebeamerfont{note title}\usebeamercolor[fg]{note title}%
    \ifbeamercolorempty[bg]{note title}{}{%
      \insertvrule{.25\paperheight}{note title.bg}%
      \vskip-.25\paperheight%
      \nointerlineskip%
    }%
    \vbox{
      \hfill\insertslideintonotes{0.25}\hskip-\Gm@rmargin\hskip0pt%
      \vskip-0.25\paperheight%
      \nointerlineskip
      \if@RTL
      \begin{pgfpicture}{-\textwidth}{0cm}{-\textwidth}{0cm}
        \begin{pgflowlevelscope}{\pgftransformrotate{-90}}
          {\pgftransformshift{\pgfpoint{2cm}{0.2cm}}%
          \pgftext[base,right]{\usebeamerfont{note date}\usebeamercolor[fg]{note date}\bidi
        \end{pgflowlevelscope}
      \end{pgfpicture}%
      \else
      \begin{pgfpicture}{0cm}{0cm}{0cm}{0cm}
        \begin{pgflowlevelscope}{\pgftransformrotate{90}}
          {\pgftransformshift{\pgfpoint{-2cm}{0.2cm}}%
          \pgftext[base,left]{\usebeamerfont{note date}\usebeamercolor[fg]{note date}\bidi@
        \end{pgflowlevelscope}
      \end{pgfpicture}%
      \fi}
    \nointerlineskip
    \vbox to .25\paperheight{\vskip0.5em
    \if@RTL
      \moveright0.25\textwidth
```

```
    \fi
      \hbox{\insertshorttitle[width=0.75\textwidth]}%
      \setbox\beamer@tempbox=\hbox{\insertsection}%

\if@RTL
  \moveright\dimexpr0.29\textwidth-14pt\relax
\fi
\hbox{\if@RTL\beginR\fi\ifdim\wd\beamer@tempbox>1pt{\hskip4pt\raise3pt\hbox{\vrule
            width0.4pt height7pt\vrule width 9pt
            height0.4pt}}\hskip1pt\hbox{\begin{minipage}[t]{0.71\textwidth}\def\breakhere{}
      \if@RTL\endR\fi}%
      \setbox\beamer@tempbox=\hbox{\insertsubsection}%

\if@RTL
  \moveright\dimexpr0.29\textwidth-27.4pt\relax
\fi      \hbox{\if@RTL\beginR\fi\ifdim\wd\beamer@tempbox>1pt{\hskip17.4pt\raise3pt\hbox{\vr
            width0.4pt height7pt\vrule width 9pt
            height0.4pt}}\hskip1pt\hbox{\begin{minipage}[t]{0.71\textwidth}\def\breakhere{}
      \if@RTL\endR\fi}%
      \setbox\beamer@tempbox=\hbox{\insertshortframetitle}%

\if@RTL
  \moveright\dimexpr0.33\textwidth-40.8pt\relax
\fi      \hbox{\if@RTL\beginR\fi\ifdim\wd\beamer@tempbox>1pt{\hskip30.8pt\raise3pt\hbox{\vr
            width0.4pt height7pt\vrule width 9pt
            height0.4pt}}\hskip1pt\hbox{\insertshortframetitle[width=0.67\textwidth]}\fi%
      \if@RTL\endR\fi}%
      \vfil}%
  }%
  \ifbeamercolorempty[bg]{note page}{}{%
    \nointerlineskip%
    \insertvrule{.75\paperheight}{note page.bg}%
    \vskip-.75\paperheight%
  }%
  \vskip.25em
  \nointerlineskip
  \insertnote
}
```

33 File beamerouterthemefocus-xetex-bidi.def

```
\ProvidesFile{beamerouterthemefocus-xetex-bidi.def}[2022/06/13 v0.1 bidi adaptations for be
\bidi@undef\beamer@@tmpop@footline@progressbar

\defbeamertemplate*{footline}{progressbar}{%
    % If not appendix.
    \ifnum\mainend<0% From package appendixnumberbeamer.
        %
        \settowidth{\focus@pbar@leftoffset}{1}%
        \addtolength{\focus@pbar@leftoffset}{1.5em}%
        %
```

```
        \ifx\beamer@focus@totalframenumbering\no%
            \settowidth{\focus@pbar@rightoffset}{}%
            \addtolength{\focus@pbar@rightoffset}{0.5em}%
        \else%
            \settowidth{\focus@pbar@rightoffset}{\inserttotalframenumber}%
            \addtolength{\focus@pbar@rightoffset}{1.5em}%
        \fi%
        %
        % If not title page.
        \ifnum\value{realframenumber}>0%
            \ifnum\value{framenumber}<\inserttotalframenumber%
                \begin{tikzpicture}[inner xsep=0.5em, inner ysep=0.5ex]\usebeamerfont{footl
                    \pgfmathsetmacro{\focus@pbar@progress}%
                        {(\paperwidth-\focus@pbar@leftoffset-\focus@pbar@rightoffset)*(\ins

                    \clip (0,0) rectangle ++(\paperwidth,\the\focus@pbar@height);
\if@RTLmain
                    \fill[footline.bg] (\paperwidth,0) rectangle ++(-\the\focus@pbar@leftof
                    \fill[footline.bg] (\paperwidth-\the\focus@pbar@leftoffset,0) rectangle
                                       ++(0,{-0.5*\the\focus@pbar@height}) node[anchor=west
\else
                    \fill[footline.bg] (0,0) rectangle ++(\the\focus@pbar@leftoffset,\the\f
                    \fill[footline.bg] (\the\focus@pbar@leftoffset,0) rectangle ++(\focus@p
                                       ++(0,{-0.5*\the\focus@pbar@height}) node[anchor=east
\fi
                    \ifx\beamer@focus@totalframenumbering\no%
                    \else%
\if@RTLmain
                        \fill[footline.bg] (0,0) rectangle ++(\the\focus@pbar@rightoffset,\
                                           ++(0,{-0.5*\the\focus@pbar@height}) node[anchor=
\else
                        \fill[footline.bg] (\paperwidth,0) rectangle ++(-\the\focus@pbar@ri
                                           ++(0,{-0.5*\the\focus@pbar@height}) node[anchor=
\fi
                    \fi%
                \end{tikzpicture}%
            \else%
                \begin{tikzpicture}[inner xsep=0.5em, inner ysep=0.5ex]
                    \clip (0,0) rectangle ++(\paperwidth,\the\focus@pbar@height);
                    \fill[footline.bg] (0,0) rectangle ++(\paperwidth,\the\focus@pbar@heigh
\if@RTLmain
                    \node[anchor=west, footline.fg] at ({\the\focus@pbar@rightoffset},{0.5*
\else
                    \node[anchor=east, footline.fg] at ({\paperwidth-\the\focus@pbar@righto
\fi
                    \ifx\beamer@focus@totalframenumbering\no%
                    \else%
\if@RTLmain
                        \node[footline.fg] at ({\the\focus@pbar@rightoffset},{0.5*\focus@pb
                        \node[anchor=east, footline.fg] at ({\the\focus@pbar@rightoffset},{
\else
                        \node[footline.fg] at ({\paperwidth-\the\focus@pbar@rightoffset},{0
                        \node[anchor=west, footline.fg] at ({\paperwidth-\the\focus@pbar@ri
\fi
```

```
                    \fi%
                \end{tikzpicture}%
            \fi%
        \fi%
    \fi%
}
```

34 File beamerouterthemeinfolines-xetex-bidi.def

```
\ProvidesFile{beamerouterthemeinfolines-xetex-bidi.def}[2022/06/09 v0.2 bidi adaptations fo
\bidi@csundef{beamer@@tmpop@footline@infolines theme}

\defbeamertemplate*{footline}{infolines theme}
{%
  \leavevmode%
  \hbox{%
  \begin{beamercolorbox}[wd=.333333\paperwidth,ht=2.25ex,dp=1ex,center]{author in head/foot
    \usebeamerfont{author in head/foot}\insertshortauthor\expandafter\ifblank\expandafter{\
  \end{beamercolorbox}%
  \begin{beamercolorbox}[wd=.333333\paperwidth,ht=2.25ex,dp=1ex,center]{title in head/foot}
    \usebeamerfont{title in head/foot}\insertshorttitle
  \end{beamercolorbox}%
  \begin{beamercolorbox}[wd=.333333\paperwidth,ht=2.25ex,dp=1ex,leftskip=2ex,rightskip=2ex,
    \hfill%
    \usebeamerfont{date in head/foot}%
    \insertshortdate{}%
    \hfill%
    \bgroup
    \usebeamercolor[fg]{page number in head/foot}%
    \usebeamerfont{page number in head/foot}%
    \usebeamertemplate{page number in head/foot}%
    \egroup
  \end{beamercolorbox}}%
  \vskip0pt%
}

\bidi@csundef{beamer@@tmpop@headline@infolines theme}

\defbeamertemplate*{headline}{infolines theme}
{%
  \leavevmode%
  \hbox{%
  \if@RTL
  \begin{beamercolorbox}[wd=.5\paperwidth,ht=2.65ex,dp=1.5ex,left]{section in head/foot}%
\else
  \begin{beamercolorbox}[wd=.5\paperwidth,ht=2.65ex,dp=1.5ex,right]{section in head/foot}%
\fi
    \usebeamerfont{section in head/foot}\insertsectionhead\hspace*{2ex}
  \end{beamercolorbox}%
\if@RTL
  \begin{beamercolorbox}[wd=.5\paperwidth,ht=2.65ex,dp=1.5ex,right]{subsection in head/foot
\else
```

```
  \begin{beamercolorbox}[wd=.5\paperwidth,ht=2.65ex,dp=1.5ex,left]{subsection in head/foot}
\fi
    \usebeamerfont{subsection in head/foot}\hspace*{2ex}\insertsubsectionhead
  \end{beamercolorbox}}%
  \vskip0pt%
}

\bidi@AfterFile{beamerouterthemesplit-xetex-bidi.def}{%
  \setbeamertemplate{footline}[infolines theme]%
}

```

35 File beamerouterthememetropolis-xetex-bidi.def

```
\ProvidesFile{beamerouterthememetropolis-xetex-bidi.def}[2022/06/13 v0.1 bidi adaptations f
\setbeamertemplate{progress bar in head/foot}{
  \nointerlineskip
  \setlength{\metropolis@progressinheadfoot}{%
    \paperwidth * \ratio{\insertframenumber pt}{\inserttotalframenumber pt}%
  }%
  \begin{beamercolorbox}[wd=\paperwidth]{progress bar in head/foot}
    \begin{tikzpicture}
      \fill[bg] (0,0) rectangle (\paperwidth, \metropolis@progressinheadfoot@linewidth);
\if@RTLmain
      \fill[fg] (\paperwidth-\metropolis@progressinheadfoot,0) rectangle (\paperwidth, \met
\else
      \fill[fg] (0,0) rectangle (\metropolis@progressinheadfoot, \metropolis@progressinhead
\fi
    \end{tikzpicture}%
  \end{beamercolorbox}
}

\AtBeginDocument{%
  \setbeamertemplate{frametitle}[plain]%
}


```

36 File beamerouterthemememiniframes-xetex-bidi.def

```
\ProvidesFile{beamerouterthemememiniframes-xetex-bidi.def}[2022/06/09 v0.1 bidi adaptations f
\bidi@csundef{beamer@@tmpop@headline@miniframes theme}

\defbeamertemplate*{headline}{miniframes theme}
{%
  \begin{beamercolorbox}[colsep=1.5pt]{upper separation line head}
  \end{beamercolorbox}
  \begin{beamercolorbox}{section in head/foot}
    \vskip2pt\if@RTL\beginR\fi\insertnavigation{\paperwidth}\if@RTL\endR\fi\vskip2pt
  \end{beamercolorbox}%
  \ifbeamer@theme@subsection%
    \begin{beamercolorbox}[colsep=1.5pt]{middle separation line head}
    \end{beamercolorbox}
    \if@RTL
```

```
    \begin{beamercolorbox}[ht=2.5ex,dp=1.125ex,%
      rightskip=.3cm,leftskip=.3cm plus1fil]{subsection in head/foot}
    \else
    \begin{beamercolorbox}[ht=2.5ex,dp=1.125ex,%
      leftskip=.3cm,rightskip=.3cm plus1fil]{subsection in head/foot}
    \fi
      \usebeamerfont{subsection in head/foot}\insertsubsectionhead
    \end{beamercolorbox}%
  \fi%
  \begin{beamercolorbox}[colsep=1.5pt]{lower separation line head}
  \end{beamercolorbox}
}


```

37 File beamerouterthemesidebar-xetex-bidi.def

```
\ProvidesFile{beamerouterthemesidebar-xetex-bidi.def}[2022/06/07 v0.2 bidi adaptations for
\bidi@csundef{beamer@@tmpop@frametitle@sidebar theme}

\bidi@csundef{beamer@@tmpop@headline@sidebar theme}

\bidi@csundef{beamer@@tmpop@sidebar left@sidebar theme}

\bidi@csundef{beamer@@tmpop@sidebar right@sidebar theme}

\ifdim\beamer@headheight>0pt

  \defbeamertemplate*{frametitle}{sidebar theme}
  {%
    \nointerlineskip%
    \ifbeamer@plainframe%
      \hbox{\usebeamercolor[bg]{frametitle}%
        \@tempdima\paperwidth\advance\@tempdima-\beamer@sidebarwidth
        \hskip-\beamer@leftmargin\vrule height\beamer@headheight width\@tempdima\hskip-\bea
      \nointerlineskip%
    \fi%
    \vskip-\beamer@headheight%
    \vbox to \beamer@headheight{%
      \vfil
      \bidi@beamer@leftskip=-\beamer@leftmargin%
      \advance\bidi@beamer@leftskip by0.3cm%
      \bidi@beamer@rightskip=-\beamer@rightmargin%
      \advance\bidi@beamer@rightskip by0.3cm plus1fil%
      {\usebeamercolor[fg]{frametitle}\usebeamerfont{frametitle}\strut\insertframetitle\par
      \ifx\insertframesubtitle\@empty\else%
        {\usebeamercolor[fg]{framesubtitle}\usebeamerfont{framesubtitle}\strut\insertframes
      \fi%
      \vbox{}%
      \vskip-1em%
      \vfil
    }%
  }

```

```
\AtBeginDocument{%
  \setbeamertemplate{frametitle}[sidebar theme]%
}

  \defbeamertemplate*{headline}{sidebar theme}
  {%
    \begin{beamercolorbox}[wd=\paperwidth]{frametitle}
      \ifx\beamer@sidebarside\beamer@lefttext%
      \else%
        \hfill%
      \fi%
      \ifdim\beamer@sidebarwidth>0pt%
        \bgroup
        \usebeamercolor[bg]{logo}%
        \if@RTLmain
        \else
          \vrule width\beamer@sidebarwidth height \beamer@headheight%
          \hskip-\beamer@sidebarwidth%
        \fi
        \hbox to \beamer@sidebarwidth{\hss\vbox to
          \beamer@headheight{\vss\hbox{{\color{fg}\insertlogo}}\vss}\hss}%
          \if@RTLmain
            \hskip-\beamer@sidebarwidth%
            \vrule width\beamer@sidebarwidth height \beamer@headheight%
          \fi
          \egroup
      \else%
        \vrule width0pt height \beamer@headheight%
      \fi%
    \end{beamercolorbox}
  }
\fi

\def\beamer@sidebarformat#1#2#3{%
\if@RTL
  \begin{beamercolorbox}[wd=\beamer@sidebarwidth,rightskip=#1,leftskip=1ex plus1fil,vmode]{
\else
  \begin{beamercolorbox}[wd=\beamer@sidebarwidth,leftskip=#1,rightskip=1ex plus1fil,vmode]{
 \fi
    \vbox{}%
    #3\par%
    \vbox{}%
    \vskip-1.5ex%
  \end{beamercolorbox}
}

\ifdim\beamer@sidebarwidth>0pt

\AtBeginDocument{%
  \setbeamersize{sidebar width \beamer@sidebarside=\beamer@sidebarwidth}%
}

  \defbeamertemplate*{sidebar \beamer@sidebarside}{sidebar theme}
  {
```

```
    \beamer@tempdim=\beamer@sidebarwidth%
    \advance\beamer@tempdim by -6pt%
    {\usebeamerfont{title in sidebar}%
      \vskip1.5em%
      \hskip3pt%
      \bgroup
      \usebeamercolor[fg]{title in sidebar}%
      \insertshorttitle[width=\beamer@tempdim,center,respectlinebreaks]\egroup\par%
      \vskip1.25em%
    }%
    {%
      \hskip3pt%
      \bgroup
      \usebeamercolor[fg]{author in sidebar}%
      \usebeamerfont{author in sidebar}%
      \insertshortauthor[width=\beamer@tempdim,center,respectlinebreaks]\egroup\par%
      \vskip1.25em%
    }%
    \insertverticalnavigation{\beamer@sidebarwidth}%
    \vfill
    \ifx\beamer@sidebarside\beamer@lefttext%
    \else%
      \usebeamercolor{normal text}%
      \llap{\usebeamertemplate***{navigation symbols}\hskip0.1cm}%
      \vskip2pt%
    \fi%
  }%
\fi
```

38 File beamerouterthemesplit-xetex-bidi.def

```
\ProvidesFile{beamerouterthemesplit-xetex-bidi.def}[2022/06/09 v0.2 bidi adaptations for be
\bidi@csundef{beamer@@tmpop@footline@split theme}

\defbeamertemplate*{footline}{split theme}
{%
  \leavevmode%
  \hbox{\if@RTL\begin{beamercolorbox}[wd=.5\paperwidth,ht=2.5ex,dp=1.125ex,rightskip=.3cm p
\else
\begin{beamercolorbox}[wd=.5\paperwidth,ht=2.5ex,dp=1.125ex,leftskip=.3cm plus1fill,rightsk
\fi
    \usebeamerfont{author in head/foot}\insertshortauthor
  \end{beamercolorbox}%
 \if@RTL
   \begin{beamercolorbox}[wd=.5\paperwidth,ht=2.5ex,dp=1.125ex,rightskip=.3cm,leftskip=.3cm
\else
  \begin{beamercolorbox}[wd=.5\paperwidth,ht=2.5ex,dp=1.125ex,leftskip=.3cm,rightskip=.3cm
\fi
    \usebeamerfont{title in head/foot}\insertshorttitle\nobreak\hfill\bgroup\usebeamercolor
  \end{beamercolorbox}}%
  \vskip0pt%
}
```

39 File beamerouterthemeshadow-xetex-bidi.def

```
\ProvidesFile{beamerouterthemeshadow-xetex-bidi.def}[2022/06/11 v0.3 bidi adaptations for b
\pgfdeclarehorizontalshading[frametitle.bg,frametitle right.bg]{bidi@beamer@RTL@frametitles
  color(0pt)=(frametitle right.bg);
  color(\paperwidth)=(frametitle.bg)
}

\newcommand*{\bidi@beamer@frametitleshade}{%
  \if@RTLmain
    \pgfuseshading{bidi@beamer@RTL@frametitleshade}%
  \else
    \pgfuseshading{beamer@frametitleshade}%
  \fi
}

\bidi@csundef{beamer@@tmpop@frametitle@shadow theme}

\defbeamertemplate*{frametitle}{shadow theme}
{%
  \nointerlineskip%
  \vskip-2pt%
  \hbox{\leavevmode
    \advance\beamer@leftmargin by -12bp%
    \advance\beamer@rightmargin by -12bp%
    \beamer@tempdim=\textwidth%
    \advance\beamer@tempdim by \beamer@leftmargin%
    \advance\beamer@tempdim by \beamer@rightmargin%
    \hskip-\Gm@lmargin\hbox{%
      \setbox\beamer@tempbox=\hbox{\begin{minipage}[b]{\paperwidth}%
          \vbox{}\vskip-.75ex%
          \bidi@beamer@leftskip0.3cm%
          \bidi@beamer@rightskip0.3cm plus1fil\leavevmode
          \bgroup\usebeamercolor[fg]{frametitle}\usebeamerfont{frametitle}\strut\insertfram
          \ifx\insertframesubtitle\@empty\else%
            {\usebeamerfont*{framesubtitle}{\usebeamercolor[fg]{framesubtitle}\insertframes
          \fi%
          \nointerlineskip
          \vbox{}%
          \end{minipage}}%
      \beamer@tempdim=\ht\beamer@tempbox%
      \advance\beamer@tempdim by 2pt%
      \begin{pgfpicture}{0pt}{0pt}{\paperwidth}{\beamer@tempdim}
        \begin{pgfscope}
          \pgfsetfillcolor{black}%
          \pgfpathrectangle{\pgfpoint{0pt}{-4pt}}{\pgfpoint{\paperwidth}{8pt}}%
          \pgfsetfading{beamer@topshadowmask}{}%
          \pgfusepath{fill}%
        \end{pgfscope}
        \begin{pgfscope}
          \usebeamercolor{frametitle right}%
          \pgfpathrectangle{\pgfpointorigin}{\pgfpoint{\paperwidth}{\beamer@tempdim}}%
```

```
          \pgfusepath{clip}%
          \pgftext[left,base]{\bidi@beamer@frametitleshade}%
        \end{pgfscope}
      \end{pgfpicture}
      \hskip-\paperwidth%
      \box\beamer@tempbox%
    }%
    \hskip-\Gm@rmargin%
  }%
  \vskip-2pt
}

\AtBeginDocument{%
  \setbeamertemplate{frametitle}[shadow theme]%
}
```

40 File beamerouterthemesmoothbars-xetex-bidi.def

```
\ProvidesFile{beamerouterthemesmoothbars-xetex-bidi.def}[2022/06/09 v0.1 bidi adaptations f
\bidi@csundef{beamer@@tmpop@headline@smoothbars theme}

\bidi@csundef{beamer@@tmpop@frametitle@smoothbars theme}

\defbeamertemplate*{headline}{smoothbars theme}
{%
  \pgfuseshading{beamer@barshade}%
  \vskip-0.05ex%
  \begin{beamercolorbox}[wd=\paperwidth,ht=1ex,dp=0ex]{empty}
  \begin{pgfpicture}
    \begin{pgfscope}%
      \ifbeamer@sb@subsection%
        \pgfsetfillcolor{subsection in head/foot.bg}%
      \else%
        \pgfsetfillcolor{section in head/foot.bg}%
      \fi%
      \pgfpathrectangle{\pgfpoint{-.5\paperwidth}{-0.5ex}}{\pgfpoint{\paperwidth}{1ex}}%
      \pgfsetfading{beamer@belowframetitlemask}{}%
      \pgfusepath{fill}%
    \end{pgfscope}%
  \end{pgfpicture}%
  \end{beamercolorbox}%
  \ifbeamer@sb@subsection%
    \vskip-9.75ex%
  \else%
    \vskip-6.85ex%
  \fi%
  \begin{beamercolorbox}[ignorebg,ht=2.25ex,dp=3.75ex]{section in head/foot}
    \insertnavigation{\paperwidth}
  \end{beamercolorbox}%
  \ifbeamer@sb@subsection%
  \if@RTL
      \begin{beamercolorbox}[ignorebg,ht=2.125ex,dp=1.125ex,%
```

```
      rightskip=.3cm,leftskip=.3cm plus1fil]{subsection in head/foot}
    \else
    \begin{beamercolorbox}[ignorebg,ht=2.125ex,dp=1.125ex,%
      leftskip=.3cm,rightskip=.3cm plus1fil]{subsection in head/foot}
    \fi
      \usebeamerfont{subsection in head/foot}\insertsubsectionhead
    \end{beamercolorbox}%
  \fi%
}%

\defbeamertemplate*{frametitle}{smoothbars theme}
{%
  \nointerlineskip%
  \vskip-0.19ex%
  \usebeamerfont{headline}%
  \begin{beamercolorbox}[wd=\paperwidth,ht=1ex,dp=1ex,vmode]{empty}
    \pgfuseshading{beamer@aboveframetitle}%
  \end{beamercolorbox}%
  \vskip-1ex%
  \nointerlineskip%
  \if@RTL
  \begin{beamercolorbox}[wd=\paperwidth,rightskip=.3cm,leftskip=.3cm plus1fil,vmode]{framet
  \else
  \begin{beamercolorbox}[wd=\paperwidth,leftskip=.3cm,rightskip=.3cm plus1fil,vmode]{framet
  \fi
    \vskip0.5ex%
    \usebeamerfont*{frametitle}\strut\insertframetitle%
      \ifx\insertframesubtitle\@empty%
        \strut\par%
      \else
        \par{\usebeamerfont*{framesubtitle}{\usebeamercolor[fg]{framesubtitle}\strut\insert
      \fi%%
    \usebeamerfont{headline}%
    \vskip0.05ex%
  \end{beamercolorbox}%
  \nointerlineskip%
  \vskip-0.05ex%
  \begin{beamercolorbox}[wd=\paperwidth,ht=1ex,dp=0ex]{empty}
  \begin{pgfpicture}
    \begin{pgfscope}%
      \pgfsetfillcolor{frametitle.bg}%
      \pgfpathrectangle{\pgfpoint{-.5\paperwidth}{-.5ex}}{\pgfpoint{\paperwidth}{1ex}}%
      \pgfsetfading{beamer@belowframetitlemask}{}%
      \pgfusepath{fill}%
    \end{pgfscope}%
  \end{pgfpicture}%
  \end{beamercolorbox}%
}

\AtBeginDocument{%
  \setbeamertemplate{frametitle}[smoothbars theme]%
}
```

41 File beamerouterthemesmoothtree-xetex-bidi.def

```
\ProvidesFile{beamerouterthemesmoothtree-xetex-bidi.def}[2022/06/09 v0.1 bidi adaptations f
\bidi@csundef{beamer@@tmpop@headline@smoothtree theme}

\bidi@csundef{beamer@@tmpop@frametitle@smoothtree theme}

\defbeamertemplate*{headline}{smoothtree theme}
{%
  \pgfuseshading{beamer@treeshade}%
  \vskip-0.05ex%
  \begin{beamercolorbox}[wd=\paperwidth,ht=1ex,dp=0ex]{empty}
  \begin{pgfpicture}
    \begin{pgfscope}%
      \pgfsetfillcolor{subsection in head/foot.bg}%
      \pgfpathrectangle{\pgfpoint{-.5\paperwidth}{-0.5ex}}{\pgfpoint{\paperwidth}{1ex}}%
      \pgfsetfading{beamer@belowframetitlemask}{}%
      \pgfusepath{fill}%
    \end{pgfscope}%
  \end{pgfpicture}%
  \end{beamercolorbox}%
  \vskip-9.15ex%
  \if@RTL
  \begin{beamercolorbox}[wd=\paperwidth,ht=1.125ex,dp=1.125ex,ignorebg,%
    rightskip=.3cm,leftskip=.3cm plus1fil]{title in head/foot}
  \else
  \begin{beamercolorbox}[wd=\paperwidth,ht=1.125ex,dp=1.125ex,ignorebg,%
    leftskip=.3cm,rightskip=.3cm plus1fil]{title in head/foot}
    \fi
    \usebeamerfont{title in head/foot}\insertshorttitle
  \end{beamercolorbox}
  \if@RTL
    \begin{beamercolorbox}[wd=\paperwidth,ht=2.125ex,dp=1.125ex,ignorebg,%
    rightskip=.3cm,leftskip=.3cm plus1fil]{section in head/foot}
  \else
  \begin{beamercolorbox}[wd=\paperwidth,ht=2.125ex,dp=1.125ex,ignorebg,%
    leftskip=.3cm,rightskip=.3cm plus1fil]{section in head/foot}
    \fi
    \usebeamerfont{section in head/foot}%
    \hskip6pt\insertsectionhead
  \end{beamercolorbox}
  \if@RTL
  \begin{beamercolorbox}[wd=\paperwidth,ht=2.125ex,dp=1.125ex,ignorebg,%
      rightskip=.3cm,leftskip=.3cm plus1fil]{subsection in head/foot}
  \else
  \begin{beamercolorbox}[wd=\paperwidth,ht=2.125ex,dp=1.125ex,ignorebg,%
      leftskip=.3cm,rightskip=.3cm plus1fil]{subsection in head/foot}
    \fi
    \usebeamerfont{subsection in head/foot}%
    \hskip12pt\insertsubsectionhead
  \end{beamercolorbox}
  \vskip-0.4ex%
}

```

```
\defbeamertemplate*{frametitle}{smoothtree theme}
{%
  \nointerlineskip%
  \vskip-0.05ex%
  \usebeamerfont{headline}%
  \begin{beamercolorbox}[wd=\paperwidth,ht=0.85ex,dp=0ex]{empty}
    \pgfuseshading{beamer@aboveframetitle}%
  \end{beamercolorbox}
  \nointerlineskip%
  \if@RTL
  \begin{beamercolorbox}[wd=\paperwidth,rightskip=.935cm,leftskip=.3cm plus1fil]{frametitle
 \else
  \begin{beamercolorbox}[wd=\paperwidth,leftskip=.935cm,rightskip=.3cm plus1fil]{frametitle
  \fi
    \vskip-1.2ex%
    \usebeamerfont*{frametitle}\strut\insertframetitle%
      \ifx\insertframesubtitle\@empty%
        \strut\par%
      \else
        \par{\usebeamerfont*{framesubtitle}{\usebeamercolor[fg]{framesubtitle}\strut\insert
      \fi%%
    \usebeamerfont{headline}%
  \end{beamercolorbox}%
  \nointerlineskip
  \vskip-0.2ex%
  \begin{beamercolorbox}[wd=\paperwidth,ht=1ex,dp=0ex]{empty}
  \begin{pgfpicture}
    \begin{pgfscope}%
      \pgfsetfillcolor{frametitle.bg}%
      \pgfpathrectangle{\pgfpoint{-.5\paperwidth}{-0.5ex}}{\pgfpoint{\paperwidth}{1ex}}%
      \pgfsetfading{beamer@belowframetitlemask}{}%
      \pgfusepath{fill}%
    \end{pgfscope}%
  \end{pgfpicture}%
  \end{beamercolorbox}%
}


\AtBeginDocument{%
  \setbeamertemplate{frametitle}[smoothtree theme]%
}


```

42 File beamerouterthemetree-xetex-bidi.def

```
\ProvidesFile{beamerouterthemetree-xetex-bidi.def}[2022/06/09 v0.1 bidi adaptations for bea
\bidi@csundef{beamer@@tmpop@headline@tree theme}

\defbeamertemplate*{headline}{tree theme}
{%
    \begin{beamercolorbox}[wd=\paperwidth,colsep=1.5pt]{upper separation line head}
    \end{beamercolorbox}
    \if@RTL
```

```
    \begin{beamercolorbox}[wd=\paperwidth,ht=2.5ex,dp=1.125ex,%
      rightskip=.3cm,leftskip=.3cm plus1fil]{title in head/foot}
    \else
    \begin{beamercolorbox}[wd=\paperwidth,ht=2.5ex,dp=1.125ex,%
      leftskip=.3cm,rightskip=.3cm plus1fil]{title in head/foot}
    \fi
      \usebeamerfont{title in head/foot}\insertshorttitle
    \end{beamercolorbox}
    \if@RTL
    \begin{beamercolorbox}[wd=\paperwidth,ht=2.5ex,dp=1.125ex,%
      rightskip=.3cm,leftskip=.3cm plus1fil]{section in head/foot}
    \else
    \begin{beamercolorbox}[wd=\paperwidth,ht=2.5ex,dp=1.125ex,%
      leftskip=.3cm,rightskip=.3cm plus1fil]{section in head/foot}
    \fi
      \usebeamerfont{section in head/foot}%
      \ifbeamer@tree@showhooks
        \setbox\beamer@tempbox=\hbox{\insertsectionhead}%
        \ifdim\wd\beamer@tempbox>1pt%
          \hskip2pt\raise1.9pt\hbox{\vrule width0.4pt height1.875ex\vrule width 5pt height0
          \hskip1pt%
        \fi%
      \else%
        \hskip6pt%
      \fi%
      \insertsectionhead
    \end{beamercolorbox}
    \if@RTL
    \begin{beamercolorbox}[wd=\paperwidth,ht=2.5ex,dp=1.125ex,%
      rightskip=.3cm,leftskip=.3cm plus1fil]{subsection in head/foot}
    \else
    \begin{beamercolorbox}[wd=\paperwidth,ht=2.5ex,dp=1.125ex,%
      leftskip=.3cm,rightskip=.3cm plus1fil]{subsection in head/foot}
    \fi
      \usebeamerfont{subsection in head/foot}%
      \ifbeamer@tree@showhooks
        \setbox\beamer@tempbox=\hbox{\insertsubsectionhead}%
        \ifdim\wd\beamer@tempbox>1pt%
          \hskip9.4pt\raise1.9pt\hbox{\vrule width0.4pt height1.875ex\vrule width 5pt heigh
          \hskip1pt%
        \fi%
      \else%
        \hskip12pt%
      \fi%
      \insertsubsectionhead
    \end{beamercolorbox}
    \begin{beamercolorbox}[wd=\paperwidth,colsep=1.5pt]{lower separation line head}
    \end{beamercolorbox}
}
```

43 File beamerthemeHannover-xetex-bidi.def

```
\ProvidesFile{beamerthemeHannover-xetex-bidi.def}[2022/06/07 v0.1 bidi adaptations for beam
\AtBeginDocument{%
  \if@RTLmain
    \setbeamertemplate{frametitle}[default][left]%
  \else
    \setbeamertemplate{frametitle}[default][right]%
  \fi
}
```

44 File beamerthemeSingapore-xetex-bidi.def

```
\ProvidesFile{beamerthemeSingapore-xetex-bidi.def}[2022/06/09 v0.1 bidi adaptations for bea
\addtoheadtemplate{\pgfuseshading{beamer@headfade}\vskip-1.25cm}{}

\beamertemplatedotitem

\AtBeginDocument{%
  \setbeamertemplate{frametitle}[default][center]%
}
```

45 File bidi.sty

```
\NeedsTeXFormat{LaTeX2e}
\def\bididate{2025/09/22}
\def\bidi@version{25.09.22}
\def\bidi@releasename{Iran}
\newcommand*{\bidireleasename}{\bidi@releasename}
\ProvidesPackage{bidi}[\bididate\space v\bidi@version\space (Release \bidi@releasename)\spa
Bidirectional typesetting in plain TeX and LaTeX]
\newif\if@bidi@banner
\newif\if@bidi@pdfbanner
\newif\iffootdir@debug
\newif\if@extrafootnotefeatures
\newif\if@nonlatin
\newif\if@bidi@pdfm@mark
\newif\if@bidi@perpage@footnote
\ExplSyntaxOn
\msg_new:nnn {bidi} {cannot-use-engine}
  {
    Oops!~can~not~use~\c_sys_engine_str.\\\\
    The~bidi~package~requires~XeTeX.
  }
 \sys_if_engine_xetex:F
  {
    \msg_fatal:nn {bidi} {cannot-use-engine}
  }

\keys_define:nn { bidi }
  {
    banner .choice: ,
```

```
    banner / on .code:n = \@bidi@bannertrue ,
    banner / off .code:n = \@bidi@bannerfalse ,
    banner .default:n = on
  }
\keys_define:nn { bidi }
  {
    PDFbanner .choice: ,
    PDFbanner / on .code:n = \@bidi@pdfbannertrue ,
    PDFbanner / off .code:n = \@bidi@pdfbannerfalse ,
    PDFbanner .default:n = on
  }
\keys_define:nn { bidi }
  {
    RTLdocument .choice: ,
    RTLdocument / on .code:n = \AtEndOfPackage{\@RTLtrue} ,
    RTLdocument / off .code:n = \AtEndOfPackage{\@RTLfalse} ,
    RTLdocument .default:n = on
  }
\keys_define:nn { bidi }
  {
    rldocument .choice: ,
    rldocument / on .code:n = \AtEndOfPackage{\@RTLtrue} ,
    rldocument / off .code:n = \AtEndOfPackage{\@RTLfalse} ,
    rldocument .default:n = on
  }
\keys_define:nn { bidi }
  {
    documentdirection .choice: ,
    documentdirection / righttoleft .code:n = \AtEndOfPackage{\@RTLtrue} ,
    documentdirection / lefttoright .code:n = \AtEndOfPackage{\@RTLfalse}
  }
\keys_define:nn { bidi }
  {
    tabledirection .choice: ,
    tabledirection / righttoleft .code:n = \AtEndOfPackage{\@RTLtabtrue} ,
    tabledirection / lefttoright .code:n = \AtEndOfPackage{\@RTLtabfalse}
  }
\keys_define:nn { bidi }
  {
    footnotedirection .choice: ,
    footnotedirection / righttoleft .code:n = \AtEndOfPackage{\@RTL@footnotetrue} ,
    footnotedirection / lefttoright .code:n = \AtEndOfPackage{\@RTL@footnotefalse}
  }
\keys_define:nn { bidi }
  {
    debugfootnotedirection .choice: ,
    debugfootnotedirection / on .code:n = \footdir@debugtrue ,
    debugfootnotedirection / off .code:n = \footdir@debugfalse ,
    debugfootnotedirection .default:n = on
  }
\keys_define:nn { bidi }
  {
    footnoterule .choice: ,
    footnoterule / automatic .code:n = \AtEndOfPackage{\autofootnoterule} ,
```

```
    footnoterule / left .code:n = \AtEndOfPackage{\leftfootnoterule} ,
    footnoterule / right .code:n = \AtEndOfPackage{\rightfootnoterule} ,
    footnoterule / split .code:n = \AtEndOfPackage{\SplitFootnoteRule} ,
    footnoterule / textwidth .code:n = \AtEndOfPackage{\textwidthfootnoterule}
  }
\keys_define:nn { bidi }
  {
    extrafootnotefeatures .choice: ,
    extrafootnotefeatures / on .code:n = \@extrafootnotefeaturestrue ,
    extrafootnotefeatures / off .code:n = \@extrafootnotefeaturesfalse ,
    extrafootnotefeatures .default:n = on
  }
\keys_define:nn { bidi }
  {
    script .choice: ,
    script / latin .code:n = \@nonlatinfalse ,
    script / nonlatin .code:n = \@nonlatintrue ,
    script .default:n = latin
  }
\keys_define:nn { bidi }
  {
    DetectColumn .choice: ,
    DetectColumn / on .code:n =
      \def\bidi@firstcolumn@status@write{%
        \protected@write\@auxout{}%
          {\string\bidi@column@status
            {1}}}
      \def\bidi@lastcolumn@status@write{%
        \protected@write\@auxout{}%
          {\string\bidi@column@status{2}}} ,
    DetectColumn / off .code:n =
       \let\bidi@firstcolumn@status@write\relax
       \let\bidi@lastcolumn@status@write\relax ,
    DetectColumn .default:n = on
  }
\keys_define:nn { bidi }
  {
    logo .choice: ,
    logo / on .code:n = \AtEndOfPackage{\AtBeginDocument{\@bidi@inslogo@}} ,
    logo / off .code:n = \AtEndOfPackage{\let\@bidi@logo@\@empty \let\@bidi@inslogo@\@empty
    logo .default:n = on
  }
\keys_define:nn { bidi }
  {
    pdfinfo .choice: ,
    pdfinfo / on .code:n = \@bidi@pdfm@marktrue ,
    pdfinfo / off .code:n = \@bidi@pdfm@markfalse ,
    pdfinfo .default:n = on
  }
% The `perpagefootnote' option is documented in UK TeX FAQ at
%  <https://texfaq.org/FAQ-footnpp> (see last paragraph)
\keys_define:nn { bidi }
  {
    perpagefootnote .choice: ,
```

```
    perpagefootnote / on .code:n = \@bidi@perpage@footnotetrue ,
    perpagefootnote / off .code:n = \@bidi@perpage@footnotefalse ,
    perpagefootnote .default:n = on
  }
\keys_set:nn { bidi }
  {
    banner = on ,
    PDFbanner = on ,
    DetectColumn = off

  }
\ExplSyntaxOff
\ProcessKeyOptions
\edef\@bidi@info{**************************************************^^J%
* ^^J%
* bidi package (Bidirectional typesetting with^^J%
* plain TeX and LaTeX formats in XeTeX and LuaTeX engines)^^J%
* ^^J%
* Description: A convenient interface for^^J%
* typesetting bidirectional texts in plain TeX^^J%
* and LaTeX.  The package includes adaptations^^J%
* for use with many other commonly-used packages.^^J%
* ^^J%
* Copyright (c) 2007--2025 Vafa Khalighi^^J%
* Copyright (c) 2018--2020 bidi-tex GitHub organization^^J%
* ^^J%
* v\bidi@version\space (Release \bidi@releasename), \bididate^^J%
* ^^J%
* License: LaTeX Project Public License, version^^J%
* 1.3c or higher (your choice)^^J%
* ^^J%
* Location on CTAN: /macros/unicodetex/generic/bidi^^J%
* ^^J%
* Issue tracker: https://github.com/xepersian/bidi/issues^^J%
* ^^J%
* Primary author of bidi package: Vafa Khalighi.^^J%
* ^^J%
**************************************************}
\edef\bidi@everyjob{\the\everyjob}
\if@bidi@banner
  \typeout{\@bidi@info}
  \everyjob{\bidi@everyjob\typeout{\@bidi@info}}
\fi
\newcommand*{\bidiversion}{\ensuremath\bidi@version}
\RequirePackage{biditools}
\RequirePackage{zref-abspage}
\RequirePackage{auxhook}
\RequirePackage{ltxcmds}
\eqnewif{\if@RTLmain}{\if@rlmain}
\eqnewif{\if@RTL}{\if@rl}
\newcommand*{\setlatin}{\@nonlatinfalse}
\newcommand*{\setnonlatin}{\@nonlatintrue}
\eqnewif{\if@RTLtab}{\if@tab@rl}
\newif\if@hboxRconstruct
```

```
\newif\if@bidi@pdfencrypt
\newcommand*{\setRTLtable}{\@RTLtabtrue}
\newcommand*{\setLTRtable}{\@RTLtabfalse}
\newif\if@RTLmarginpar
\newif\if@LTRmarginpar
\newif\if@LTRbibitems
\newif\if@RTLbibitems
\eqnewif{\if@RTL@footnote}{\if@rl@footnote}
\newif\if@bidi@list@minipage@parbox
\newif\if@bidi@list@minipage@parbox@not@nob
\newcommand*{\@bidi@pdfcreator}{%
  The bidi package, v\bidi@version\space (Release \bidi@releasename), \bididate
}
\newcommand*{\@bidi@pdfproducer}{%
  The bidi package, v\bidi@version\space (Release \bidi@releasename), \bididate
}
\newcommand*{\@bidi@pdfcustomproperties}{%
  This is the bidi package, Version \bidi@version\space (Release \bidi@releasename),
  Released September 22, 2025.
}
\newcommand*{\bidi@beamer@ragged}{}
\@RTLmainfalse
\AtBeginDocument{%
  \if@RTLmain\else
    \if@RTL\@RTLmaintrue%
    \else\@RTLmainfalse%
    \fi%
  \fi%
}
\let\n@xt=\
\bidi@newrobustcmd*{\LRE}{\protect\pLRE}%
\def\pLRE{\protect\afterassignment\moreLRE \let\n@xt= }
\bidi@newrobustcmd*{\RLE}{\protect\pRLE}
\def\pRLE{\protect\afterassignment\moreRLE \let\n@xt= }
\def\bracetext{\ifcat\n@xt{\else\ifcat\n@xt}\fi
  \errmessage{Missing left brace has been substituted}\fi \bgroup}
\newinsert\@bidi@copyins@
\skip\@bidi@copyins@=12\p@
\dimen\@bidi@copyins@=40pc
\count\@bidi@copyins@=1000
\newcommand*{\@bidi@inslogo@}{\insert\@bidi@copyins@{\@bidi@logo@}}
\newcommand*{\@bidi@logo@hb@xt@columnwidth}{%
  \if@RTLmain
    \if@twocolumn
      \hboxR to \columnwidth
    \else
      \hboxR to \textwidth
    \fi
  \else
    \if@twocolumn
      \hboxL to \columnwidth
    \else
      \hboxL to \textwidth
    \fi
```

```
  \fi
}
\newcommand*{\@bidi@logo}[1]{%
  \toks@{%
    \setbox\z@\hbox{%
      \special{%
        pdf:image width 50pt height 50pt (#1)%
      }
    }%
    \dp\z@\z@
    \ht\z@=50pt
    \wd\z@=50pt
    \beginL
      \lower20pt\box\z@
    \endL
  }%
  \the\toks@
}
\newcount\bidi@typesethour
\newcount\bidi@typesetminute
\bidi@typesethour=\time
\divide\bidi@typesethour 60
\bidi@typesetminute=-\bidi@typesethour
\multiply\bidi@typesetminute 60
\advance\bidi@typesetminute \time
\newcommand*{\TypesetHour}{\two@digits\bidi@typesethour}
\newcommand*{\TypesetMinute}{\two@digits\bidi@typesetminute}
\newcommand*{\TypesetTime}{\TypesetHour:\TypesetMinute}
\newcommand*{\@bidi@logo@}{%
  \@bidi@logo@hb@xt@columnwidth
    {\hss\LRE{\bfseries Typeset {\today} at {\TypesetTime} by the \textsf{bidi}
    package\quad\@bidi@logo{bidi-logo.pdf}}}}
\ExplSyntaxOn
\keys_define:nn { bidi / pdfencrypt }
  {
    userpassword .code:n = \def\bidi@pdfencrypt@userpassword{#1} ,
    userpassword .default:n =
  }
\keys_define:nn { bidi / pdfencrypt }
  {
    ownerpassword .code:n = \def\bidi@pdfencrypt@ownerpassword{#1} ,
    ownerpassword .default:n =
  }
\keys_define:nn { bidi / pdfencrypt }
  {
    keylength .code:n = \def\bidi@pdfencrypt@keylength{#1} ,
    keylength .default:n = 128
  }
\keys_define:nn { bidi / pdfencrypt }
  {
    permissionflags .code:n = \def\bidi@pdfencrypt@permissionflags{#1} ,
    permissionflags .default:n = 2052
  }
\NewDocumentCommand \pdfencryptsetup {m} { \keys_set:nn { bidi / pdfencrypt } {#1} }
```

```
\ExplSyntaxOff
\@onlypreamble\pdfencryptsetup
\input{latex-xetex-bidi.def}

\pdfencryptsetup{%
  userpassword,%
  ownerpassword,%
  keylength,%
  permissionflags%
}

\if@extrafootnotefeatures
  \input{extrafootnotefeatures-xetex-bidi.def}
\fi
\newcount\bidi@digits
\XeTeXinterchartokenstate=\@ne
\newXeTeXintercharclass\bidi@digits@charclass
\newXeTeXintercharclass\bidi@sepmark@charclass
\XeTeXcharclass `\. \bidi@sepmark@charclass
\XeTeXcharclass `\- \bidi@sepmark@charclass
\bidi@digits=`\0 \loop \XeTeXcharclass \bidi@digits \bidi@digits@charclass \ifnum\bidi@digi
\bidi@digits=`\  \loop \XeTeXcharclass \bidi@digits \bidi@digits@charclass \ifnum\bidi@digit
\bidi@digits=`\  \loop \XeTeXcharclass \bidi@digits \bidi@digits@charclass \ifnum\bidi@digit
\XeTeXinterchartoks \bidi@sepmark@charclass  \bidi@digits@charclass = {\DigitsDotDashInterC
\newcommand*{\DigitsDotDashInterCharToks}{\if@nonlatin\char"200F \fi}
\bidi@AtEndPreamble{%
  \if@bidi@perpage@footnote
    \RequirePackage{bidi-perpage}%
    \ResetCounterPerPage{footnote}%
  \fi
  \ifx\bidi@pdfencrypt@ownerpassword\bidi@empty
    \ifx\bidi@pdfencrypt@userpassword\bidi@empty
      \@bidi@pdfencryptfalse
    \else
      \@bidi@pdfencrypttrue
    \fi
  \else
    \@bidi@pdfencrypttrue
  \fi
  \if@bidi@pdfencrypt
    \special{pdf:encrypt
      userpw (\bidi@pdfencrypt@userpassword)
      ownerpw (\bidi@pdfencrypt@ownerpassword)
      length \bidi@pdfencrypt@keylength
      perm \bidi@pdfencrypt@permissionflags
    }%
  \fi
}
\if@bidi@pdfbanner
  \if@bidi@pdfm@mark
    \AtEndDocument{%
      \special{pdf:%
        docinfo<<%
          /Creator(\@bidi@pdfcreator)%
```

```
          /Producer(\@bidi@pdfproducer)%
          /BIDI.Fullbanner(\@bidi@pdfcustomproperties)%
          \if@bidi@csdef{@xepersian@pdfcustomproperties}{%
            /XEPERSIAN.Fullbanner(\@xepersian@pdfcustomproperties)%
          }{}%
        >>%
      }%
    }
  \else
    \AtEndDocument{%
      \special{pdf:%
        docinfo<<%
          /BIDI.Fullbanner(\@bidi@pdfcustomproperties)%
          \if@bidi@csdef{@xepersian@pdfcustomproperties}{%
            /XEPERSIAN.Fullbanner(\@xepersian@pdfcustomproperties)%
          }{}%
        >>%
      }%
    }
  \fi
\else
  \if@bidi@pdfm@mark
    \AtEndDocument{%
      \special{pdf:%
        docinfo<<%
          /Creator(\@bidi@pdfcreator)%
          /Producer(\@bidi@pdfproducer)%
        >>%
      }%
    }
  \fi
\fi
```

46 File bidi.tex

```
\def\bididate{2025/09/22}
\catcode`@=11
\def\bidi@version{25.09.22}
\def\bidi@releasename{Iran}
\def\bidireleasename{\bidi@releasename}
\let \protect \relax
\newlinechar`\^^J
\edef\@bidi@info{**************************************************^^J%
* ^^J%
* bidi package (Bidirectional typesetting with^^J%
* plain TeX and LaTeX formats in XeTeX and LuaTeX engines)^^J%
* ^^J%
* Description: A convenient interface for^^J%
* typesetting bidirectional texts in plain TeX^^J%
* and LaTeX.  The package includes adaptations^^J%
* for use with many other commonly-used packages.^^J%
* ^^J%
* Copyright (c) 2007--2025 Vafa Khalighi^^J%
* Copyright (c) 2018--2020 bidi-tex GitHub organization^^J%
```

```
* ^^J%
* v\bidi@version\space (Release \bidi@releasename), \bididate^^J%
* ^^J%
* License: LaTeX Project Public License, version^^J%
* 1.3c or higher (your choice)^^J%
* ^^J%
* Location on CTAN: /macros/unicodetex/generic/bidi^^J%
* ^^J%
* Issue tracker: https://github.com/xepersian/bidi/issues^^J%
* ^^J%
* Primary author of bidi package: Vafa Khalighi.^^J%
* ^^J%
**************************************************}
\edef\bidi@everyjob{\the\everyjob}
\message{\@bidi@info}
\everyjob{\bidi@everyjob\message{\@bidi@info}}
\def\bidiversion{%
  \relax
  \ifmmode
    \bidi@version
  \else
    $\bidi@version$
  \fi
}
\input iftex.sty
\RequireXeTeX
\newif\if@bidi@pdfm@mark
\newif\if@RTLmain
\newif\if@RTL
\newif\if@hboxRconstruct
\newif\if@sentdir
\newif\if@RTL@footnote
\@RTLmainfalse
\def\setRTLmain{%
  \if@RTLmain\else
    \if@RTL\@RTLmaintrue%
    \else\@RTLmainfalse%
    \fi%
  \fi%
}
\let\n@xt=\
\protected\def\LRE{\protect\pLRE}%
\def\pLRE{\protect\afterassignment\moreLRE \let\n@xt= }
\protected\def\RLE{\protect\pRLE}
\def\pRLE{\protect\afterassignment\moreRLE \let\n@xt= }
\def\bracetext{\ifcat\n@xt{\else\ifcat\n@xt}\fi
  \errmessage{Missing left brace has been substituted}\fi \bgroup}
\newinsert\@bidi@copyins@
\skip\@bidi@copyins@=12\p@
\dimen\@bidi@copyins@=40pc
\count\@bidi@copyins@=1000
\def\@bidi@inslogo@{\insert\@bidi@copyins@{\@bidi@logo@}}
\def\@bidi@logo@hb@xt@{%
  \if@RTLmain
```

```
    \hboxR to
  \else
    \hboxL to
  \fi
}
\def\@bidi@logo#1{%
  \toks@{%
    \setbox\z@\hbox{%
      \special{%
        pdf:image width 50pt height 50pt (#1)%
      }
    }%
    \dp\z@\z@
    \ht\z@=50pt
    \wd\z@=50pt
    \beginL
      \lower20pt\box\z@
    \endL
  }%
  \the\toks@
}
\def\today{\ifcase\month\or
  January\or February\or March\or April\or May\or June\or
  July\or August\or September\or October\or November\or December\fi
  \space\number\day, \number\year}
\def\two@digits#1{\ifnum#1<10 0\fi\number#1}
\newcount\bidi@typesethour
\newcount\bidi@typesetminute
\bidi@typesethour=\time
\divide\bidi@typesethour 60
\bidi@typesetminute=-\bidi@typesethour
\multiply\bidi@typesetminute 60
\advance\bidi@typesetminute \time
\def\TypesetHour{\two@digits\bidi@typesethour}
\def\TypesetMinute{\two@digits\bidi@typesetminute}
\def\TypesetTime{\TypesetHour:\TypesetMinute}
\def\@bidi@logo@{\@bidi@logo@hb@xt@\hsize{\hss\LRE{\bf Typeset {\today} at {\TypesetTime} b
\def\bidilogo{\@bidi@inslogo@}
\def\nobidilogo{\let\@bidi@logo@\@empty \let\@bidi@inslogo@\@empty}
\def\@bidi@pdfcreator{%
  The bidi package, v\bidi@version\space (Release \bidi@releasename), \bididate
}
\def\@bidi@pdfproducer{%
  The bidi package, v\bidi@version\space (Release \bidi@releasename), \bididate
}
\def\@bidi@pdfcustomproperties{%
  This is the bidi package, Version \bidi@version\space (Release \bidi@releasename),
  Released September 22, 2025.
}
\def\bidi@pdfm@mark{%
  \special{pdf:%
    docinfo<<%
    \if@bidi@pdfm@mark
      /Creator(\@bidi@pdfcreator)%
```

```
      /Producer(\@bidi@pdfproducer)%
    \fi
    /BIDI.Fullbanner(\@bidi@pdfcustomproperties)%
      >>%
    }%
}
\def\bidipdfinfoon{\@bidi@pdfm@marktrue}
\def\bidipdfinfooff{\@bidi@pdfm@markfalse}
\input plain-xetex-bidi.def
\outer\def\bye{\bidi@pdfm@mark\par\vfill\supereject\end}
\catcode`@=12
\bidipdfinfoon
```

47 File bidi2in1.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidi2in1}
\pagestyle{plain}
\newcount\evenpage
\newcount\oddpage
\twocolumn
\def\@oddfoot{\evenpage=\thepage%
\multiply\evenpage by 2%
\oddpage=\the\evenpage%
\advance\oddpage by -1%
\hfil\the\evenpage\hfil\hfil\the\oddpage\hfil}%
\def\@evenfoot{\evenpage=\thepage%
\multiply\evenpage by 2%
\oddpage=\the\evenpage%
\advance\oddpage by -1%
\hfil\the\oddpage\hfil\hfil\the\evenpage\hfil}%
\textwidth 9.49in
\textheight 6.7in
\columnsep 0.9in
\columnseprule 0.125pt
\headheight 0cm
\topmargin 0in
\marginparwidth 0in
\marginparsep 0in
\hoffset 0.05in % Corrected
\voffset -0.5in %top margin space is 1.0in by default
\oddsidemargin 0in
\evensidemargin 0in
\headsep 0cm
\topskip 0cm
\parskip 0.15in       %
\headsep 0pt
\special{papersize=11.69in,8.26in}
\renewcommand\maketitle{\par
\begingroup
\renewcommand\thefootnote{\@fnsymbol\c@footnote}%
\def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
\long\def\@makefntext##1{\parindent 1em\noindent
\hb@xt@1.8em{%
```

```
\hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
\@maketitle
\@thanks
\endgroup
\setcounter{footnote}{0}%
\global\let\thanks\relax
\global\let\maketitle\relax
\global\let\@maketitle\relax
\global\let\@thanks\@empty
\global\let\@author\@empty
\global\let\@date\@empty
\global\let\@title\@empty
\global\let\title\relax
\global\let\author\relax
\global\let\date\relax
\global\let\and\relax
}
```

48 File bidicode.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidicode}
\RequirePackage{xcolor}
\RequirePackage{showexpl}
\definecolor{hellgelb}{rgb}{1,1,0.85}
\definecolor{colKeys}{rgb}{0.2,0.4,0.8}
\definecolor{colCS}{rgb}{0.2,0.4,0.8}
\definecolor{colIdentifier}{rgb}{0,0,0}
\definecolor{colComments}{rgb}{1,0,0}
\definecolor{colString}{rgb}{0,0.5,0}
\lstset{%
    language=[LaTeX]TeX,%
    float=hbp,%
    basicstyle=\ttfamily\small,%
    identifierstyle=\color{colIdentifier},%
    keywordstyle=\color{colKeys},%
    texcsstyle=*\color{colCS},%
    stringstyle=\color{colString},%
    commentstyle=\color{colComments},%
    backgroundcolor=\color{hellgelb},%
    columns=flexible,%
    tabsize=4,%
    extendedchars=true,%
    showspaces=false,%
    showstringspaces=false,%
    numbers=left,%
    numbersep=0.9em,%
    numberstyle=\tiny,%
    frame=single,%
    captionpos=b,%
    xleftmargin=1em,%
    breaklines=true,%
    breakautoindent=false,%
    breakindent=0pt,%
```

```
    escapeinside=**,%
    pos=r,%
    explpreset={%
      xleftmargin=1em,%
      columns=flexible,%
      language=[LaTeX]TeX%
    },%
    moretexcs={%
      bididate,%
      bidiversion,%
      deflatinfont,%
      defpersianfont,%
      ding,%
      endLTR,%
      endRTL,%
      false,%
      falsesymbol,%
      junicode,%
      lr,%
      LR,%
      LRE,%
      LTR,%
      maketitle,%
      Nastaliq,%
      newfontfamily,%
      Parsifont,%
      part,%
      RL,%
      RLE,%
      RTL,%
      RTLcases,%
      SepMark,%
      setLR,%
      setLTR,%
      setRL,%
      setRTL,%
      settextfont,%
      subsection,%
      subsubsection,%
      tableofcontents,%
      text,%
      theequation,%
      thesection,%
      true,%
      truesymbol,%
      XePersian,%
      xepersiandate,%
      xepersianversion%
    }%
}
\newcommand\HLON{%
  \gdef\lst@alloverstyle##1{%
    \fboxrule=0pt
    \fboxsep=0pt
```

```
    \fcolorbox{hellgelb}{hellgelb}{\bfseries\strut##1}%
}}
\newcommand\HLOFF{%
  \xdef\lst@alloverstyle##1{##1}%
}
\newcommand\Larg [1]{{\normalfont\itshape#1\/}}
\newcommand\Larga[1]{$\langle$\Larg{#1}$\rangle$}
\newcommand\Largb[1]{\lcb\Larg{#1}\rcb}
\newcommand\Largs[1]{\lsb\Larg{#1}\rsb}
\newcommand\Largr[1]{\lrb\Larg{#1}\rrb}
\newcommand\LBEG[1]{{\normalfont\ttfamily\bs{}begin\lcb#1\rcb}}
\newcommand\LEND[1]{{\normalfont\ttfamily\bs{}end\lcb#1\rcb}}

\DeclareRobustCommand\bs{{\normalfont\ttfamily\symbol{92}}}
\DeclareRobustCommand\lcb{{\normalfont\ttfamily\char`\{}}
\DeclareRobustCommand\rcb{{\normalfont\ttfamily\char`\}}}
\DeclareRobustCommand\lsb{{\normalfont\ttfamily[}}
\DeclareRobustCommand\rsb{{\normalfont\ttfamily]}}
\DeclareRobustCommand\lrb{{\normalfont\ttfamily(}}
\DeclareRobustCommand\rrb{{\normalfont\ttfamily)}}

\def\Lcs#1{\nxLcs{#1}}
\def\LcsStar#1{\nxLcs{#1}\OptArg*{*}}
\def\nxLcs#1{\texttt{\symbol{92}#1}}

\def\Coordx#1{$x_{#1}$}
\def\Coordy#1{$y_{#1}$}
\def\Coordz#1{$z_{#1}$}
\def\Coord#1{\Coordx{#1},\kern 1pt\Coordy{#1}}
\def\Coordn{\Coordx{n},\kern 1pt\Coordy{n}}
\def\CoordIII#1{\Coordx{#1},\kern 1pt\Coordy{#1},\kern 1pt\Coordz{#1}}
\def\CAny{\Coordx{},\kern 1pt\Coordy{}}
\def\CIIIAny{\Coordx{},\kern 1pt\Coordy{},\kern 1pt\Coordz{}}
\def\coord#1{(\Coordx{#1},\kern 1pt\Coordy{#1})}
\def\coordn{(\Coordx{n},\kern 1pt\Coordy{n})}
\def\coordiii#1{(\Coordx{#1},\kern 1pt\Coordy{#1},\kern 1pt\Coordz{#1})}
\def\coordx#1{($x_{#1}$)}
\def\coordy#1{($y_{#1}$)}
\def\coordz#1{($z_{#1}$)}
\def\cAny{(\Coordx{},\kern 1pt\Coordy{})}
\def\ciiiAny{(\Coordx{},\kern 1pt\Coordy{},\kern 1pt\Coordz{})}

\newsavebox{\boxdef}
\newenvironment{BDef}
  {\begin{lrbox}\boxdef
      \def\arraystretch{1.0}
      \begin{tabular}{@{}l@{}l@{}l@{}}
  }
  {\end{tabular}\end{lrbox}

   {\BCmd\fbox{\usebox\boxdef}\endBCmd}
   \aftergroup\@afterindentfalse\aftergroup\@afterheading
  }

```

```
\newenvironment{BDef*}
  {\begin{lrbox}\boxdef
      \def\arraystretch{1.0}
      \begin{tabular}{@{}l@{}l@{}l@{}}
  }
  {\end{tabular}\end{lrbox}
   {\begin{BCmd*}\fbox{\usebox\boxdef}\end{BCmd*}}
   \aftergroup\@afterindentfalse\aftergroup\@afterheading
  }
\newenvironment{BCmd}{
  \@beginparpenalty-\@lowpenalty
  \topsep\BDefaboveskip
  \fboxsep3pt
  \flushleft}
 {\@endparpenalty\@M
  \@topsepadd\BDefbelowskip
  \endflushleft}

\newenvironment{BCmd*}{
  \@beginparpenalty\@M
  \topsep\BDefinlineskip
  \fboxsep3pt
  \flushleft}
 {\@endparpenalty5000
  \endflushleft}

\newskip\BDefaboveskip
\newskip\BDefbelowskip
\newskip\BDefinlineskip
\setlength\BDefaboveskip{10pt plus 4pt}
\setlength\BDefbelowskip{6pt}
\setlength\BDefinlineskip{6pt}

\def\OptArgs{\colorbox{black!20}{\texttt{[Options]}}\kern1pt}
\def\OptArg{\@ifnextchar*\OptArg@i{\OptArg@ii*}}
\def\OptArg@i*#1{\colorbox{black!20}{\texttt{#1}}\kern1pt}
\def\OptArg@ii*#1{\colorbox{black!20}{\texttt{[#1]}}\kern1pt}
```

49 File bidiftnxtra.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidiftnxtra}
\newtoks\bidi@p@ftn
\let\FN@sf@@footnote\footnote
\let\FN@sf@@LTRfootnote\LTRfootnote
\let\FN@sf@@RTLfootnote\RTLfootnote
\def\footnote{\ifx\protect\@typeset@protect
    \expandafter\FN@sf@@footnote
  \else
    \expandafter\FN@sf@gobble@opt
  \fi
}
\def\LTRfootnote{\ifx\protect\@typeset@protect
    \expandafter\FN@sf@@LTRfootnote
```

```
  \else
    \expandafter\FN@sf@gobble@opt
  \fi
}
\def\RTLfootnote{\ifx\protect\@typeset@protect
    \expandafter\FN@sf@@RTLfootnote
  \else
    \expandafter\FN@sf@gobble@opt
  \fi
}
\edef\FN@sf@gobble@opt{\noexpand\protect
  \expandafter\noexpand\csname FN@sf@gobble@opt \endcsname}
\expandafter\def\csname FN@sf@gobble@opt \endcsname{%
  \@ifnextchar[%]
    \FN@sf@gobble@twobracket
    \@gobble
}
\def\FN@sf@gobble@twobracket[#1]#2{}
\let\FN@sf@@footnotemark\footnotemark
\def\footnotemark{\ifx\protect\@typeset@protect
    \expandafter\FN@sf@@footnotemark
  \else
    \expandafter\FN@sf@gobble@optonly
  \fi
}
\edef\FN@sf@gobble@optonly{\noexpand\protect
  \expandafter\noexpand\csname FN@sf@gobble@optonly \endcsname}
\expandafter\def\csname FN@sf@gobble@optonly \endcsname{%
  \@ifnextchar[%]
    \FN@sf@gobble@bracket
    {}%
}
\def\FN@sf@gobble@bracket[#1]{}
\def\@tabular{%
   \leavevmode \hbox \bgroup
   \let\@footnotetext\bidi@p@ftntext
   \let\@LTRfootnotetext\bidi@p@LTRftntext
   \let\@RTLfootnotetext\bidi@p@RTLftntext
   \let\@xfootnotenext\bidi@p@xftntext
   \let\@xfootnote\bidi@p@xfootnote
   \let\@xLTRfootnotenext\bidi@p@xLTRftntext
   \let\@xLTRfootnote\bidi@p@xLTRfootnote
    \let\@xRTLfootnotenext\bidi@p@xRTLftntext
   \let\@xRTLfootnote\bidi@p@xRTLfootnote
   \if@RTLtab\beginR \fi
   $\let\@acol\@tabacol
   \let\@classz\@tabclassz
   \let\@classiv\@tabclassiv \let\\\@tabularcr\@tabarray}
\def\endtabular{\crcr\egroup\if@RTLtab\egroup\endR\egroup\fi
                  \egroup $\if@RTLtab\endR\fi\egroup
                   \ifx\@captype\@undefined
                    \global\bidi@p@ftn\expandafter{\expandafter}\the\bidi@p@ftn\fi}
\long\def\bidi@p@ftntext#1{%
  \edef\@tempy{\the\bidi@p@ftn\noexpand\footnotetext[\the\csname c@\@mpfn\endcsname]}%
```

```
  \global\bidi@p@ftn\expandafter{\@tempy{#1}}}%
\long\def\bidi@p@LTRftntext#1{%
  \edef\@tempyi{\the\bidi@p@ftn\noexpand\LTRfootnotetext[\the\csname c@\@mpfn\endcsname]}%
  \global\bidi@p@ftn\expandafter{\@tempyi{#1}}}%
\long\def\bidi@p@RTLftntext#1{%
  \edef\@tempyii{\the\bidi@p@ftn\noexpand\RTLfootnotetext[\the\csname c@\@mpfn\endcsname]}%
  \global\bidi@p@ftn\expandafter{\@tempyii{#1}}}%


\long\def\bidi@p@xftntext[#1]#2{%
  \global\bidi@p@ftn\expandafter{\the\bidi@p@ftn\footnotetext[#1]{#2}}}

\long\def\bidi@p@xLTRftntext[#1]#2{%
  \global\bidi@p@ftn\expandafter{\the\bidi@p@ftn\LTRfootnotetext[#1]{#2}}}

\long\def\bidi@p@xRTLftntext[#1]#2{%
  \global\bidi@p@ftn\expandafter{\the\bidi@p@ftn\RTLfootnotetext[#1]{#2}}}


\def\bidi@p@xfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\bidi@p@xftntext[#1]}


\def\bidi@p@xLTRfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\bidi@p@xLTRftntext[#1]}


\def\bidi@p@xRTLfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\bidi@p@xRTLftntext[#1]}

\def\@xfloat #1[#2]{%
  \@nodocument
  \def \@captype {#1}%
   \def \@fps {#2}%
   \@onelevel@sanitize \@fps
   \def \reserved@b {!}%
   \ifx \reserved@b \@fps
     \@fpsadddefault
   \else
     \ifx \@fps \@empty
       \@fpsadddefault
     \fi
```

```
  \fi
  \ifhmode
    \@bsphack
    \@floatpenalty -\@Mii
  \else
    \@floatpenalty-\@Miii
  \fi
\ifinner
    \@parmoderr\@floatpenalty\z@
\else
  \@next\@currbox\@freelist
    {%
     \@tempcnta \sixt@@n
     \expandafter \@tfor \expandafter \reserved@a
       \expandafter :\expandafter =\@fps
       \do
        {%
         \if \reserved@a h%
           \ifodd \@tempcnta
           \else
             \advance \@tempcnta \@ne
           \fi
         \fi
         \if \reserved@a t%
           \@setfpsbit \tw@
         \fi
         \if \reserved@a b%
           \@setfpsbit 4%
         \fi
         \if \reserved@a p%
           \@setfpsbit 8%
         \fi
         \if \reserved@a !%
           \ifnum \@tempcnta>15
             \advance\@tempcnta -\sixt@@n\relax
           \fi
         \fi
         }%
     \@tempcntb \csname ftype@\@captype \endcsname
     \multiply \@tempcntb \@xxxii
     \advance \@tempcnta \@tempcntb
     \global \count\@currbox \@tempcnta
     }%
  \@fltovf
\fi
\global \setbox\@currbox
  \color@vbox
    \normalcolor
    \vbox \bgroup
     \let\@footnotetext\bidi@p@ftntext
     \let\@LTRfootnotetext\bidi@p@LTRftntext
     \let\@RTLfootnotetext\bidi@p@RTLftntext
     \let\@xfootnotenext\bidi@p@xftntext
      \let\@xfootnote\bidi@p@xfootnote
```

```
        \let\@xLTRfootnotenext\bidi@p@xLTRftntext
        \let\@xLTRfootnote\bidi@p@xLTRfootnote
        \let\@xRTLfootnotenext\bidi@p@xRTLftntext
        \let\@xRTLfootnote\bidi@p@xRTLfootnote
        \hsize\columnwidth
        \@parboxrestore
        \@floatboxreset
}
\def \@endfloatbox{%
      \par\vskip\z@skip      %% \par\vskip\z@ added 15 Dec 87
      \@minipagefalse
      \outer@nobreak
    \egroup                  %% end of vbox
    \global\bidi@p@ftn\expandafter{\expandafter}\the\bidi@p@ftn
  \color@endbox
}
```

50 File bidimoderncv.cls

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesClass{bidimoderncv}
\newif\if@DEBUG\@DEBUGfalse
\DeclareOption{a4paper}{
  \setlength\paperheight{297mm}
  \setlength\paperwidth{210mm}}
\DeclareOption{a5paper}{
  \setlength\paperheight{210mm}
  \setlength\paperwidth{148mm}}
\DeclareOption{b5paper}{
  \setlength\paperheight{250mm}
  \setlength\paperwidth{176mm}}
\DeclareOption{letterpaper}{
  \setlength\paperheight{11in}
  \setlength\paperwidth{8.5in}}
\DeclareOption{legalpaper}{
  \setlength\paperheight{14in}
  \setlength\paperwidth{8.5in}}
\DeclareOption{executivepaper}{
  \setlength\paperheight{10.5in}
  \setlength\paperwidth{7.25in}}
\DeclareOption{landscape}{
  \setlength\@tempdima{\paperheight}
  \setlength\paperheight{\paperwidth}
  \setlength\paperwidth{\@tempdima}}
\newcommand\@ptsize{}
\DeclareOption{10pt}{\renewcommand\@ptsize{0}}
\DeclareOption{11pt}{\renewcommand\@ptsize{1}}
\DeclareOption{12pt}{\renewcommand\@ptsize{2}}
\DeclareOption{draft}{\setlength\overfullrule{5pt}}
\DeclareOption{final}{\setlength\overfullrule{0pt}}
\newif\if@colour\@colourtrue
\DeclareOption{nocolour}{\@colourfalse}
\ExecuteOptions{a4paper,11pt,colour,final}
\ProcessOptions\relax
```

```
\input{size1\@ptsize.clo}
\RequirePackage{color}
\RequirePackage{graphicx}
\RequirePackage{ifthen}
\RequirePackage{marvosym}
\addtolength{\oddsidemargin}{-54pt}
\addtolength{\textwidth}{109pt}
\addtolength{\topmargin}{-70pt}
\addtolength{\textheight}{122pt}
\addtolength{\marginparsep}{-5pt}
\addtolength{\marginparwidth}{-10pt}
\RequirePackage{url}
\RequirePackage{hyperref}
\hypersetup{%
  breaklinks,
  baseurl       = http://,%
  pdfborder     = 0 0 0,%
  pdfpagemode   = UseNone,%
  pdfstartpage  = 1}
\AtEndOfClass{%
  \AtBeginDocument{%
    \hypersetup{%
      pdfauthor     = \@firstname~\@familyname,%
      pdftitle      = \@title,%
      pdfsubject    = \@firstname~\@familyname,%
      pdfkeywords   = \@resumename~\@firstname~\@familyname}}}
\urlstyle{tt}
\RequirePackage{fancyhdr}
\fancypagestyle{plain}{%
  \renewcommand{\headrulewidth}{0pt}
  \renewcommand{\footrulewidth}{0pt}
  \fancyhf{}}
\pagestyle{plain}
\setlength\lineskip{1\p@}
\setlength\normallineskip{1\p@}
\renewcommand\baselinestretch{}
\setlength{\parindent}{0pt}
\setlength{\parskip}{0pt}
\setlength\columnsep{10\p@}
\setlength\columnseprule{0\p@}
\pagestyle{empty}
\pagenumbering{arabic}
\raggedbottom
\onecolumn
\providecommand*{\listitemsymbol}{\textbullet}
\providecommand*{\addresssymbol}{}
\providecommand*{\mobilesymbol}{\Mobilefone}
\providecommand*{\phonesymbol}{\Telefon}
\providecommand*{\faxsymbol}{\FAX}
\providecommand*{\emailsymbol}{\Letter}
\definecolor{firstnamecolor}{rgb}{0,0,0}
\def\firstnamecolour#1{\gdef\@firstnamecolour{\addfontfeature{Color=#1}}}
\def\familynamecolour#1{\gdef\@familynamecolour{\addfontfeature{Color=#1}}}
\def\titlecolour#1{\gdef\@titlecolour{\addfontfeature{Color=#1}}}
```

```
\def\addresscolour#1{\gdef\@addresscolour{\addfontfeature{Color=#1}}}
\def\quotecolour#1{\gdef\@quotecolour{\addfontfeature{Color=#1}}}
\def\sectiontitlecolour#1{\gdef\@sectiontitlecolour{\addfontfeature{Color=#1}}}
\definecolor{sectionrectanglecolor}{rgb}{0,0,0}
\def\subsectioncolour#1{\gdef\@subsectioncolour{\addfontfeature{Color=#1}}}
\def\hintcolour#1{\gdef\@hintcolour{\addfontfeature{Color=#1}}}
\providecommand*{\firstnamefont}{}
\providecommand*{\familynamefont}{}
\providecommand*{\titlefont}{}
\providecommand*{\addressfont}{}
\providecommand*{\quotefont}{}
\providecommand*{\sectionfont}{}
\providecommand*{\subsectionfont}{}
\providecommand*{\hintfont}{\small}
\providecommand*{\firstnamestyle}[1]{{\firstnamefont\@firstnamecolour#1}}
\providecommand*{\familynamestyle}[1]{{\familynamefont\@familynamecolour#1}}
\providecommand*{\titlestyle}[1]{{\titlefont\@titlecolour#1}}
\providecommand*{\addresstyle}[1]{{\addressfont\@addresscolour#1}}
\providecommand*{\quotestyle}[1]{{\quotefont\@quotecolour#1}}
\providecommand*{\sectionstyle}[1]{{\sectionfont\@sectiontitlecolour#1}}
\providecommand*{\subsectionstyle}[1]{{\subsectionfont\@subsectioncolour#1}}
\providecommand*{\hintstyle}[1]{{\hintfont\@hintcolour#1}}
\newcommand*{\cvtheme}[2][]{
  \def\@cvtheme{#2}
  \def\@cvthemeoptions{#1}}
\cvtheme{bidi-casual}
\AtBeginDocument{\RequirePackage[\@cvthemeoptions]{cvtheme\@cvtheme}}
\newcommand*{\resumename}[1]{\def\@resumename{#1}}
\newcommand*{\firstname}[1]{\def\@firstname{#1}}
\newcommand*{\familyname}[1]{\def\@familyname{#1}}
\renewcommand*{\title}[1]{\def\@title{#1}}
\newcommand*{\address}[1]{\def\@address{#1}}
\newcommand*{\mobile}[1]{\def\@mobile{#1}}
\newcommand*{\phone}[1]{\def\@phone{#1}}
\renewcommand*{\fax}[1]{\def\@fax{#1}}
\newcommand*{\email}[1]{\def\@email{#1}}
\newcommand*{\extrainfo}[1]{\def\@extrainfo{#1}}
\def\@photowidth{0pt}
\newcommand*{\photo}[2][64pt]{\def\@photowidth{#1}\def\@photo{#2}}
\newcommand*{\quote}[1]{\def\@quote{#1}}
\newlength{\quotewidth}
\newlength{\hintscolumnwidth}
\newlength{\separatorcolumnwidth}
\setlength{\separatorcolumnwidth}{0.025\textwidth}
\newlength{\maincolumnwidth}
\newlength{\doubleitemmaincolumnwidth}
\newlength{\listitemsymbolwidth}
\settowidth{\listitemsymbolwidth}{\listitemsymbol{}~}
\newlength{\listitemmaincolumnwidth}
\newlength{\listdoubleitemmaincolumnwidth}
\newcommand*{\recomputethemelengths}{}
\newcommand*{\recomputelengths}{%
\setlength{\quotewidth}{0.65\textwidth}%
\setlength{\maincolumnwidth}{\textwidth}%
```

```
\addtolength{\maincolumnwidth}{-\separatorcolumnwidth}%
\addtolength{\maincolumnwidth}{-\hintscolumnwidth}%
\setlength{\listitemmaincolumnwidth}{\maincolumnwidth}%
\addtolength{\listitemmaincolumnwidth}{-\listitemsymbolwidth}%
\setlength{\doubleitemmaincolumnwidth}{\maincolumnwidth}%
\addtolength{\doubleitemmaincolumnwidth}{-\hintscolumnwidth}%
\addtolength{\doubleitemmaincolumnwidth}{-\separatorcolumnwidth}%
\setlength{\doubleitemmaincolumnwidth}{0.5\doubleitemmaincolumnwidth}%
\setlength{\listdoubleitemmaincolumnwidth}{\maincolumnwidth}%
\addtolength{\listdoubleitemmaincolumnwidth}{-\listitemsymbolwidth}%
\setlength{\listdoubleitemmaincolumnwidth}{0.475\listdoubleitemmaincolumnwidth}%
\renewcommand{\headwidth}{\textwidth}%
\recomputethemelengths}
\setlength{\hintscolumnwidth}{0.15\textwidth}
\recomputelengths
\title{}
\renewcommand*{\maketitle}{}
\newcommand*{\section}[1]{%
\vspace*{2.5ex \@plus 1ex \@minus .2ex}%
  \phantomsection{}%
  \addcontentsline{toc}{part}{#1}%
  \parbox[m]{\hintscolumnwidth}{\bidi@raggedleft\hintfont{\leavevmode\color{sectionrectangl
  \hspace{\separatorcolumnwidth}%
  \parbox[m]{\maincolumnwidth}{\sectionstyle{#1}}\\[1ex]}
\newcommand*{\subsection}[1]{%
  \cvline[0.45em]{}{\subsectionstyle{#1}}}
\newcommand*{\cvline}[3][.25em]{%
  \begin{tabular}{@{}p{\hintscolumnwidth}@{\hspace{\separatorcolumnwidth}}p{\maincolumnwidt
    \bidi@raggedleft\hintfont{#2} &{#3}%
  \end{tabular}\\[#1]}
\newcommand*{\cvdoubleitem}[4]{%
 \cvline{#1}{\begin{minipage}[t]{\doubleitemmaincolumnwidth}#2\end{minipage}%
 \hfill%
 \begin{minipage}[t]{\hintscolumnwidth}\bidi@raggedleft\hintfont{#3}\end{minipage}\hspace*{
\newcommand*{\cvlistitem}[2][\listitemsymbol{}]{%
  \cvline[0pt]{}{#1~\begin{minipage}[t]{\listitemmaincolumnwidth}#2\end{minipage}}}
\newcommand*{\cvlistdoubleitem}[3][\listitemsymbol{}]{%
  \cvline[0pt]{}{#1~\begin{minipage}[t]{\listdoubleitemmaincolumnwidth}#2\end{minipage}%
  \hfill%
  \ifthenelse{\equal{#3}{}}%
    {}%
    {#1~\begin{minipage}[t]{\listdoubleitemmaincolumnwidth}#3\end{minipage}}}}
\newcommand*{\cventry}[6]{%
  \cvline{#1}{%
    {\bfseries#2}%
    \ifx#3\else{, {\slshape#3}}\fi%
    \ifx#4\else{, #4}\fi%
    \ifx#5\else{, #5}\fi%
    .%
    \ifx#6\else{\newline{}\begin{minipage}[t]{\linewidth}\small#6\end{minipage}}\fi
    }}%
\newcommand*{\cvlanguage}[3]{%
  \cvline{#1}{\begin{minipage}[t]{.225\maincolumnwidth}\textbf{#2}\end{minipage}\hfill\begi
\newcommand*{\cvcomputer}[4]{%
```

```
  \cvdoubleitem{#1}{\small#2}{#3}{\small#4}}
\newcommand*{\link}[2][]{%
  \ifthenelse{\equal{#1}{}}%
    {\href{#2}{#2}}%
    {\href{#2}{#1}}}
\newcommand*{\httplink}[2][]{%
  \ifthenelse{\equal{#1}{}}%
    {\href{http://#2}{#2}}%
    {\href{http://#2}{#1}}}
\newcommand*{\emaillink}[2][]{%
  \ifthenelse{\equal{#1}{}}%
    {\href{mailto:#2}{#2}}%
    {\href{mailto:#2}{#1}}}
\newif\if@displaypagenumbers\@displaypagenumberstrue
\newcommand*{\nopagenumbers}{\@displaypagenumbersfalse}
\AtBeginDocument{%
  \if@displaypagenumbers%
    \@ifundefined{r@lastpage}{}{%
      \ifthenelse{\pageref{lastpage} > 1}{%
      \fancypagestyle{plain}{%
        \fancyfoot[r]{\beginL\addressfont\@quotecolour\footnotesize\thepage\beginL/\endL\pa
      \pagestyle{plain}}{}}%
  \AtEndDocument{\label{lastpage}}%
  \fi}
\newlength{\bibindent}
\setlength{\bibindent}{1.5em}
\newcommand*{\bibliographyitemlabel}{\includegraphics{bidi-bibitem.pdf}}
\newenvironment{thebibliography}[1]%
  {%
    \section{\refname}%
    \small%
    \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
    \bidi@@thebibliography@font@hook%
    \begin{list}{\bibliographyitemlabel}%
      {%
        \setlength{\topsep}{0pt}%
        \setlength{\labelwidth}{\hintscolumnwidth}%
        \setlength{\labelsep}{\separatorcolumnwidth}%
        \leftmargin\labelwidth%
        \advance\leftmargin\labelsep%
        \@openbib@code%
        \usecounter{enumiv}%
        \let\p@enumiv\@empty%
        \renewcommand\theenumiv{\@arabic\c@enumiv}}%
        \sloppy\clubpenalty4000\widowpenalty4000%
  }%
  {%
    \def\@noitemerr{\@latex@warning{Empty `thebibliography' environment}}%
    \end{list}%
  }
\newcommand\newblock{\hskip .11em\@plus.33em\@minus.07em}
\let\@openbib@code\@empty
```

51 File bidi-perpage.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidi-perpage}[2025/09/15 v0.5 Reset counter(s) on every page]
\newcommand*{\bidi@checkvlist}{%
  \ifcase
    \ifvmode
      \ifx\lastnodetype\bidi@undefined
        \ifdim-\@m\p@=\prevdepth
          \ifdim\lastskip=\z@
            \ifnum\lastpenalty=\z@
              \@ne
            \fi
          \fi
        \fi
      \else
         \ifnum\lastnodetype=\m@ne
           \@ne
         \fi
       \fi
     \fi
     \z@
   \or
     \PackageWarning{bidi-perpage}{%
       `\string\stepcounter' is probably at the beginning of vertical
       list.
       You may need to use `\string\leavevmode' before it to avoid
       vertical shifts%
     }%
  \fi
}
\newcount\bidi@page@count
\bidi@page@count\@ne
\newcommand*{\ResetCounterPerPage}[2][\z@]{%
  \if@bidi@csundef{bidi@stepcounterhook@@#2}{%
    \expandafter\gdef\csname bidi@stepcounterhook@@#2\endcsname{}%
  }{}%
  \if@bidi@csundef{if@bidi@reset@#2@rerun}{%
    \expandafter\newif\csname if@bidi@reset@#2@rerun\endcsname
  }{}%
  \if@bidi@csundef{bidi@#2@count}{%
    \expandafter\newcount\csname bidi@#2@count\endcsname
  }{}%
  \csname bidi@#2@count\endcsname\z@
  \if@bidi@csundef{bidi@previous@page@@#2@count}{%
    \expandafter\newcount\csname
    bidi@previous@page@@#2@count\endcsname
  }{}%
  \csname bidi@previous@page@@#2@count\endcsname\z@
  \if@bidi@csundef{bidi@reset@#2@perpage}{%
    \bidi@AfterEndDocumentCheckLabelsRerun{%
      \csname if@bidi@reset@#2@rerun\endcsname
        \PackageWarningNoLine{bidi-perpage}{%
          Counter `#2' may not have been reset per page.
```

```
5303          Rerun to reset counter `#2' per page%
5304        }%
5305      \fi
5306    }%
5307  }{}%
5308  \expandafter\gdef\csname bidi@reset@#2@perpage\endcsname{%
5309    \global\advance\csname bidi@#2@count\endcsname\@ne
5310    \if@filesw
5311      \edef\@tempa{%
5312        \write\@auxout{%
5313          \string\bidi@counter@page{#2}%
5314          {\number\csname bidi@#2@count\endcsname}%
5315          {\noexpand\number\noexpand\bidi@page@count}%
5316        }%
5317      }%
5318      \bidi@checkvlist
5319      \dimen@=\lastkern
5320      \ifdim\dimen@=\z@
5321      \else
5322        \unkern
5323      \fi
5324      \count@=\lastpenalty
5325      \@tempa
5326       \ifdim\dimen@=\z@
5327         \penalty
5328         \ifnum\count@<\@M
5329           \@M
5330         \else
5331           \count@
5332         \fi
5333       \else
5334         \kern\dimen@
5335       \fi
5336    \fi
5337  \begingroup\expandafter\expandafter\expandafter\endgroup
5338  \expandafter\ifx\csname bidi@#2@@\number\csname
5339  bidi@#2@count\endcsname\endcsname\relax
5340    \global\csname @bidi@reset@#2@reruntrue\endcsname
5341  \else
5342    \global\csname @bidi@reset@#2@rerunfalse\endcsname
5343    \expandafter\@tempcnta\csname bidi@#2@@\number
5344    \csname bidi@#2@count\endcsname\endcsname\relax
5345    \ifnum\@tempcnta=\csname
5346    bidi@previous@page@@#2@count\endcsname
5347    \else
5348      \global\csname
5349      bidi@previous@page@@#2@count\endcsname\@tempcnta
5350      \global\csname c@#2\endcsname#1\relax
5351    \fi
5352  \fi
5353  }%
5354  \expandafter\bidi@gappto\csname
5355  bidi@stepcounterhook@@#2\endcsname{%
5356    \csname bidi@reset@#2@perpage\endcsname
```

```
  }%
}
\def\bidi@counter@page#1#2#3{\bidi@namegdef{bidi@#1@@#2}{#3}}
\bidi@AtEndOutputPage{%
  \global\advance\bidi@page@count\@ne
}
```

52 File biditools.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{biditools}[2025/02/02 v2.7 Programming tools for bidi package]
\providecommand{\@bidi@saveprimitive}[2]{\begingroup\escapechar`\\\relax
  \edef\@tempa{\string#1}\edef\@tempb{\meaning#1}%
  \ifx\@tempa\@tempb \global\let#2#1%
  \else
    \edef\@tempb{\meaning#2}%
    \ifx\@tempa\@tempb
    \else
      \@latex@error{Unable to properly define \string#2; primitive
      \noexpand#1no longer primitive}\@eha
    \fi
  \fi
  \endgroup}
\newtoks\@bidi@envbody
\newtoks\@bidi@emptytoks
\def\bidi@addto@envbody#1{\global\@bidi@envbody\expandafter{\the\@bidi@envbody#1}}
\def\bidi@collect@body#1{%
  \@bidi@envbody{\expandafter#1\expandafter{\the\@bidi@envbody}}%
  \edef\bidi@process@envbody{\the\@bidi@envbody\noexpand\end{\@currenvir}}%
  \@bidi@envbody\@bidi@emptytoks \def\begin@bidi@stack{b}%
  \begingroup
  \expandafter\let\csname\@currenvir\endcsname\bidi@collect@@body
  \edef\bidi@process@envbody{\expandafter\noexpand\csname\@currenvir\endcsname}%
  \bidi@process@envbody
}
\def\bidi@push@begins#1\begin#2{%
  \ifx\end#2\else b\expandafter\bidi@push@begins\fi
}
\def\bidi@collect@@body#1\end#2{%
  \edef\begin@bidi@stack{\bidi@push@begins#1\begin\end \expandafter\@gobble\begin@bidi@stac
  \ifx\@empty\begin@bidi@stack
    \endgroup
    \@checkend{#2}%
    \bidi@addto@envbody{#1}%
  \else
    \bidi@addto@envbody{#1\end{#2}}%
  \fi
  \bidi@process@envbody % A little tricky! Note the grouping
}
\long\def\bidi@addto@long@envbody#1{\global\@bidi@envbody\expandafter{\the\@bidi@envbody#1}
\long\def\bidi@collect@long@body#1{%
  \@bidi@envbody{\expandafter#1\expandafter{\the\@bidi@envbody}}%
  \edef\bidi@process@envbody{\the\@bidi@envbody\noexpand\end{\@currenvir}}%
  \@bidi@envbody\@bidi@emptytoks \def\begin@bidi@stack{b}%
```

```
  \begingroup
  \expandafter\let\csname\@currenvir\endcsname\bidi@collect@long@@body
  \edef\bidi@process@envbody{\expandafter\noexpand\csname\@currenvir\endcsname}%
  \bidi@process@envbody
}
\long\def\bidi@push@long@begins#1\begin#2{%
  \ifx\end#2\else b\expandafter\bidi@push@long@begins\fi
}
\long\def\bidi@collect@long@@body#1\end#2{%
  \edef\begin@bidi@stack{\bidi@push@long@begins#1\begin\end \expandafter\@gobble\begin@bidi
  \ifx\@empty\begin@bidi@stack
    \endgroup
    \@checkend{#2}%
    \bidi@addto@long@envbody{#1}%
  \else
    \bidi@addto@long@envbody{#1\end{#2}}%
  \fi
  \bidi@process@envbody % A little tricky! Note the grouping
}
\long\def\bidi@new@ifnextchar#1#2#3{%
  \let\reserved@d= #1%
  \def\reserved@a{#2}\def\reserved@b{#3}%
  \futurelet\@let@token\bidi@new@ifnch
}
\def\bidi@new@ifnch{%
  \ifx\@let@token\reserved@d \let\reserved@b\reserved@a \fi
  \reserved@b
}
\def\bidi@matrix@check#1{%
  \expandafter\ifx\csname\@currenvir\endcsname#1%
  \else\bidi@matrix@error#1%
    \expandafter\@gobble
  \fi
}
\def\bidi@matrix@error#1{%
  \PackageError{biditools}{%
Old form `\string#1' should be \string\begin{\expandafter\@gobble\string#1}%
  }{%
`\string#1{...}' is old bidi package syntax whose use is
ill-advised in the old versions of bidi package.%
  }%
}
\def\eqnewif#1#2{%
  \count@\escapechar \escapechar\m@ne
    \let#1\iffalse
    \let#2\iffalse
    \eq@if#1#2\iftrue
    \eq@if#1#2\iffalse
  \escapechar\count@}
\def\eq@if#1#2#3{%
  \expandafter\def\csname\expandafter\@gobbletwo\string#1%
                      \expandafter\@gobbletwo\string#3\endcsname
                         {\let#1#3%
                         \let#2#3}%
```

```
  \expandafter\def\csname\expandafter\@gobbletwo\string#2%
                      \expandafter\@gobbletwo\string#3\endcsname
                         {\let#2#3%
                         \let#1#3}}
\def\noteqnewif#1#2{%
  \count@\escapechar \escapechar\m@ne
    \let#1\iffalse
    \let#2\iffalse
    \not@eq@if#1#2\iftrue\iffalse
  \escapechar\count@}
\def\not@eq@if#1#2#3#4{%
  \expandafter\def\csname\expandafter\@gobbletwo\string#1%
                      \expandafter\@gobbletwo\string#3\endcsname
                         {\let#1#3%
                         \let#2#4}%
  \expandafter\def\csname\expandafter\@gobbletwo\string#1%
                      \expandafter\@gobbletwo\string#4\endcsname
                         {\let#1#4%
                         \let#2#3}%
  \expandafter\def\csname\expandafter\@gobbletwo\string#2%
                      \expandafter\@gobbletwo\string#3\endcsname
                         {\let#2#3%
                         \let#1#4}%
  \expandafter\def\csname\expandafter\@gobbletwo\string#2%
                      \expandafter\@gobbletwo\string#4\endcsname
                         {\let#2#4%
                         \let#1#3}}
\newcommand*{\SetBoolean}[2]{%
  \lowercase{\def\@tempa{#2}}%
  \@ifundefined{@tempswa\@tempa}%
    {\PackageError{biditools}%
       {You can only set a boolean to `true' or `false'}\@ehc}%
    {\@ifundefined{#1\@tempa}%
      {\PackageError{biditools}{Boolean #1 undefined}\@ehc}%
      {\csname#1\@tempa\endcsname}}}
\newcommand*{\GlobalSetBoolean}[2]{%
  \lowercase{\def\@tempa{#2}}%
  \@ifundefined{@tempswa\@tempa}%
    {\PackageError{biditools}%
       {You can only set a boolean to `true' or `false'}\@ehc}%
    {\@ifundefined{#1\@tempa}%
      {\PackageError{biditools}{Boolean #1 undefined}\@ehc}%
      {\global\csname#1\@tempa\endcsname}}}
\newcommand*{\SetatBoolean}[2]{%
  \lowercase{\def\@tempa{#2}}%
  \@ifundefined{@tempswa\@tempa}%
    {\PackageError{biditools}%
       {You can only set a boolean to `true' or `false'}\@ehc}%
    {\@ifundefined{@#1\@tempa}%
      {\PackageError{biditools}{Boolean @#1 undefined}\@ehc}%
      {\csname @#1\@tempa\endcsname}}}
\newcommand*{\GlobalSetatBoolean}[2]{%
  \lowercase{\def\@tempa{#2}}%
  \@ifundefined{@tempswa\@tempa}%
```

```
    {\PackageError{biditools}%
       {You can only set a boolean to `true' or `false'}\@ehc}%
    {\@ifundefined{@#1\@tempa}%
      {\PackageError{biditools}{Boolean @#1 undefined}\@ehc}%
      {\global\csname @#1\@tempa\endcsname}}}
\def\@bidi@removefromreset#1#2{{%
  \expandafter\let\csname c@#1\endcsname\@bidi@removefromreset
  \def\@elt##1{%
    \expandafter\ifx\csname c@##1\endcsname\@bidi@removefromreset
    \else
      \noexpand\@elt{##1}%
    \fi}%
  \expandafter\xdef\csname cl@#2\endcsname{%
    \csname cl@#2\endcsname}}}
\newcommand*{\ifRtoL}{%
  \if@RTL
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi}
\newcommand*{\ifLtoR}{%
  \if@RTL
    \expandafter\@secondoftwo
  \else
    \expandafter\@firstoftwo
  \fi}
\newcommand*{\ifRtoLtable}{%
  \if@RTLtab
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi}
\newcommand*{\ifLtoRtable}{%
  \if@RTLtab
    \expandafter\@secondoftwo
  \else
    \expandafter\@firstoftwo
  \fi}
\newcommand*{\ifRtoLhboxconstruct}{%
  \if@hboxRconstruct
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi}
\newcommand*{\ifLtoRhboxconstruct}{%
  \if@hboxRconstruct
    \expandafter\@secondoftwo
  \else
    \expandafter\@firstoftwo
  \fi}
\newcommand*{\iflatin}{%
  \if@nonlatin
    \expandafter\@secondoftwo
  \else
```

```
    \expandafter\@firstoftwo
  \fi}
\newcommand*{\ifnonlatin}{%
  \if@nonlatin
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi}

\newcommand*{\bidi@@convert@dimen@t@unit}[2]{%
    \strip@pt\dimexpr #1*65536/\dimexpr 1#2\relax #2}

\newcommand*{\bidi@@convert@dimen@t@pt}[1]{%
    \dimexpr #1*65536/\dimexpr 1pt\relax}

\newcommand*{\IfPackageVersionAtLeastTF}[1]{%
  \expandafter\@if@ver@pkg@least\csname #1@version\endcsname
}
\newcommand*{\@if@ver@pkg@least}[2]{%
  \ifnum\expandafter\bidi@parse@ver@#100\@nil<\expandafter\bidi@parse@ver@#200\@nil
    \expandafter\@secondoftwo
  \else
    \expandafter\@firstoftwo
  \fi
}
\newcommand*{\bidi@parse@ver@}[1]{\bidi@parse@ver0#1}
\def\bidi@parse@ver#1.#2.#3#4#5\@nil{%
  \if\relax#2\relax\else#1\fi#2#3#4
}
\newcommand*{\IfPackageVersionAtMostTF}[1]{%
  \expandafter\@if@ver@pkg@most\csname #1@version\endcsname
}
\newcommand*{\@if@ver@pkg@most}[2]{%
  \ifnum\expandafter\bidi@parse@ver@#100\@nil>\expandafter\bidi@parse@ver@#200\@nil
    \expandafter\@secondoftwo
  \else
    \expandafter\@firstoftwo
  \fi
}
\newcommand*{\IfPackageVersionTF}[1]{%
  \expandafter\@if@ver@pkg@\csname #1@version\endcsname
}
\newcommand*{\@if@ver@pkg@}[2]{%
  \ifnum\expandafter\bidi@parse@ver@#100\@nil=\expandafter\bidi@parse@ver@#200\@nil
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi
}

\newcommand*{\if@bidi@csdef}[1]{%
  \ifcsname#1\endcsname
    \expandafter\@firstoftwo
  \else
```

```
    \expandafter\@secondoftwo
  \fi}
\newcommand*{\if@bidi@csundef}[1]{%
  \ifcsname#1\endcsname
    \expandafter\ifx\csname#1\endcsname\relax
      \expandafter\expandafter
      \expandafter\@firstoftwo
    \else
      \expandafter\expandafter
      \expandafter\@secondoftwo
    \fi
  \else
    \expandafter\@firstoftwo
  \fi}
\newcommand{\if@bidi@def}[1]{%
  \ifdefined#1%
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi}
\newcommand{\if@bidi@undef}[1]{%
  \ifdefined#1%
    \ifx#1\relax
      \expandafter\expandafter
      \expandafter\@firstoftwo
    \else
      \expandafter\expandafter
      \expandafter\@secondoftwo
    \fi
  \else
    \expandafter\@firstoftwo
  \fi}
\newcommand{\if@bidi@blank}[1]{% from url.sty
  \bidi@ifblank@i#1&&\@secondoftwo\@firstoftwo:}
\long\def\bidi@ifblank@i#1#2&#3#4#5:{#4}
\newcommand{\bidi@notblank}[1]{%
  \bidi@ifblank@i#1&&\@firstoftwo\@secondoftwo:}
\newcommand{\if@bidi@defmacro}{}
\long\edef\if@bidi@defmacro#1{%
  \noexpand\expandafter\noexpand\bidi@ifdefmacro
  \noexpand\meaning#1\detokenize{macro}:&}
\edef\bidi@ifdefmacro{%
  \def\noexpand\bidi@ifdefmacro##1\detokenize{macro}:##2&}
\bidi@ifdefmacro{\bidi@notblank{#2}}
\newcommand*{\if@bidi@csmacro}[1]{%
  \if@bidi@csdef{#1}
    {\expandafter\if@bidi@defmacro\csname#1\endcsname}
    {\@secondoftwo}}
\newcommand{\if@bidi@defprimitive}[1]{%
  \ifprimitive#1%
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi}
```

```
\newcommand{\if@bidi@csprimitive}[1]{%
 \begingroup\expandafter\expandafter\expandafter\endgroup%
  \expandafter\ifprimitive\csname#1\endcsname%
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi}
\newcommand*{\bidi@csdefcs}[2]{%
\expandafter\@ifdefinable  \csname#1\endcsname{%
\expandafter\def\csname#1\expandafter\endcsname{\csname#2\endcsname}}}
\newcommand*{\bidi@csletcs}[2]{%
\expandafter\@ifdefinable  \csname#1\endcsname{%
\expandafter\let\csname#1\expandafter\endcsname\csname#2\endcsname}}
\newcommand*{\bidi@cslet}[2]{%
\expandafter\@ifdefinable  \csname#1\endcsname{%
\expandafter\let\csname#1\endcsname#2}}
\newcommand{\bidi@namelongdef}[1]{%
  \long\expandafter\def\csname #1\endcsname}
\newcommand{\bidi@namelonggdef}[1]{%
  \long\expandafter\gdef\csname #1\endcsname}
\newcommand{\bidi@namelongedef}[1]{%
  \long\expandafter\edef\csname #1\endcsname}
\newcommand{\bidi@namelongxdef}[1]{%
  \long\expandafter\xdef\csname #1\endcsname}
\def\bidi@ensure@newcommand{\@star@or@long\bidi@ensure@new@command}
\def\bidi@ensure@new@command#1{%
  \begingroup \escapechar\m@ne\xdef\@gtempa{{\string#1}}\endgroup
  \expandafter\if@bidi@csundef\@gtempa
     {\new@command#1}{\relax%
  \let\@ifdefinable\@rc@ifdefinable%
  \new@command#1}}
\def\bidi@ensure@newlength#1{\if@bidi@undef#1{\newskip#1}{}}

\protected\def\bidi@error{\PackageError{bidi}}
\protected\def\bidi@warning{\PackageWarning{bidi}}
\protected\def\bidi@warningnoline{\PackageWarningNoLine{bidi}}
\protected\def\bidi@info{\PackageInfo{bidi}}

\def\bidi@pos#1#2#3#4{\bidi@namegdef{bidi@#1pos@@#2@#3}{#4}}

\newcount\bidi@poscount

\newcommand*{\WriteStartXPostoaux}{%
  \global\advance\bidi@poscount\@ne
    \edef\@tempa{%
      \write\@auxout{%
        \string\bidi@pos{x}{start}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
    }%
    \ifvmode
      \leavevmode
    \fi
  \if@RTL
       \if@filesw
```

```
    \@tempa
  \fi
  \pdfsavepos
    \else
  \pdfsavepos
  \if@filesw
    \@tempa
  \fi
  \fi
  \if@bidi@csundef{bidi@xpos@@start@\number\bidi@poscount}{%
        \PackageWarningNoLine{biditools}{%
          The start x position `\number\bidi@poscount' is not known yet.
          Rerun to get this x position%
          }%
  }{}%
}

\newcommand*{\WriteEndXPostoaux}{%
      \edef\@tempa{%
        \write\@auxout{%
          \string\bidi@pos{x}{end}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
    }%
  \if@RTL
    \if@filesw
    \@tempa
  \fi
  \pdfsavepos
  \else
  \pdfsavepos
  \if@filesw
    \@tempa
  \fi
  \fi
  \if@bidi@csundef{bidi@xpos@@end@\number\bidi@poscount}{%
          \PackageWarningNoLine{biditools}{%
          The end x position `\number\bidi@poscount' is not known yet.
          Rerun to get this x position%
          }%
  }{}%
}

\newcommand*{\WriteStartYPostoaux}{%
  \global\advance\bidi@poscount\@ne
    \edef\@tempa{%
      \write\@auxout{%
        \string\bidi@pos{y}{start}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
    }%
    \ifvmode
      \leavevmode
    \fi
  \if@RTL
       \if@filesw
```

```
    \@tempa
  \fi
  \pdfsavepos
    \else
  \pdfsavepos
  \if@filesw
    \@tempa
  \fi
  \fi
  \if@bidi@csundef{bidi@ypos@@start@\number\bidi@poscount}{%
        \PackageWarningNoLine{biditools}{%
          The start y position `\number\bidi@poscount' is not known yet.
          Rerun to get this y position%
          }%
  }{}%
}

\newcommand*{\WriteEndYPostoaux}{%
      \edef\@tempa{%
        \write\@auxout{%
          \string\bidi@pos{y}{end}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
    }%
  \if@RTL
    \if@filesw
    \@tempa
  \fi
  \pdfsavepos
  \else
  \pdfsavepos
  \if@filesw
    \@tempa
  \fi
  \fi
  \if@bidi@csundef{bidi@ypos@@end@\number\bidi@poscount}{%
          \PackageWarningNoLine{biditools}{%
          The end y position `\number\bidi@poscount' is not known yet.
          Rerun to get this y position%
          }%
  }{}%
}

\newcommand*{\WriteStartXYPostoaux}{%
  \global\advance\bidi@poscount\@ne
    \edef\@tempa{%
      \write\@auxout{%
        \string\bidi@pos{x}{start}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
      \write\@auxout{%
        \string\bidi@pos{y}{start}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
    }%
    \ifvmode
      \leavevmode
```

```
    \fi
  \if@RTL
       \if@filesw
    \@tempa
  \fi
  \pdfsavepos
    \else
  \pdfsavepos
  \if@filesw
    \@tempa
  \fi
  \fi
  \if@bidi@csundef{bidi@xpos@@start@\number\bidi@poscount}{%
        \PackageWarningNoLine{biditools}{%
          The start x position `\number\bidi@poscount' is not known yet.
          Rerun to get this x position%
          }%
  }{}%
  \if@bidi@csundef{bidi@ypos@@start@\number\bidi@poscount}{%
        \PackageWarningNoLine{biditools}{%
          The start y position `\number\bidi@poscount' is not known yet.
          Rerun to get this y position%
          }%
  }{}%
}

\newcommand*{\WriteEndXYPostoaux}{%
      \edef\@tempa{%
        \write\@auxout{%
          \string\bidi@pos{x}{end}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
        \write\@auxout{%
          \string\bidi@pos{y}{end}{\number\bidi@poscount}{\noexpand\number\noexpand\pdflast
      }%
    }%
  \if@RTL
    \if@filesw
    \@tempa
  \fi
  \pdfsavepos
  \else
  \pdfsavepos
  \if@filesw
    \@tempa
  \fi
  \fi
  \if@bidi@csundef{bidi@xpos@@end@\number\bidi@poscount}{%
          \PackageWarningNoLine{biditools}{%
          The end x position `\number\bidi@poscount' is not known yet.
          Rerun to get this x position%
          }%
  }{}%
  \if@bidi@csundef{bidi@ypos@@end@\number\bidi@poscount}{%
          \PackageWarningNoLine{biditools}{%
```

```
          The end y position `\number\bidi@poscount' is not known yet.
          Rerun to get this y position%
          }%
  }{}%
}

\newcommand*{\currentposxwidth}{%
  \if@bidi@csundef{bidi@xpos@@end@\number\bidi@poscount}{\z@}
  {%
    \ifnum\csname bidi@xpos@@start@\number\bidi@poscount
    \endcsname < \csname   bidi@xpos@@end@\number\bidi@poscount
    \endcsname
    \dimexpr \csname bidi@xpos@@end@\number\bidi@poscount
    \endcsname sp - \csname   bidi@xpos@@start@\number\bidi@poscount
    \endcsname sp\relax
  \else
    \dimexpr \csname bidi@xpos@@start@\number\bidi@poscount
    \endcsname sp - \csname   bidi@xpos@@end@\number\bidi@poscount
    \endcsname sp\relax
  \fi
  }%
}

\newcommand*{\currentposyheight}{%
  \if@bidi@csundef{bidi@ypos@@end@\number\bidi@poscount}{\z@}
  {%
    \dimexpr \csname bidi@ypos@@start@\number\bidi@poscount
    \endcsname sp - \csname   bidi@ypos@@end@\number\bidi@poscount
    \endcsname sp\relax
  }%
}



\newcommand*{\setbaselineskip}[1]{%
    \linespread{\strip@pt\dimexpr\numexpr\dimexpr#1\relax*65536/\dimexpr\baselineskip\relax
    \selectfont
}


\newcommand*{\bidi@newrobustcmd}{}
\protected\def\bidi@newrobustcmd{\@star@or@long\bidi@new@command}

\def\bidi@new@command#1{\@testopt{\bidi@newcommand#1}0}

\def\bidi@newcommand#1[#2]{%
  \@ifnextchar[%]
    {\bidi@xargdef#1[#2]}
    {\ifx\l@ngrel@x\relax
       \let\l@ngrel@x\protected
     \else
       \protected\def\l@ngrel@x{\protected\long}%
     \fi
     \@argdef#1[#2]}}
```

```
5948
5949 \long\def\bidi@xargdef#1[#2][#3]#4{%
5950   \@ifdefinable#1{%
5951     \expandafter\protected
5952     \expandafter\def
5953     \expandafter#1%
5954     \expandafter{%
5955       \expandafter\@testopt
5956       \csname\string#1\endcsname{#3}}%
5957     \expandafter\@yargdef\csname\string#1\endcsname\tw@{#2}{#4}}}
5958
5959 \bidi@newrobustcmd*{\bidi@renewrobustcmd}{\@star@or@long\bidi@renew@command}
5960
5961 \def\bidi@renew@command#1{%
5962   \if@bidi@undef{#1}
5963      {\bidi@error{\string#1 undefined}\@ehc}
5964      {}%
5965   \let\@ifdefinable\@rc@ifdefinable
5966   \bidi@new@command#1}
5967
5968
5969
5970 \bidi@newrobustcmd*{\bidi@providerobustcmd}{\@star@or@long\bidi@provide@command}
5971
5972 \def\bidi@provide@command#1{%
5973   \if@bidi@undef{#1}
5974     {\def\reserved@a{\bidi@new@command#1}}
5975     {\def\reserved@a{\bidi@renew@command\reserved@a}}%
5976   \reserved@a}
5977
5978 \newcommand*{\bidi@csuse}[1]{%
5979   \ifcsname#1\endcsname
5980     \csname#1\expandafter\endcsname
5981   \fi}
5982
5983 \newcommand{\bidi@expandonce}[1]{%
5984   \unexpanded\expandafter{#1}}
5985
5986 \def\bidi@protected{%
5987   \let\@@protect\protect
5988   \let\protect\@unexpandable@protect
5989   \afterassignment\restore@protect}
5990
5991 \bidi@newrobustcmd{\bidi@appto}[2]{%
5992   \if@bidi@undef{#1}
5993     {\edef#1{\unexpanded{#2}}}
5994     {\edef#1{\bidi@expandonce#1\unexpanded{#2}}}}
5995 \bidi@newrobustcmd{\bidi@eappto}[2]{%
5996   \if@bidi@undef{#1}
5997     {\edef#1{#2}}
5998     {\edef#1{\bidi@expandonce#1#2}}}
5999 \bidi@newrobustcmd{\bidi@gappto}[2]{%
6000   \if@bidi@undef{#1}
6001     {\xdef#1{\unexpanded{#2}}}
```

```
    {\xdef#1{\bidi@expandonce#1\unexpanded{#2}}}}
\bidi@newrobustcmd{\bidi@xappto}[2]{%
  \if@bidi@undef{#1}
    {\xdef#1{#2}}
    {\xdef#1{\bidi@expandonce#1#2}}}

\bidi@newrobustcmd*{\bidi@protected@eappto}{\bidi@protected\bidi@eappto}
\bidi@newrobustcmd*{\bidi@protected@xappto}{\bidi@protected\bidi@xappto}



\bidi@newrobustcmd{\bidi@preto}[2]{%
  \if@bidi@undef{#1}
    {\edef#1{\unexpanded{#2}}}
    {\edef#1{\unexpanded{#2}\bidi@expandonce#1}}}
\bidi@newrobustcmd{\bidi@epreto}[2]{%
  \if@bidi@undef{#1}
    {\edef#1{#2}}
    {\edef#1{#2\bidi@expandonce#1}}}
\bidi@newrobustcmd{\bidi@gpreto}[2]{%
  \if@bidi@undef{#1}
    {\xdef#1{\unexpanded{#2}}}
    {\xdef#1{\unexpanded{#2}\bidi@expandonce#1}}}
\bidi@newrobustcmd{\bidi@xpreto}[2]{%
  \if@bidi@undef{#1}
    {\xdef#1{#2}}
    {\xdef#1{#2\bidi@expandonce#1}}}

\bidi@newrobustcmd*{\bidi@protected@epreto}{\bidi@protected\bidi@epreto}
\bidi@newrobustcmd*{\bidi@protected@xpreto}{\bidi@protected\bidi@xpreto}



\bidi@newrobustcmd*{\bidi@csappto}[1]{\expandafter\bidi@appto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@cseappto}[1]{\expandafter\bidi@eappto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@csgappto}[1]{\expandafter\bidi@gappto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@csxappto}[1]{\expandafter\bidi@xappto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@protected@cseappto}{\bidi@protected\bidi@cseappto}
\bidi@newrobustcmd*{\bidi@protected@csxappto}{\bidi@protected\bidi@csxappto}



\bidi@newrobustcmd*{\bidi@cspreto}[1]{\expandafter\bidi@preto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@csepreto}[1]{\expandafter\bidi@epreto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@csgpreto}[1]{\expandafter\bidi@gpreto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@csxpreto}[1]{\expandafter\bidi@xpreto\csname#1\endcsname}
\bidi@newrobustcmd*{\bidi@protected@csepreto}{\bidi@protected\bidi@csepreto}
\bidi@newrobustcmd*{\bidi@protected@csxpreto}{\bidi@protected\bidi@csxpreto}



\bidi@newrobustcmd{\if@bidi@patchable}{%
  \bidi@dbg@trce\if@bidi@patchable
  \begingroup
```

```
  \@makeother\#%
  \@ifstar\bidi@ifpatchable@i\bidi@ifpatchable}

\long\def\bidi@ifpatchable#1#2{%
  \endgroup
  \bidi@dbg@init#1%
  \if@bidi@undef{#1}
    {\bidi@dbg@fail{def}\@secondoftwo}
    {\bidi@dbg@info{def}%
     \if@bidi@defmacro{#1}
       {\bidi@dbg@info{mac}%
        \bidi@ifscanable{#1}
          {\bidi@ifhashcheck{#2}
             {\bidi@dbg@info{tok}%
              \bidi@ifpattern#1{#2}
                 {\bidi@dbg@info{pat}%
                  \bidi@dbg@info{pos}\@firstoftwo}
                 {\bidi@dbg@fail{pat}\@secondoftwo}}
             {\bidi@dbg@fail{hsh}\@secondoftwo}}
          {\bidi@dbg@fail{tok}\@secondoftwo}}
       {\bidi@dbg@fail{mac}\@secondoftwo}}}

\long\def\bidi@ifpatchable@i#1{%
  \endgroup
  \bidi@dbg@init#1%
  \if@bidi@undef{#1}
    {\bidi@dbg@fail{def}\@secondoftwo}
    {\bidi@dbg@info{def}%
     \if@bidi@defmacro{#1}
       {\bidi@dbg@info{mac}%
        \if@bidi@defparam{#1}
          {\bidi@dbg@info{prm}%
           \bidi@ifscanable{#1}
             {\bidi@dbg@info{tok}%
              \bidi@dbg@info{pos}\@firstoftwo}
             {\bidi@dbg@fail{tok}\@secondoftwo}}
          {\bidi@dbg@info{prl}%
           \if@bidi@defprotected{#1}
             {\bidi@dbg@info{pro}}
             {}%
           \bidi@dbg@info{pos}\@firstoftwo}}
       {\bidi@dbg@fail{mac}\@secondoftwo}}}

\bidi@newrobustcmd*{\bidi@patchcmd}{%
  \bidi@dbg@trce\bidi@patchcmd
  \begingroup
  \@makeother\#%
  \bidi@@patchcmd}

\newcommand{\bidi@@patchcmd}[4][########1]{%
  \bidi@ifpatchable#2{#3}
    {\bidi@dbg@succ{ret}%
     \begingroup
     \edef\bidi@resrvda{%
```

```
6110        \def\noexpand\bidi@resrvda####1\detokenize{macro:}####2->####3&{%
6111          #1\def\string\bidi@resrvda\space####2{\noexpand\bidi@resrvdb####3&}}%
6112        \def\noexpand\bidi@resrvdb####1\detokenize{#3}####2&{%
6113          ####1\detokenize{#4}####2}%
6114        \edef\noexpand\bidi@resrvda{%
6115          \noexpand\bidi@resrvda\meaning#2&}}%
6116      \bidi@resrvda
6117      \bidi@patchcmd@scantoks\bidi@resrvda
6118      \let#2\bidi@resrvda
6119      \bidi@undef\bidi@resrvda
6120      \@firstoftwo}
6121     {\@secondoftwo}}
6122
6123 \def\bidi@patchcmd@scantoks#1{%
6124   \edef\bidi@resrvda{\endgroup
6125     \unexpanded{\makeatletter\scantokens}{#1}%
6126     \catcode\number`\@=\the\catcode`\@\relax}%
6127   \bidi@resrvda}
6128
6129 \protected\def\bidi@ifscanable#1{%
6130   \begingroup
6131   \edef\bidi@resrvda{%
6132     \def\noexpand\bidi@resrvda####1\detokenize{macro}:####2->####3&{%
6133       ####1\def\string\bidi@resrvda####2{####3}}%
6134     \edef\noexpand\bidi@resrvda{\noexpand\bidi@resrvda\meaning#1&}}%
6135   \bidi@resrvda
6136   \makeatletter
6137   \scantokens\expandafter{\bidi@resrvda}%
6138   \expandafter\endgroup\ifx#1\bidi@resrvda
6139     \expandafter\@firstoftwo
6140   \else
6141     \expandafter\@secondoftwo
6142   \fi}
6143
6144
6145 \protected\long\def\bidi@ifhashcheck#1{%
6146   \begingroup
6147   \edef\bidi@resrvda{\detokenize{#1}}%
6148   \expandafter\endgroup
6149   \expandafter\bidi@ifhashcheck@i\meaning\bidi@resrvda&}
6150
6151 \edef\bidi@ifhashcheck@i#1&{%
6152   \noexpand\expandafter
6153   \noexpand\bidi@ifhashcheck@ii
6154   \noexpand\strip@prefix#1\string#\string#&}
6155
6156 \edef\bidi@ifhashcheck@ii{%
6157   \def\noexpand\bidi@ifhashcheck@ii##1\string#\string###2&}
6158 \bidi@ifhashcheck@ii{\if@bidi@blank{#2}}
6159
6160
6161 \protected\long\def\bidi@ifpattern#1#2{%
6162   \begingroup
6163   \edef\bidi@resrvda{%
```

```
    \def\noexpand\bidi@resrvda####1\detokenize{#2}####2&{%
      \endgroup\noexpand\noexpand\noexpand\if@bidi@blank{####2}}%
    \edef\noexpand\bidi@resrvda{\noexpand\bidi@resrvda
      \expandafter\strip@prefix\meaning#1\detokenize{#2}&}%
    \noexpand\bidi@resrvda}
  \bidi@resrvda\@secondoftwo\@firstoftwo}


\newcommand{\if@bidi@defparam}{}
\long\edef\if@bidi@defparam#1{%
  \noexpand\expandafter\noexpand\bidi@ifdefparam
  \noexpand\meaning#1\detokenize{macro}:->&}
\edef\bidi@ifdefparam{%
  \def\noexpand\bidi@ifdefparam##1\detokenize{macro}:##2->##3&}
\bidi@ifdefparam{\bidi@notblank{#2}}


\newcommand{\if@bidi@defprotected}{}
\long\edef\if@bidi@defprotected#1{%
  \noexpand\expandafter\noexpand\bidi@ifdefprotected
  \noexpand\meaning#1\string\protected&}
\edef\bidi@ifdefprotected{%
  \def\noexpand\bidi@ifdefprotected##1\string\protected##2&}
\bidi@ifdefprotected{\bidi@notblank{#2}}


\bidi@newrobustcmd{\bidi@undef}[1]{\let#1\bidi@undefined}
\bidi@newrobustcmd{\bidi@csundef}[1]{%
  \expandafter\let\csname #1\endcsname\bidi@undefined
}

\let\bidi@dbg@trce\@gobble
\let\bidi@dbg@init\@gobble
\let\bidi@dbg@info\@gobble
\let\bidi@dbg@succ\@gobble
\let\bidi@dbg@fail\@gobble


\bidi@newrobustcmd*{\bidi@apptocmd}{%
  \bidi@dbg@trce\bidi@apptocmd
  \begingroup
  \@makeother\#%
  \bidi@hooktocmd\bidi@append}


\bidi@newrobustcmd*{\bidi@pretocmd}{%
  \bidi@dbg@trce\bidi@pretocmd
  \begingroup
  \@makeother\#%
  \bidi@hooktocmd\bidi@prepend}

\long\def\bidi@hooktocmd#1#2#3{%
```

```
  \endgroup
  \bidi@dbg@init#2%
  \if@bidi@undef{#2}
    {\bidi@dbg@fail{def}\@secondoftwo}
    {\bidi@dbg@info{def}%
     \if@bidi@defmacro{#2}
       {\bidi@dbg@info{mac}%
        \if@bidi@defparam{#2}
          {\bidi@dbg@info{prm}%
           \bidi@ifscanable{#2}
             {\bidi@ifhashcheck{#3}
                {\bidi@dbg@info{tok}%
                 \bidi@dbg@succ{ret}%
                 \bidi@hooktocmd@i#1#2{#3}%
                 \@firstoftwo}
                {\bidi@dbg@fail{hsh}\@secondoftwo}}
             {\bidi@dbg@fail{tok}\@secondoftwo}}
          {\bidi@dbg@info{prl}%
           \if@bidi@defprotected{#2}
             {\bidi@dbg@info{pro}%
              \bidi@dbg@succ{red}%
              \protected}
             {\bidi@dbg@succ{red}}%
           \edef#2{#1{\bidi@expandonce#2}{\unexpanded{#3}}}%
           \@firstoftwo}}
       {\bidi@dbg@fail{mac}\@secondoftwo}}}

\long\def\bidi@hooktocmd@i#1#2#3{%
  \begingroup
  \edef\bidi@resrvda{%
    \def\noexpand\bidi@resrvda####1\detokenize{macro}:####2->####3&{%
      ####1\def\string\bidi@resrvda\space####2{#1{####3}{\detokenize{#3}}}}%
    \edef\noexpand\bidi@resrvda{%
      \noexpand\bidi@resrvda\meaning#2&}}%
  \bidi@resrvda
  \bidi@patchcmd@scantoks\bidi@resrvda
  \let#2\bidi@resrvda
  \bidi@undef\bidi@resrvda}

\long\def\bidi@append#1#2{#1#2}
\long\def\bidi@prepend#1#2{#2#1}

%\bidi@newrobustcmd*{\bidi@AtEndPreamble}{\bidi@gappto\bidi@endpreamblehook}
%\newcommand*{\bidi@endpreamblehook}{}

\bidi@newrobustcmd*{\bidi@AtEndPreamble}{\AddToHook{begindocument/before}}%

\bidi@newrobustcmd*{\bidi@BeforeOutputPageShipOut}{\bidi@gappto\bidi@beforeoutputpageshipou
\newcommand*{\bidi@beforeoutputpageshipouthook}{}

\bidi@newrobustcmd*{\bidi@BeforeHeader}{\bidi@gappto\bidi@beforeheaderhook}
\newcommand*{\bidi@beforeheaderhook}{}

\bidi@newrobustcmd*{\bidi@BeforeOutputBoxOutputPage}{\bidi@gappto\bidi@beforeoutputboxoutpu
```

```
\newcommand*{\bidi@beforeoutputboxoutputpagehook}{}

\bidi@newrobustcmd*{\bidi@AfterOutputBoxOutputPage}{\bidi@gappto\bidi@afteroutputboxoutputp
\newcommand*{\bidi@afteroutputboxoutputpagehook}{}

\bidi@newrobustcmd*{\bidi@BeforeFooter}{\bidi@gappto\bidi@beforefooterhook}
\newcommand*{\bidi@beforefooterhook}{}

\bidi@newrobustcmd*{\bidi@AfterFooter}{\bidi@gappto\bidi@afterfooterhook}
\newcommand*{\bidi@afterfooterhook}{}


\bidi@newrobustcmd*{\bidi@AfterOutputPageShipOut}{\bidi@gappto\bidi@afteroutputpageshipouth
\newcommand*{\bidi@afteroutputpageshipouthook}{}

\bidi@newrobustcmd*{\bidi@AtEndOutputPage}{\bidi@gappto\bidi@atendoutputpagehook}
\newcommand*{\bidi@atendoutputpagehook}{}

%\bidi@preto\document{%
%  \endgroup
%  \let\bidi@AtEndPreamble\@firstofone
%  \bidi@endpreamblehook
%  \protected\def\bidi@AtEndPreamble{\@notprerr\@gobble}%
%  \bidi@undef\bidi@endpreamblehook
%  \begingroup}

\bidi@newrobustcmd*{\bidi@AfterPreamble}{\AtBeginDocument}
\bidi@AtEndPreamble{\let\bidi@AfterPreamble\@firstofone}

%\bidi@newrobustcmd*{\bidi@AfterEndPreamble}{\bidi@gappto\bidi@afterendpreamblehook}
%\newcommand*{\bidi@afterendpreamblehook}{}

\bidi@newrobustcmd*{\bidi@AfterEndPreamble}{\AddToHook{begindocument/end}}%

%\bidi@appto\document{%
%  \let\bidi@AfterEndPreamble\@firstofone
%  \bidi@afterendpreamblehook
%  \protected\def\bidi@AfterEndPreamble{\@notprerr\@gobble}%
%  \bidi@undef\bidi@afterendpreamblehook
%  \ignorespaces}

\bidi@newrobustcmd*{\bidi@AfterEndDocumentCheckLabelsRerun}{\bidi@gappto\bidi@afterenddocum
\newcommand*{\bidi@afterenddocumentchecklabelsrerunhook}{}

\bidi@patchcmd\enddocument
  {\fi}
  {\let\bidi@AfterEndDocumentCheckLabelsRerun\@firstofone
   \bidi@afterenddocumentchecklabelsrerunhook
   \fi}
   {}
   {\PackageWarning{biditools}{Patching `\string\enddocument' failed}}

\AtEndDocument{\let\bidi@AfterEndPreamble\@gobble}

```

```
\bidi@newrobustcmd*{\bidi@AfterLastShipout}{\bidi@gappto\bidi@afterlastshipouthook}
\newcommand*{\bidi@afterlastshipouthook}{}

\bidi@patchcmd\enddocument
  {\clearpage}
  {\clearpage
   \let\bidi@AfterLastShipout\@firstofone
   \bidi@afterlastshipouthook}
  {}
  {\let\bidi@clearpage\clearpage
   \def\clearpage{%
     \bidi@clearpage
     \let\bidi@AfterLastShipout\@firstofone
     \bidi@afterlastshipouthook}}

%\bidi@newrobustcmd*{\bidi@AfterEndDocument}{\bidi@gappto\bidi@afterenddocumenthook}
%\newcommand*{\bidi@afterenddocumenthook}{}

\bidi@newrobustcmd*{\bidi@AfterEndDocument}{\AddToHook{enddocument/end}}%

%\bidi@patchcmd\enddocument
%  {\deadcycles}
%  {\let\bidi@AfterEndDocument\@firstofone
%   \bidi@afterenddocumenthook
%   \deadcycles}
%  {}
%  {\let\bidi@@end\@@end
%   \def\@@end{%
%     \let\bidi@AfterEndDocument\@firstofone
%     \bidi@afterenddocumenthook
%     \bidi@@end}}

\bidi@newrobustcmd{\bidi@AtBeginEnvironment}[1]{%
  \bidi@csgappto{@bidi@begin@#1@hook}}

% Patch \begin<space> and \end<space> in newer LaTeX releases
% \begin and \end in older ones.
\expandafter\bidi@patchcmd\csname begin\ifcsname begin \endcsname\space\fi\endcsname
  {\csname #1\endcsname}
  {\bidi@csuse{@bidi@begin@#1@hook}%
   \csname #1\endcsname}
  {}
  {\bidi@warning{%
     Patching '\string\begin' failed!\MessageBreak
     '\string\bidi@AtBeginEnvironment' will not work\@gobble}}


\bidi@newrobustcmd{\bidi@AtEndEnvironment}[1]{%
  \bidi@csgappto{@bidi@end@#1@hook}}

\expandafter\bidi@patchcmd\csname end\ifcsname end \endcsname\space\fi\endcsname
  {\csname end#1\endcsname}
  {\bidi@csuse{@bidi@end@#1@hook}%
```

```
   \csname end#1\endcsname}
  {}
  {\bidi@warning{%
     Patching '\string\end' failed!\MessageBreak
     '\string\bidi@AtEndEnvironment' will not work\@gobble}}


\bidi@newrobustcmd{\bidi@BeforeBeginEnvironment}[1]{%
  \bidi@csgappto{@bidi@beforebegin@#1@hook}}

\expandafter\bidi@pretocmd\csname begin\ifcsname begin \endcsname\space\fi\endcsname
  {\bidi@csuse{@bidi@beforebegin@#1@hook}}
  {}
  {\bidi@warning{%
     Patching '\string\begin' failed!\MessageBreak
     '\string\bidi@BeforeBeginEnvironment' will not work\@gobble}}

\bidi@newrobustcmd{\bidi@AfterEndEnvironment}[1]{%
  \bidi@csgappto{@bidi@afterend@#1@hook}}

\expandafter\bidi@patchcmd\csname end\ifcsname end \endcsname\space\fi\endcsname
  {\if@ignore}
  {\bidi@csuse{@bidi@afterend@#1@hook}%
   \if@ignore}
  {}
  {\bidi@warning{%
     Patching '\string\end' failed!\MessageBreak
     '\string\bidi@AfterEndEnvironment' will not work\@gobble}}

\def\bidi@namedef#1{\expandafter\def\csname #1\endcsname}
\def\bidi@namegdef#1{\expandafter\gdef\csname #1\endcsname}
\def\bidi@nameedef#1{\expandafter\edef\csname #1\endcsname}
\def\bidi@namexdef#1{\expandafter\xdef\csname #1\endcsname}

% From David Carlisle:
% The \@stpelt redefinition below belongs to Heiko Oberdiek
% See also https://github.com/ho-tex/oberdiek/issues/26

\let\@bidi@stepcounter\stepcounter
\let\@bidi@@stpelt\@stpelt

\def\@stpelt#1{%
  \ifcsname bidi@reset@#1@perpage\endcsname
    \begingroup
      \let\stepcounter\@bidi@stepcounter
      \@bidi@@stpelt{#1}%
    \endgroup
    \expandafter\@gobbletwo
  \fi
  \@bidi@@stpelt{#1}%
}

\bidi@pretocmd\stepcounter
```

```
  {%
    \if@bidi@csundef{bidi@stepcounterhook@@#1}{}{%
      \csname bidi@stepcounterhook@@#1\endcsname
    }%
  }{}%
  {\PackageWarning{biditools}{Patching `\string\stepcounter' failed}}

\chardef\bidi@backslash`\\
\def\bidics#1{\texttt{\char\bidi@backslash#1}}

% anonymous control sequences
\newcount\bidi@tempcountb
\newtoks\bidi@temptoksa
\newtoks\bidi@temptoksb

% Catcode (re)storing
%
\def\bidi@storecatcode#1%
   {\escapechar\m@ne
    \bidi@csarg\edef{bidi@restorecatcode\string#1}%
          {\catcode`\string#1=
                \the\catcode\expandafter`\string#1}%
    \catcode\expandafter`\string#1=12\relax
    \escapechar`\\\relax}
\def\bidi@restorecatcode#1%
   {\escapechar\m@ne
    \csname bidi@restorecatcode\string#1\endcsname
    \escapechar`\\\relax}

% Construct a control sequence inside \edef
%
\def\bidi@csname#1{\expandafter\noexpand\csname#1\endcsname}

% Construct a control sequence out of #2, and give it to #1
%
\def\bidi@csarg#1#2{\expandafter#1\csname#2\endcsname}

% Pick an escapecharacter
% this presumes that its argument is a character.
%
\def\bidi@pickescape#1{\ifnum`#1=\escapechar\else#1\fi}

% Equality of strings.
% the fast approach: does not work in expansion-only environment.
%
\def\bidi@EqualString#1#2{00\fi\def\bidi@eqs@a{#1}\def\bidi@eqs@b{#2}%
    \ifx\bidi@eqs@a\bidi@eqs@b}

% Test by expansion only
%
\def\bidi@EqualStringX#1#2{00\fi
    \csname if\@bidi@EqualStringX#1&$#2&$\endcsname}
\def\@bidi@EqualStringX#1#2$#3#4$#5{\ifx#1#3%
        \ifx#1&true\else\bidi@hop@ES\@bidi@EqualStringX#2$#4$\fi
```

```
    \else false\fi}
\def\bidi@hop@ES#1\fi#2\fi{\fi\fi#1}

% Lexicographic ordering
% note the use of \def
% also note the characters 0,127,255 that are used,
% these are not supposed to appear in the strings
%
{\catcode0=12 \catcode255=12 \catcode127=12
\gdef\bidi@StringBeforeNC#1#2{00\fi
  \bidi@CharsBefore#1^^@^^?#2^^ff^^?}
\gdef\bidi@CharsBeforeNC#1#2^^?#3#4^^?{%
  \ifcat#1\relax\def\bidi@next{\bidi@CharsBefore#2^^@^^?#3#4^^ff^^?}%
  \else\ifcat#3\relax\def\bidi@next{\bidi@CharsBefore#1#2^^@^^?#4^^ff^^?}%
       \else\ifnum\lccode`#1<\lccode`#3
              \def\bidi@next{\csname iftrue\endcsname}%
            \else\ifnum\lccode`#1>\lccode`#3
                   \def\bidi@next{\csname iffalse\endcsname}%
                 \else\def\bidi@next{\bidi@CharsBefore#2^^?#4^^?}%
  \fi  \fi  \fi  \fi
  \bidi@next}
\gdef\bidi@StringBefore#1#2{00\fi
  \bidi@CharsBefore#1^^@^^?#2^^ff^^?}
\gdef\bidi@CharsBefore#1#2^^?#3#4^^?{%
  \ifnum`#1<`#3
       \def\bidi@next{\csname iftrue\endcsname}%
  \else\ifnum`#1>`#3
       \def\bidi@next{\csname iffalse\endcsname}%
       \else\def\bidi@next{\bidi@CharsBefore#2^^?#4^^?}%
  \fi\fi
  \bidi@next}
}

% Null argument test
%
\def\bidi@empty{}
\def\bidi@ifempty#1{00\fi\expandafter\ifx\csname bidi@#1@null\endcsname\bidi@@null}
\def\bidi@ifEmptyX#1{\expandafter\ifx\csname bidi@#1@null\endcsname\bidi@@null}
%\def\bidi@ifEmpty#1{\def\bidi@cs@a{#1}\ifx\bidi@cs@a\bidi@empty}
\def\bidi@IsEmptyList#1{00\fi\def\bidi@cs@a{#1}\ifx\cs@a\bidi@empty}

% Next character test
%
\def\bidi@NextChar#1#2#3{00\fi
    \let\bidi@nxt@ch#1\def\bidi@nxt@a{#2}\def\bidi@nxt@b{#3}%
    \futurelet\bidi@nxt@c\@bidi@ifnxtc}
\def\bidi@ifNextChar#1#2#3{%
    \let\bidi@nxt@ch#1\def\bidi@nxt@a{#2}\def\bidi@nxt@b{#3}%
    \futurelet\bidi@nxt@c\@bidi@ifnxtc}
\def\@bidi@ifnxtc{\ifx\bidi@nxt@ch\bidi@nxt@c \expandafter\bidi@nxt@a
    \else \expandafter\bidi@nxt@b \fi}

% Test for defined-ness of string as control sequence.
% works inside \edef
```

```
%
\def\bidi@undefinedcs#1{00\fi\bidi@csarg\ifx{#1}\relax}

% Define uniquely defined dummy macros,
% usually to serve as bumper blocks at the end of a list
%
\newcount\bidi@dummies
\def\DefNewDummy#1{
    \if\bidi@undefinedcs{#1}\bidi@csarg\edef{#1}{bidi@dum\the\bidi@dummies}
        \advance\bidi@dummies\@ne
    \else
        \bidi@error{Attempt at second definition of `#1'}
    \fi}

% string case statement
% use: \bidi@switch \iftest{...} in:
%      item1 action1
%      ...
%      itemn actionn
%      default defaultaction [optional]
%      \endbidi@switch
% inspired by Jonathan Fine: Some Basic Control Macros
% Tugboat 12 #4
%
\let\@bidi@fi\fi \let\endbidi@switch\relax \DefNewDummy{bidi@default}
\def\bidi@switch@exit #1 \@bidi@fi #2 \endbidi@switch {\fi #1}
\def\bidi@switch #1#2#3{\bidi@csarg\ifx{#2}\bidi@default\bidi@switch@exit #3 \@bidi@fi
  #1{#2}\bidi@switch@exit #3 \@bidi@fi
  \bidi@switch {#1}
}
% this version puts the test object in {}
\def\bidi@oswitch #1 in: #2 #3; {\bidi@csarg\ifx{#2}\bidi@default\bidi@switch@exit #3 \@bid
  #1{#2}\bidi@switch@exit #3 \@bidi@fi
  \bidi@switch #1 in:
}
% this version assumes that the test object is just one character
\def\bidi@cswitch #1 in: #2 #3; {\bidi@csarg\ifx{#2}\bidi@default\bidi@switch@exit #3 \@bid
  #1#2\bidi@switch@exit #3 \@bidi@fi
  \bidi@cswitch #1 in:
}
% this version assumes that the test object can have an optional space
\def\bidi@bswitch #1 in: #2 #3; {\bidi@csarg\ifx{#2}\bidi@default\bidi@switch@exit #3 \@bid
  #1#2 \bidi@switch@exit #3 \@bidi@fi
  \bidi@bswitch #1 in:
}
% this version can cope with significant spaces at the start of #3;
% #2 is macro argument
\def\bidi@mswitch #1 in: #2:#3; {\bidi@csarg\ifx{#2}\bidi@default\bidi@switch@exit #3 \@bid
  #1{#2}\bidi@switch@exit #3 \@bidi@fi
  \bidi@mswitch #1 in:
}
% idem; #2 does not have to be enclosed in braces
\def\bidi@fswitch #1 in: #2:#3; {\bidi@csarg\ifx{#2}\bidi@default\bidi@switch@exit #3 \@bid
  #1#2 \bidi@switch@exit #3 \@bidi@fi
```

```
  \bidi@fswitch #1 in:
}

% Routines for taking the value of a string:
% if the string is defined as control sequence
% take the value of that, otherwise take the string itself

% String or value of control sequence
%
\def\bidi@w@w#1{\if\bidi@undefinedcs{#1}#1\else \the\csname#1\endcsname\fi}

% String or control sequence
%
\def\@bidi@ww#1{\if\bidi@undefinedcs{#1}#1\else \csname#1\endcsname \fi}

% String or \noexpand-ed control sequence;
% for use in \edef
%
\newif\ifbidi@in@label
\def\@bidi@w@w#1{\if\bidi@undefinedcs{#1}#1\else
            \ifbidi@in@label\noexpand\protect\fi \bidi@csname{#1}\fi}
\newtoks\bidi@are@these@correct
\def\bidi@t@w@w#1{%
    \if\bidi@undefinedcs{#1}#1%
        \ifdefining\bidi@append@to@list\bidi@are@these@correct{#1 }\fi
    \else
        \ifin@label\noexpand\protect\fi \bidi@csname{#1}\fi}

% List Manipulation ................
% this assumes that #1 is a list of tokens, #2 is the name of a list
%
% Names of lists (and of items to pop into) are given as strings;
% not as control sequences.
%
\newtoks\bidi@toks@lista \newtoks\bidi@toks@listb
% basic append/prepend macro
\long\def\@bidi@append@to@cslist#1#2#3{\begingroup\bidi@toks@lista=#2{#3}%
  \global#1=\expandafter\expandafter\expandafter{\expandafter\the\expandafter#1\the\bidi@to
\long\def\@bidi@prepend@to@cslist#1#2#3{\begingroup\bidi@toks@lista=#2{#3}%
  \global#1=\expandafter\expandafter\expandafter{\expandafter\the\expandafter\bidi@toks@lis
\def\@bidi@append@to@list{\bidi@csarg\@bidi@append@to@cslist}
\def\@bidi@prepend@to@list{\bidi@csarg\@bidi@prepend@to@cslist}
% variations:
\long\def\bidi@append@to@list#1#2{\@bidi@append@to@list{#1}{}{#2}}
\long\def\bidi@prepend@to@list#1#2{\@bidi@prepend@to@list{#1}{}{#2}}
\def\bidi@append@list@to@list#1#2{%
  \@bidi@append@to@list{#1}{\expandafter\expandafter\expandafter}{\expandafter\the\csname#2
\def\bidi@prepend@list@to@list#1#2{%
  \@bidi@prepend@to@list{#1}{\expandafter\expandafter\expandafter}{\expandafter\the\csname#
\def\bidi@append@cslist@to@cslist#1#2{%
  \@bidi@append@to@cslist{#1}\expandafter{\the#2}}
\def\bidi@prepend@cslist@to@cslist#1#2{%
  \@bidi@prepend@to@cslist{#1}\expandafter{\the#2}}
\def\bidi@append@toks@cs@to@list#1#2{\@bidi@append@to@list{#1}\expandafter{\the#2}}
```

```
\def\bidi@prepend@toks@cs@to@list#1#2{\@bidi@prepend@to@list{#1}\expandafter{\the#2}}

\let\bidi@willbeunhskip\unhskip

% A few list macros for the user
\def\NewTokenList:#1 {\bidi@csarg\newtoks{#1}\global\csname#1\endcsname{}}
\def\EmptyTokenList:#1 {\global\csname#1\endcsname{}}
\long\def\AppendToTokenList:#1=#2 {\@bidi@append@to@list{#1}{}{#2}}
\long\def\PrependToTokenList:#1=#2 {\@bidi@prepend@to@list{#1}{}{#2}}
\def\TheTokenList:#1 {\let\bidi@oldwbuskip\bidi@willbeunhskip \let\bidi@willbeunhskip\@empt
    \if\bidi@undefinedcs{#1}\bidi@error{Token List <#1> undefined}
    \else\bidi@csarg\the{#1}\fi
    \let\bidi@willbeunhskip\bidi@oldwbuskip}

\def\bidi@del@tok@from@list#1#2{\begingroup
    \long\def\bidi@cs@liste##1#2##2\bidi@tok@SM
       {\bidi@toks@lista{##1}\bidi@toks@listb{##2}%
        \edef\bidi@cs@listb{\global\bidi@csname{#1}=
                {\the\bidi@toks@lista\the\bidi@toks@listb}}%
        \bidi@cs@listb}%
    \edef\bidi@cs@lista{\noexpand\bidi@cs@liste{}\expandafter\the\csname#1\endcsname\noexpa
    \bidi@cs@lista \endgroup}
\def\bidi@in@front@of@list#1{\bidi@csarg{\let\expandafter\bidi@cs@lista}{#1}%
  \bidi@in@front@of@cslist\bidi@cs@lista}
\long\def\bidi@in@front@of@cslist#1#2{\begingroup\bidi@toks@lista={#2}%
  \global#1=\expandafter\expandafter\expandafter{\expandafter\the\expandafter\bidi@toks@lis
  \endgroup}
\long\def\bidi@local@in@front@of@list#1#2{\bidi@toks@lista={#2}%
    \csname#1\endcsname\expandafter\expandafter\expandafter\expandafter\expandafter\expanda
                {\expandafter\expandafter\expandafter\the\expandafter\expandafter\expandaft
                 \expandafter\the\csname#1\endcsname}%
    }
\def\bidi@set@list#1{\bidi@csarg{\let\expandafter\bidi@cs@lista}{#1}%
  \bidi@set@cslist\bidi@cs@lista}
\long\def\bidi@set@cslist#1#2{\begingroup\bidi@toks@lista={#2}%
   \global#1=\expandafter{\the\bidi@toks@lista}\endgroup}

%%%%%%%%%%%%%%% Stack macros
%
% push in terms of prepending of lists
\def\bidi@push@cs@onto@cs#1#2{\@bidi@prepend@to@cslist#1\expandafter{\expandafter\\\expanda
\def\bidi@push@onto#1{\bidi@csarg\bidi@push@onto@cs{#1}}
\def\bidi@push@onto@cs#1#2{\@bidi@prepend@to@cslist#1{}{\\{#2}}}
\def\bidi@local@push@onto#1#2{\let\\=\relax
    \bidi@local@in@front@of@list{#1}{\\{#2}}}
% pop via auxiliary macro: #1 is result, #2 is stack
% two cs arguments
\def\bidi@pop@cs@into#1#2{\edef\bidi@cs@e
   {\noexpand\@@bidi@popinto\noexpand#1\noexpand#2\the#2\noexpand\@@bidi@pop}\bidi@cs@e}
% two string arguments
\def\bidi@pop@into#1#2{\edef\bidi@cs@e
   {\noexpand\@@bidi@popinto\bidi@csname{#1}\bidi@csname{#2}\bidi@csarg\the{#2}\noexpand\@@
\long\def\@@bidi@popinto#1#2\\#3#4\@@bidi@pop{#1{#3}#2{#4}}
\def\bidi@copy@stacktop#1#2{%
```

```
    \edef\bidi@cs@e{\noexpand\@bidi@copy@stacktop
                    {#1}\bidi@csarg\the{#2}\noexpand\@@bidi@pop}%
    \bidi@cs@e}
\def\@bidi@copy@stacktop#1\\#2#3\@@bidi@pop{\csname#1\endcsname#2\relax}
\newcount\bidi@stack@length \newtoks\bidi@empty@stack \bidi@empty@stack{\\{}}
\def\bidi@length@of@stack#1{\bidi@csarg\bidi@length@of@csstack{#1}}
\def\bidi@length@of@csstack#1{\def\\##1{\advance\bidi@stack@length\@ne}%
  \bidi@stack@length\m@ne \the#1}
% turn a stack upside down
\def\bidi@invert@csstack#1{\bidi@length@of@csstack{#1}%
  \bidi@tempcountb\z@ \bidi@temptoksa\bidi@empty@stack
  \loop\ifnum\bidi@tempcountb<\bidi@stack@length
    \bidi@pop@cs@into\bidi@temptoksb#1\advance\bidi@stack@length\m@ne
    \bidi@push@cs@onto@cs\bidi@temptoksa\bidi@temptoksb
%    \bidi@append@cslist@to@cslist\bidi@temptoksb\bidi@temptoksa% append a to b
%    \bidi@temptoksa\bidi@temptoksb
    \repeat% copy b to a
  #1\bidi@temptoksa \bidi@temptoksa\bidi@empty@toks}
% invert a stack into a list
\def\bidi@x@stack@to@list#1{\bidi@length@of@stack{#1}%
  \bidi@tempcountb\z@ \bidi@temptoksa\bidi@empty@toks
  \loop\ifnum\bidi@tempcountb<\bidi@stack@length
    \bidi@pop@into{bidi@temptoksb}{#1}\advance\bidi@stack@length\m@ne
    \bidi@append@list@to@list{bidi@temptoksb}{bidi@temptoksa}\repeat
  \csname#1\endcsname\bidi@temptoksa \bidi@temptoksa\bidi@empty@toks}


% General loop macro:
% \looprepeat
%   \forvariable{<var>} \fromvalue{<start>} \bystep{<step>} \tovalue{<end>} \downtovalue{<e
%               \untilcondition{<cond>} \whilecondition{<cond>}
%   \doloopbody { <loop body> }
% where all control sequences in between \looprepeat and \doloopbody are optional.
%
% var: characters to form a control sequence;
%    after \forvariable{index} you can access the loop counter as \index.
%    This is a count register; to print it use \number\index.
% start,step,end: integers with obvious relations to the loop counter;
%    start and step have a default value of 1
% cond: (sequence of commands ending in) any TeX \if... test.
%
% Count down instead of up with \downtovalue; the increment given in \bystep
% is always positive, and is added or subtracted accordingly.
%
% Tests: \untilcondition is evaluated at the end of the loop body; \whilecondition
% at the beginning of the loop body.
%
% Exit from middle of loop: \breaklooprepeat
% use this at any place in the loop; in case of a conditional use
%   \ifsomething ... \expandafter \breaklooprepeat \fi
%
% Note that the line ends do not cause spaces in the output.
%
% Technical details:
```

```
% The loop body is not executed in a group: the braces are those
% of a token list.
% The `forvariable' variable is \let to a \count register.



% Auxiliary stuff
\def\bidi@looprepeat@csarg#1#2{\expandafter#1\csname#2\endcsname}
\def\bidi@looprepeat@csromannumeral#1{\csname #1\romannumeral\bidi@looprepeat@depth\endcsna
\def\bidi@looprepeat@csargromannumeral#1#2{\expandafter#1\csname#2\romannumeral\bidi@loopre

\newcount\bidi@looprepeat@depth
\let\endlooprepeat\relax \def\bidi@csprotect{}
% Trace switches may later be defined by PAC_utils
\let\bidi@looprepeat@traceinit\relax \let\bidi@looprepeat@traceexit\relax

% Main repeatloop macro
% - go to next level and allocate unique counter/toks if this is the
%   first time we visit this level
% - setup: gather bounds and termination conditions
% - scoop up body in token list; after the assignment define and
%   execute body
\def\looprepeat#1\doloopbody{\bidi@looprepeat@traceinit % exit in \breakrepeatloop
  \advance\bidi@looprepeat@depth\@ne\relax
  \bidi@looprepeat@csargromannumeral\ifx{bidi@looprepeat@count}\relax
    \bidi@looprepeat@csargromannumeral{\csname newcount\expandafter\endcsname}{bidi@looprep
    \bidi@looprepeat@csargromannumeral{\csname newtoks\expandafter\endcsname}{bidi@looprepe
    \bidi@looprepeat@csargromannumeral{\csname newtoks\expandafter\endcsname}{bidi@looprepe
    \bidi@looprepeat@csargromannumeral{\csname newtoks\expandafter\endcsname}{bidi@looprepe
  \fi \bidi@looprepeat@zero \def\bidi@looprepeat@sign{}\def\bidi@looprepeat@comp{>}\bidi@lo
  \edef\bidi@looprepeat@tmp
     {\def\bidi@looprepeat@csargromannumeral\noexpand{bidi@looprepeat@looprepeat}{\bidi@loo
  \afterassignment\bidi@looprepeat@dxbody\bidi@looprepeat@csromannumeral{bidi@looprepeat@to

% Define and execute loop body
% This is done with an \edef to construct the actual sequence
\def\bidi@looprepeat@dxbody{\bidi@looprepeat@csargromannumeral\edef{bidi@looprepeat@body}{%
    \bidi@looprepeat@csargromannumeral\the{bidi@looprepeat@wtest}%
      \noexpand\the\bidi@looprepeat@csargromannumeral\noexpand{bidi@looprepeat@toks}%
        \bidi@looprepeat@csargromannumeral\the{bidi@looprepeat@utest}%
    \global\bidi@looprepeat@csargromannumeral\advance{bidi@looprepeat@count} by \bidi@loopr
    \noexpand\endlooprepeat
    \bidi@looprepeat@csargromannumeral\noexpand{bidi@looprepeat@looprepeat}}%
  \bidi@looprepeat@csromannumeral{bidi@looprepeat@body}\ignorespaces}

% Stop test
%% In order to stop, issue a
% \breaklooprepeat which scoops up the rest of the body and exits
\def\breaklooprepeat#1\endlooprepeat{\bidi@looprepeat@zero\bidi@looprepeat@csargromannumera
  \advance\bidi@looprepeat@depth\m@ne \bidi@looprepeat@traceexit
  }


% Setup
```

```
% gather bounds and termination conditions
\def\bidi@looprepeat@setup#1{%
  \begingroup
    \def\forvariable##1{%
      \edef\bidi@looprepeat@tmp{%
        \global\let\bidi@looprepeat@csarg\noexpand{##1}\bidi@looprepeat@csromannumeral{bidi
      \bidi@looprepeat@tmp}%
    \def\fromvalue##1{\bidi@looprepeat@csargromannumeral\global{bidi@looprepeat@count}##1\i
    \def\tovalue##1{%
      \edef\bidi@looprepeat@tmp{\global\bidi@looprepeat@csargromannumeral\noexpand{bidi@loo
       {\bidi@looprepeat@csargromannumeral\the{bidi@looprepeat@wtest}%
        \noexpand\ifnum\bidi@looprepeat@csargromannumeral\noexpand{bidi@looprepeat@count}\b
          \noexpand\expandafter \noexpand\breaklooprepeat
        \noexpand\fi}\ignorespaces}%
      \bidi@looprepeat@tmp}%
    \def\downtovalue##1{%
      \gdef\bidi@looprepeat@sign{-}\gdef\bidi@looprepeat@comp{<}\tovalue{##1}\ignorespaces}
    \def\bystep##1{\ifnum##1<0 \bidi@error{LOOPREPEAT: increment has to be a positive value
                \bidi@looprepeat@csargromannumeral\gdef{bidi@looprepeat@inc}{-##1}\else
                \bidi@looprepeat@csargromannumeral\gdef{bidi@looprepeat@inc}{##1}\fi\ignores
    \def\untilcondition##1{%
      \edef\bidi@looprepeat@tmp{\global\bidi@looprepeat@csargromannumeral\noexpand{bidi@loo
         {\noexpand##1\relax
          \noexpand\expandafter \noexpand\breaklooprepeat \noexpand\fi}\ignorespaces}%
      \bidi@looprepeat@tmp}%
    \def\whilecondition##1{%
      \edef\bidi@looprepeat@tmp{\global\bidi@looprepeat@csargromannumeral\noexpand{bidi@loo
         {\noexpand##1\relax \noexpand\else
          \noexpand\expandafter \noexpand\breaklooprepeat \noexpand\fi}\ignorespaces}%
    \bidi@looprepeat@tmp}%
    \fromvalue{\@ne}\bystep{\@ne}#1%
  \endgroup}
\def\bidi@looprepeat@zero
   {\bidi@looprepeat@csromannumeral{bidi@looprepeat@toks}{}\bidi@looprepeat@csromannumeral{
    \bidi@looprepeat@csargromannumeral\def{bidi@looprepeat@body}{}}

%\tracingmacros2
%\newcount\tmpcount % used in some examples below

%\looprepeat \forvariable{i}
%        \bystep{2}
%  \doloopbody {%
%     \ifnum\i=13 \expandafter\breaklooprepeat \fi
%     \number\i{} %
%}%

%\looprepeat \forvariable{iii}
%        \tovalue{8}
%   \doloopbody {}
%After loop: \number\iii%

%\looprepeat \forvariable{i}
%        \fromvalue{10}
%        \bystep{2}
```

```
%        \downtovalue{0}
%   \doloopbody {\number\i{} }

%\looprepeat \forvariable{x} \whilecondition{\ifnum\x<7}
%   \doloopbody {\number\x{} }

%\looprepeat \tovalue{3} \doloopbody {Hello world! }

%\looprepeat \forvariable{j}
%        \untilcondition{\tmpcount\j \divide\tmpcount by 37 \noexpand\ifnum\tmpcount=1}
%  \doloopbody {\number\j{} }

%\looprepeat \forvariable{i} \bystep{2} \tovalue{10} \doloopbody
% {\looprepeat \forvariable{j} \fromvalue{\i} \bystep{3} \tovalue{18}
%  \doloopbody {(\number\i.\number\j) }
% }

% infinite loop
%\looprepeat \doloopbody {}

\ExplSyntaxOn
\NewDocumentCommand \bidi@AfterClass { s m o +m }
  {
    \IfBooleanTF { #1 }
      {
        \@ifclassloaded{ #2 }
          { #4 }
          {
            \hook_gput_code:nnn
              { file / #2.\@clsextension / after }
              { #3 }
              { #4 }
          }
      }
      {
        \hook_gput_code:nnn { file / #2.\@clsextension / after } { #3 } { #4 }
      }
  }

\seq_new:N \g__biditools_input_file_seq

\prg_new_protected_conditional:Npnn \__bidi_if_loading:n #1 { T, F, TF }
  {
    \str_set:Nx \l_tmpa_str { #1 }
    \seq_if_in:NxTF \g__biditools_input_file_seq { \str_use:N \l_tmpa_str }
      { \prg_return_true: }
      { \prg_return_false: }
  }

\prg_new_protected_conditional:Npnn \bidi_if_class_loaded:n #1 { T, F, TF }
  {
    \@ifclassloaded { #1 }
      {
        \__bidi_if_loading:nTF { #1.\@clsextension }
```

```
          { \prg_return_false: }
          { \prg_return_true: }
      }
      {
        \prg_return_false:
      }
  }

\prg_new_protected_conditional:Npnn \bidi_if_package_loaded:n #1 { T, F, TF }
  {
    \@ifpackageloaded { #1 }
      {
        \__bidi_if_loading:nTF { #1.\@pkgextension }
          { \prg_return_false: }
          { \prg_return_true: }
      }
      {
        \prg_return_false:
      }
  }

\NewDocumentCommand \bidi@AfterAtEndOfClass { s m o +m }
  {
    \IfBooleanTF { #1 }
      {
        \bidi_if_class_loaded:nTF { #2 }
          { #4 }
          { \hook_gput_code:nnn { class / #2 / after } { #3 } { #4 } }
      }
      {
        \bidi_if_class_loaded:nF
          { #2 }
          { \hook_gput_code:nnn { class / #2 / after } { #3 } { #4 } }
      }
  }

\NewDocumentCommand \bidi@AfterPackage { s m o +m }
  {
    \IfBooleanTF { #1 }
      {
        \@ifpackageloaded{ #2 }
          { #4 }
          {
            \hook_gput_code:nnn
              { file / #2.\@pkgextension / after }
              { #3 }
              { #4 }
          }
      }
      {
        \hook_gput_code:nnn { file / #2.\@pkgextension / after } { #3 } { #4 }
      }
  }

```

```
\NewDocumentCommand \bidi@AfterAtEndOfPackage { s m o +m }
  {
    \IfBooleanTF { #1 }
      {
        \bidi_if_package_loaded:nTF { #2 }
          { #4 }
          { \hook_gput_code:nnn { package / #2 / after } { #3 } { #4 } }
      }
      {
        \bidi_if_package_loaded:nF
          { #2 }
          { \hook_gput_code:nnn { package / #2 / after } { #3 } { #4 } }
      }
  }

\clist_new:N \l__biditools_package_clist
\msg_new:nnn { biditools } { cannot-prevent-for-already-loaded-package }
  {
    Can~not~prevent~package~`#1'~from~being~loaded,~
    since~it~has~been~loaded~already~before~line~\msg_line_number:
  }
\clist_new:N \g__biditools_prevent_clist

\NewDocumentCommand \bidi@PreventPackageFromLoading { s +o m }
  {
    \clist_set:Nx \l__biditools_package_clist { #3 }
    \clist_map_inline:Nn \l__biditools_package_clist
      {
        \@ifpackageloaded { ##1 }
          {
            \IfBooleanTF { #1 } { \msg_info:nnn } { \msg_warning:nnn }
              { biditools } { cannot-prevent-for-already-loaded-package } { ##1 }
          }
          {
            \clist_if_in:NnF \g__biditools_prevent_clist { ##1 }
              { \clist_gput_right:Nn \g__biditools_prevent_clist { ##1 } }
            \tl_if_exist:cF { g__biditools_exclude_package_##1_tl }
              {
                \tl_new:c { g__biditools_exclude_package_##1_tl }
              }
            \IfValueT { #2 }
              {
                \tl_gput_right:cn { g__biditools_exclude_package_##1_tl } { #2 }
              }
            \disable@package@load { ##1 }
              { \tl_use:c { g__biditools_exclude_package_##1_tl } }
          }
      }
    \clist_clear:N \l__biditools_package_clist
  }

\NewDocumentCommand \bidi@ResetPreventPackageFromLoading {}
  {
    \clist_map_function:NN \g__biditools_prevent_clist \reenable@package@load
```

```
    \clist_gclear:N \g__biditools_prevent_clist
  }

\NewDocumentCommand \bidi@StorePreventPackageFromLoading { m }
  { \edef #1 { \clist_use:Nn \g__biditools_prevent_clist { , } } }

\NewDocumentCommand \bidi@UnPreventPackageFromLoading { s m }
  {
    \clist_set:Nx \l__biditools_package_clist { #2 }
    \clist_map_inline:Nn \l__biditools_package_clist
      {
        \clist_if_in:NnT \g__biditools_prevent_clist { ##1 }
          {
            \clist_gremove_all:Nn \g__biditools_prevent_clist { ##1 }
            \reenable@package@load { ##1 }
            \IfBooleanT { #1 }
              { \cs_undefine:c { g__biditools_exclude_package_##1_tl } }
          }
      }
  }

\NewDocumentCommand \bidi@BeforeClosingMainAux { o m }
  {
    \hook_gput_code:nnn { enddocument / afterlastpage } { #1 }
      {
        \debug_suspend:
        \RenewDocumentCommand \bidi@BeforeClosingMainAux { m } { ##1 }
        \cs_set_eq:NN \__biditools_protected@write:Nnn \protected@write
        \cs_set_eq:NN \protected@write \bidi@protected@immediate@write
        #2
        \cs_set_eq:NN \protected@write \__biditools_protected@write:Nnn
        \debug_resume:
      }
  }

\NewDocumentCommand \bidi@AfterReadingMainAux { o m }
  {
    \hook_gput_code:nnn { enddocument / afteraux } { #1 }
      {
        \debug_suspend:
        \RenewDocumentCommand \bidi@AfterReadingMainAux { m } { ##1 }
        \cs_set_eq:NN \__biditools_protected@write:Nnn \protected@write
        \cs_set_eq:NN \protected@write \bidi@protected@immediate@write
        #2
        \cs_set_eq:NN \protected@write \__biditools_protected@write:Nnn
        \debug_resume:
      }
  }

\clist_new:N \l__biditools_file_patch_clist

\NewDocumentCommand \ApplyPatchToFiles { m O{def} O{bidi} }
  {
    \clist_set:Nx \l__biditools_file_patch_clist { #1 }
```

```
    \clist_map_inline:Nn \l__biditools_file_patch_clist
      {
        \ApplyPatchToFile { ##1 } [ #2 ] [ #3 ]
      }
    \clist_clear:N \l__biditools_file_patch_clist
  }

\clist_new:N \l__biditools_package_patch_clist

\NewDocumentCommand \ApplyPatchToPackages { m O{bidi} }
  {
    \clist_set:Nx \l__biditools_package_patch_clist { #1 }
    \clist_map_inline:Nn \l__biditools_package_patch_clist
      {
        \ApplyPatchToPackage { ##1 } [ #2 ]
      }
    \clist_clear:N \l__biditools_package_patch_clist
  }

\clist_new:N \l__biditools_class_patch_clist

\NewDocumentCommand \ApplyPatchToClasses { m O{bidi} }
  {
    \clist_set:Nx \l__biditools_class_patch_clist { #1 }
    \clist_map_inline:Nn \l__biditools_class_patch_clist
      {
        \ApplyPatchToClass { ##1 } [ #2 ]
      }
    \clist_clear:N \l__biditools_class_patch_clist
  }

\NewDocumentCommand \ApplyPatchToClassesIfPackageLoadedF { m m O{bidi} }
  {
    \clist_set:Nx \l__biditools_class_patch_clist { #1 }
    \clist_map_inline:Nn \l__biditools_class_patch_clist
      {
        \ApplyPatchToClassIfPackageLoadedF { ##1 } { #2 } [ #3 ]
      }
    \clist_clear:N \l__biditools_class_patch_clist
  }
\ExplSyntaxOff

\newcommand*{\bidi@ReplaceInput}{\declare@file@substitution}
\newcommand*{\bidi@UnReplaceInput}
{\undeclare@file@substitution}
\newcommand*{\bidi@ReplacePackage}[2]{%
  \declare@file@substitution{#1.\@pkgextension}{#2.\@pkgextension}%
}
\newcommand*{\bidi@UnReplacePackage}[1]{%
  \undeclare@file@substitution{#1.\@pkgextension}%
}
\newcommand*{\bidi@ReplaceClass}[2]{%
  \declare@file@substitution{#1.\@clsextension}{#2.\@clsextension}%
}
```

```
\newcommand*{\bidi@UnReplaceClass}[1]{%
  \undeclare@file@substitution{#1.\@clsextension}%
}
\newcommand*{\bidi@BeforeFile}[1]{%
  \AddToHook{file/#1/before}%
}
\newcommand*{\bidi@AfterFile}[1]{%
  \AddToHook{file/#1/after}%
}
\newcommand*{\bidi@BeforeClass}[1]{%
    \bidi@BeforeFile{#1.\@clsextension}%
}
\newcommand*{\bidi@BeforePackage}[1]{%
  \bidi@BeforeFile{#1.\@pkgextension}%
}

\long\def\bidi@protected@immediate@write#1#2#3{%
  \begingroup
    #2%
    \let\protect\@unexpandable@protect
    \edef\reserved@a{\immediate\write#1{#3}}%
    \reserved@a
  \endgroup
  \if@nobreak\ifvmode\nobreak\fi\fi
}

\def\bidi@patch@AfterPackage#1{%
  \@ifpackageloaded{#1}{%
    \@firstofone
  }{%
    \AddToHook{package/#1/after}%
  }%
}

\def\bidi@patch@AfterFile#1{%
  \IfFileLoadedTF{#1}{%
    \@firstofone
  }{%
    \AddToHook{file/#1/after}%
  }%
}

\NewDocumentCommand \ApplyPatchToFile { m O{def} O{bidi} }
  {
    \bidi@patch@AfterFile{#1.#2}{%
      \ifnum\catcode`\@=11
        \input{#1-xetex-#3.def}%
      \else
        \bidi@storecatcode\@
        \makeatletter
        \input{#1-xetex-#3.def}%
        \bidi@restorecatcode\@
      \fi
    }%
```

```
  }

\NewDocumentCommand \ApplyPatchCodeToFile { m +m O{def} }
  {
    \bidi@patch@AfterFile{#1.#3}{#2}%
  }

\NewDocumentCommand \ApplyPatchToFilesIfPackageLoadedF { m m O{def} O{bidi} }
  {
    \AddToHook{begindocument/before}{%
      \IfPackageLoadedF{#1}{%
        \ApplyPatchToFiles{#2}[#3][#4]%
      }%
    }
  }

\NewDocumentCommand \ApplyPatchToClassIfPackageLoadedF { m m O{bidi} }
  {
    \AddToHook{begindocument/before}{%
      \IfPackageLoadedF{#2}{%
        \ifnum\catcode`\@=11
          \@ifclassloaded{#1}{%
            \input{#1-xetex-#3.def}%
          }{}%
        \else
          \bidi@storecatcode\@
          \makeatletter
          \@ifclassloaded{#1}{%
            \input{#1-xetex-#3.def}%
          }{}%
          \bidi@restorecatcode\@
        \fi
      }%
    }
  }

\NewDocumentCommand \ApplyPatchToPackageIfPackageLoadedF { m m O{bidi} }
  {
    \AddToHook{begindocument/before}{%
      \IfPackageLoadedF{#2}{%
        \IfPackageLoadedT{#1}{%
          \ifnum\catcode`\@=11
            \input{#1-xetex-#3.def}%
          \else
            \bidi@storecatcode\@
            \makeatletter
            \input{#1-xetex-#3.def}%
            \bidi@restorecatcode\@
          \fi
        }%
      }%
    }
  }

```

```
\NewDocumentCommand \ApplyPatchIfPackageLoaded { m +m +m }
  {
    \AddToHook{begindocument/before}{%
       \ifnum\catcode`\@=11
         \@ifpackageloaded{#1}{#2}{#3}%
       \else
         \bidi@storecatcode\@
         \makeatletter
         \@ifpackageloaded{#1}{#2}{#3}%
         \bidi@restorecatcode\@
       \fi
    }
  }

\NewDocumentCommand \ApplyPatchIfPackageLoadedT { m +m }
  {
    \ApplyPatchIfPackageLoaded{#1}{#2}{}%
  }

\NewDocumentCommand \ApplyPatchIfPackageLoadedF { m +m }
  {
    \ApplyPatchIfPackageLoaded{#1}{}{#2}%
  }

\NewDocumentCommand \ApplyPatchToPackage { m O{bidi} }
  {
    \bidi@patch@AfterPackage{#1}{\input{#1-xetex-#2.def}}%
  }

\NewDocumentCommand \ApplyPatchCodeToPackage { m +m }
  {
    \bidi@patch@AfterPackage{#1}{#2}%
  }

\NewDocumentCommand \ApplyPatchToClass { m O{bidi} }
  {
    \@ifclassloaded{#1}{\input{#1-xetex-#2.def}}{}%
  }
```

53 File bidituftefloat.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidituftefloat}[2025/01/03 v0.3
bidi implementation of tufte float]
\RequirePackage{xifthen}
\newcommand{\@bidituftefloat@pkgname}{bidituftefloat}
\newcommand{\bidituftefloatError}[2]{\PackageError{\@bidituftefloat@pkgname}{#1}{#2}}
\newcommand{\bidituftefloatDebugInfoNL}[1]{\ifthenelse{\boolean{@bidituftefloat@debug}}{\bi
\newcommand{\bidituftefloatInfoNL}[1]{\PackageInfo{\@bidituftefloat@pkgname}{#1\@gobble}}
\newboolean{@bidituftefloat@reversegeometry}
\setboolean{@bidituftefloat@reversegeometry}{false}
\DeclareOption{reversegeometry}{\setboolean{@bidituftefloat@reversegeometry}{true}}
\newboolean{@bidituftefloat@afourpaper}
\DeclareOption{a4paper}{\setboolean{@bidituftefloat@afourpaper}{true}}
```

```
\newboolean{@bidituftefloat@bfivepaper}
\DeclareOption{b5paper}{\setboolean{@bidituftefloat@bfivepaper}{true}}
\newboolean{@bidituftefloat@symmetric}
\newboolean{@bidituftefloat@twoside}
\DeclareOption{twoside}{%
\@twosidetrue  \@mparswitchtrue%
\setboolean{@bidituftefloat@twoside}{true}%
\setboolean{@bidituftefloat@symmetric}{true}%
}
\DeclareOption{oneside}{%
\@twosidefalse  \@mparswitchfalse%
\setboolean{@bidituftefloat@twoside}{false}%
\setboolean{@bidituftefloat@symmetric}{false}%
}
\IfClassLoadedT{book}{\ExecuteOptions{twoside}}
\newboolean{@bidituftefloat@debug}
\newcommand*{\@bidituftefloat@caption@justification}{\@bidituftefloat@justification@autodet
\ProcessOptions
%% Globally sets the length
\newcommand*{\gsetlength}[2]{%
  \setlength{#1}{#2}%
  \global#1=#1\relax%
}

%% Set the font sizes and baselines to match bidituftefloat's books
\renewcommand\normalsize{%
   \@setfontsize\normalsize\@xpt{14}%
   \abovedisplayskip 10\p@ \@plus2\p@ \@minus5\p@
   \abovedisplayshortskip \z@ \@plus3\p@
   \belowdisplayshortskip 6\p@ \@plus3\p@ \@minus3\p@
   \belowdisplayskip \abovedisplayskip
   \let\@listi\@listI}
\normalbaselineskip=14pt
\normalsize
\renewcommand\footnotesize{%
   \@setfontsize\footnotesize\@viiipt{10}%
   \abovedisplayskip 6\p@ \@plus2\p@ \@minus4\p@
   \abovedisplayshortskip \z@ \@plus\p@
   \belowdisplayshortskip 3\p@ \@plus\p@ \@minus2\p@
   \def\@listi{\leftmargin\leftmargini
               \topsep 3\p@ \@plus\p@ \@minus\p@
               \parsep 2\p@ \@plus\p@ \@minus\p@
               \itemsep \parsep}%
   \belowdisplayskip \abovedisplayskip
}
%% Paragraph indentation and separation for marginal text
\newcommand{\@bidituftefloat@margin@par}{%
  \setlength{\RaggedRightParindent}{0.5pc}%
  \setlength{\JustifyingParindent}{0.5pc}%
  \setlength{\parindent}{0.5pc}%
  \setlength{\parskip}{0pt}%
}
\RequirePackage{ragged2e}
\ifthenelse{\boolean{@bidituftefloat@reversegeometry}}{%
```

```
\RequirePackage[letterpaper,right=1in,top=1in,headsep=2\baselineskip,textwidth=26pc,marginp
\ifthenelse{\boolean{@bidituftefloat@afourpaper}}
  {\geometry{a4paper,right=24.8mm,top=27.4mm,headsep=2\baselineskip,textwidth=107mm,marginp
  {}
\ifthenelse{\boolean{@bidituftefloat@bfivepaper}}
  {\geometry{paperwidth=176mm,paperheight=250mm,right=14.66mm,top=13.88mm,textwidth=102.66m
  {}}{%
\RequirePackage[letterpaper,left=1in,top=1in,headsep=2\baselineskip,textwidth=26pc,marginpa
\ifthenelse{\boolean{@bidituftefloat@afourpaper}}
  {\geometry{a4paper,left=24.8mm,top=27.4mm,headsep=2\baselineskip,textwidth=107mm,marginpa
  {}
\ifthenelse{\boolean{@bidituftefloat@bfivepaper}}
  {\geometry{paperwidth=176mm,paperheight=250mm,left=14.66mm,top=13.88mm,textwidth=102.66mm
  {}}
\ifthenelse{\boolean{@bidituftefloat@symmetric}}
  {}
  {\geometry{asymmetric}}% forces internal LaTeX `twoside'
\setlength\marginparpush{10pt}
%% Font for margin items
\newcommand{\@bidituftefloat@marginfont}{\normalfont\footnotesize}
\newcommand*{\@bidituftefloat@caption@font}{\@bidituftefloat@marginfont}
\newcommand*{\setcaptionfont}[1]{\renewcommand*{\@bidituftefloat@caption@font}{#1}}
\newcommand{\@bidituftefloat@justification}{\justifying}%
\setlength\abovedisplayskip{6pt plus 2pt minus 4pt}
\setlength\belowdisplayskip{6pt plus 2pt minus 4pt}
\newboolean{@bidituftefloat@changepage}
\IfFileExists{changepage.sty}{%
  \bidituftefloatDebugInfoNL{Found changepage.sty}
  \RequirePackage[strict]{changepage}
  \setboolean{@bidituftefloat@changepage}{true}
}{%
  \bidituftefloatDebugInfoNL{Found chngpage.sty}
  \RequirePackage[strict]{chngpage}
  \setboolean{@bidituftefloat@changepage}{false}
}
\newboolean{@bidituftefloat@odd@page}
\setboolean{@bidituftefloat@odd@page}{true}
\newcommand*{\@bidituftefloat@checkoddpage}{%
  \checkoddpage%
  \ifthenelse{\boolean{@bidituftefloat@changepage}}{%
    \ifoddpage%
      \setboolean{@bidituftefloat@odd@page}{true}%
    \else%
      \setboolean{@bidituftefloat@odd@page}{false}%
    \fi%
  }{%
    \ifcpoddpage%
      \setboolean{@bidituftefloat@odd@page}{true}%
    \else%
      \setboolean{@bidituftefloat@odd@page}{false}%
    \fi%
  }%
}
\newlength{\@bidituftefloat@overhang}% used by the fullwidth environment and the running he
```

```
\newlength{\@bidituftefloat@fullwidth}
\newlength{\@bidituftefloat@caption@fill}
\newcommand{\bidituftefloatRecalculate}{%
  \setlength{\@bidituftefloat@overhang}{\marginparwidth}
  \addtolength{\@bidituftefloat@overhang}{\marginparsep}

  \setlength{\@bidituftefloat@fullwidth}{\textwidth}
  \addtolength{\@bidituftefloat@fullwidth}{\marginparsep}
  \addtolength{\@bidituftefloat@fullwidth}{\marginparwidth}

  \setlength{\@bidituftefloat@caption@fill}{\textwidth}
  \addtolength{\@bidituftefloat@caption@fill}{\marginparsep}
}
\AtBeginDocument{\bidituftefloatRecalculate}
\RequirePackage{optparams}%  provides multiple optional arguments for commands
\RequirePackage{placeins}
\newsavebox{\@bidituftefloat@margin@floatbox}
\newenvironment{@bidituftefloat@margin@float}[2][-1.2ex]%
  {\FloatBarrier% process all floats before this point so the figure/table numbers stay in
  \begin{lrbox}{\@bidituftefloat@margin@floatbox}%
  \begin{minipage}{\marginparwidth}%
    \@bidituftefloat@caption@font%
    \def\@captype{#2}%
    \hbox{}\vspace*{#1}%
    \@bidituftefloat@caption@justification%
    \@bidituftefloat@margin@par%
    \noindent%
  }
  {\end{minipage}%
  \end{lrbox}%
  \marginpar{\usebox{\@bidituftefloat@margin@floatbox}}%
  }
\newenvironment{marginfigure}[1][-1.2ex]%
  {\begin{@bidituftefloat@margin@float}[#1]{figure}}
  {\end{@bidituftefloat@margin@float}}
\newenvironment{margintable}[1][-1.2ex]%
  {\begin{@bidituftefloat@margin@float}[#1]{table}}
  {\end{@bidituftefloat@margin@float}}
\newcommand*{\@bidituftefloat@justification@autodetect}{\justifying}%

\newcommand{\@bidituftefloat@float@debug@info}{}% contains debug info generated as the floa
\newcommand{\@bidituftefloat@float@debug}[1]{% adds debug info to the queue for output
  \ifthenelse{\equal{\@bidituftefloat@float@debug@info}{}}%
    {\def\@bidituftefloat@float@debug@info{#1}}%
    {\g@addto@macro\@bidituftefloat@float@debug@info{\MessageBreak#1}}%
}
\newcommand{\floatalignment}{x}% holds the current float alignment (t, b, h, p)
\newcommand{\setfloatalignment}[1]{\global\def\floatalignment{#1}\@bidituftefloat@float@deb
\newboolean{@bidituftefloat@float@recto}
\newcommand{\forcerectofloat}{\GlobalSetBoolean{@bidituftefloat@float@recto}{true}\@bidituf
\newcommand{\forceversofloat}{\GlobalSetBoolean{@bidituftefloat@float@recto}{false}\@biditu
\newsavebox{\@bidituftefloat@figure@box}
\newsavebox{\@bidituftefloat@caption@box}
\let\@bidituftefloat@orig@float\@float
```

```
\let\@bidituftefloat@orig@endfloat\end@float
\newlength{\@bidituftefloat@caption@vertical@offset}
\setlength{\@bidituftefloat@caption@vertical@offset}{0pt}
\newcommand{\@bidituftefloat@stored@shortcaption}{}
\newcommand{\@bidituftefloat@stored@caption}{}
\newcommand{\@bidituftefloat@stored@label}{}
\long\def\@bidituftefloat@caption[#1][#2]#3{%
  \ifthenelse{\isempty{#1}}%
    {\gdef\@bidituftefloat@stored@shortcaption{#3}}%
    {\gdef\@bidituftefloat@stored@shortcaption{#1}}%
  \gsetlength{\@bidituftefloat@caption@vertical@offset}{-#2}% we want a positive offset to
  \gdef\@bidituftefloat@stored@caption{#3}%
}
\newcommand{\@bidituftefloat@label}[1]{%
  \gdef\@bidituftefloat@stored@label{#1}%
}
\newcommand{\@bidituftefloat@fps}{}
\newboolean{@bidituftefloat@float@star}
\newlength{\@bidituftefloat@float@contents@width}
\newenvironment{@bidituftefloat@float}[3][htbp]%
  {% begin @bidituftefloat@float
    % Should this float be full-width or just text-width?
    \ifthenelse{\equal{#3}{star}}%
      {\GlobalSetBoolean{@bidituftefloat@float@star}{true}}%
      {\GlobalSetBoolean{@bidituftefloat@float@star}{false}}%
    % Check page side (recto/verso) and store detected value -- can be overriden in environ
    \@bidituftefloat@checkoddpage%
    \ifthenelse{\boolean{@bidituftefloat@odd@page}}%
      {\GlobalSetBoolean{@bidituftefloat@float@recto}{true}\@bidituftefloat@float@debug{Det
      {\GlobalSetBoolean{@bidituftefloat@float@recto}{false}\@bidituftefloat@float@debug{De
    % If the float placement specifier is 'b' and only 'b', then bottom-align the mini-page
    \renewcommand{\@bidituftefloat@fps}{#1}%
    \@bidituftefloat@float@debug{Allowed positions: [#1]}%
    \ifthenelse{\equal{#1}{b}\OR\equal{#1}{B}}%
      {\renewcommand{\floatalignment}{b}\@bidituftefloat@float@debug{Presumed position: [bo
      {\renewcommand{\floatalignment}{t}\@bidituftefloat@float@debug{Presumed position: [to
    % Capture the contents of the \caption and \label commands to use later
    \global\let\@bidituftefloat@orig@caption\caption%
    \global\let\@bidituftefloat@orig@label\label%
    \renewcommand{\caption}{\optparams{\@bidituftefloat@caption}{[][0pt]}}%
    \renewcommand{\label}[1]{\@bidituftefloat@label{##1}}%
    % Handle subfigure package compatibility
    \ifthenelse{\boolean{@bidituftefloat@packages@subfigure}}{%
      \bidi@patchcmd{\subfigure}{%
      \let\subfig@oldlabel=\label
      }{%
      \let\subfig@oldlabel=\@bidituftefloat@orig@label
      }
      {}
      {}
      \let\subtable=\subfigure
    }{}% subfigure package is not loaded
    \@bidituftefloat@orig@float{#2}[#1]%
    \ifthenelse{\boolean{@bidituftefloat@float@star}}%
```

```
      {\setlength{\@bidituftefloat@float@contents@width}{\@bidituftefloat@fullwidth}}%
      {\setlength{\@bidituftefloat@float@contents@width}{\textwidth}}%
    \begin{lrbox}{\@bidituftefloat@figure@box}%
      \begin{minipage}[\floatalignment]{\@bidituftefloat@float@contents@width}\hbox{}%
  }{% end @bidituftefloat@float
      \par\hbox{}\vspace{-\baselineskip}\ifthenelse{\prevdepth>0}{\vspace{-\prevdepth}}{}%
      \end{minipage}%
    \end{lrbox}%
    % build the caption box
    \begin{lrbox}{\@bidituftefloat@caption@box}%
      \begin{minipage}[\floatalignment]{\marginparwidth}\hbox{}%
        \ifthenelse{\NOT\equal{\@bidituftefloat@stored@caption}{}}{\@bidituftefloat@orig@ca
        \ifthenelse{\NOT\equal{\@bidituftefloat@stored@label}{}}{\@bidituftefloat@orig@labe
        \par\vspace{-\prevdepth}%% TODO: DOUBLE-CHECK FOR SAFETY
      \end{minipage}%
    \end{lrbox}%
    % now typeset the stored boxes
    \begin{fullwidth}%
      \begin{minipage}[\floatalignment]{\linewidth}%
        \ifthenelse{\boolean{@bidituftefloat@float@star}}%
          {\@bidituftefloat@float@fullwidth[\@bidituftefloat@caption@vertical@offset]{\@bid
          {\@bidituftefloat@float@textwidth[\@bidituftefloat@caption@vertical@offset]{\@bid
      \end{minipage}%
    \end{fullwidth}%
    \@bidituftefloat@orig@endfloat% end original LaTeX float environment
    % output debug info
    \ifthenelse{\boolean{@bidituftefloat@debug}}{%
      \typeout{^^J^^J---------- bidituftefloat package float information ----------}%
      \ifthenelse{\equal{\@bidituftefloat@stored@label}{}}%
        {\typeout{Warning: Float unlabeled!}}%
        {\typeout{Float label: [\@bidituftefloat@stored@label]}}%
      \typeout{Page number: [\thepage]}%
      \def\MessageBreak{^^J}%
      \typeout{\@bidituftefloat@float@debug@info}%
      \ifthenelse{\boolean{@bidituftefloat@symmetric}}%
        {\typeout{Symmetric: [true]}}%
        {\typeout{Symmetric: [false]}}%
      \typeout{----------------------------------------------------^^J^^J}%
    }{}%
    % reset commands and temp boxes and captions
    \gdef\@bidituftefloat@float@debug@info{}%
    \let\caption\@bidituftefloat@orig@caption%
    \let\label\@bidituftefloat@orig@label%
    \begin{lrbox}{\@bidituftefloat@figure@box}\hbox{}\end{lrbox}%
    \begin{lrbox}{\@bidituftefloat@caption@box}\hbox{}\end{lrbox}%
    \gdef\@bidituftefloat@stored@shortcaption{}%
    \gdef\@bidituftefloat@stored@caption{}%
    \gdef\@bidituftefloat@stored@label{}%
    \gsetlength{\@bidituftefloat@caption@vertical@offset}{0pt}% reset caption offset
  }
\newcommand{\@bidituftefloat@float@textwidth}[3][0pt]{%
  \ifthenelse{\NOT\boolean{@bidituftefloat@symmetric}\OR\boolean{@bidituftefloat@float@rect
    % asymmetric or page is odd, so caption is on the right
    \hbox{%
```

```
7565      \usebox{#2}%
7566      \hspace{\marginparsep}%
7567      \smash{\raisebox{#1}{\usebox{#3}}}%
7568    }
7569    \@bidituftefloat@float@debug{Caption position: [right]}%
7570  }{% symmetric pages and page is even, so caption is on the left
7571    \hbox{%
7572      \smash{\raisebox{#1}{\usebox{#3}}}%
7573      \hspace{\marginparsep}%
7574      \usebox{#2}%
7575    }
7576    \@bidituftefloat@float@debug{Caption position: [left]}%
7577  }%
7578 }
7579 \newcommand{\@bidituftefloat@float@fullwidth}[3][Opt]{%
7580   \ifthenelse{\equal{\floatalignment}{b}}%
7581     {% place caption above figure
7582       \ifthenelse{\NOT\boolean{@bidituftefloat@symmetric}\OR\boolean{@bidituftefloat@float@
7583         {\hfill\smash{\raisebox{#1}{\usebox{#3}}}\par\usebox{#2}\@bidituftefloat@float@debu
7584         {\smash{\raisebox{#1}{\usebox{#3}}}\hfill\par\usebox{#2}\@bidituftefloat@float@debu
7585     }{% place caption below figure
7586       \ifthenelse{\NOT\boolean{@bidituftefloat@symmetric}\OR\boolean{@bidituftefloat@float@
7587         {\usebox{#2}\par\hfill\smash{\raisebox{#1}{\usebox{#3}}}\@bidituftefloat@float@debu
7588         {\usebox{#2}\par\smash{\raisebox{#1}{\usebox{#3}}}\hfill\@bidituftefloat@float@debu
7589     }%
7590 }
7591 \renewenvironment{figure}[1][htbp]%
7592   {\ifvmode\else\unskip\fi\begin{@bidituftefloat@float}[#1]{figure}{}}
7593   {\end{@bidituftefloat@float}}
7594 \renewenvironment{table}[1][htbp]
7595   {\ifvmode\else\unskip\fi\begin{@bidituftefloat@float}[#1]{table}{}}
7596   {\end{@bidituftefloat@float}}
7597 \renewenvironment{figure*}[1][htbp]%
7598   {\ifvmode\else\unskip\fi\begin{@bidituftefloat@float}[#1]{figure}{star}}
7599   {\end{@bidituftefloat@float}}
7600 \renewenvironment{table*}[1][htbp]%
7601   {\ifvmode\else\unskip\fi\begin{@bidituftefloat@float}[#1]{table}{star}}
7602   {\end{@bidituftefloat@float}}
7603 \newenvironment{fullwidth}
7604   {\ifthenelse{\boolean{@bidituftefloat@symmetric}}%
7605      {\ifthenelse{\boolean{@bidituftefloat@changepage}}{\begin{adjustwidth*}{}{-\@biditufte
7606      {\begin{adjustwidth}{}{-\@bidituftefloat@overhang}}%
7607   }%
7608   {\ifthenelse{\boolean{@bidituftefloat@symmetric}}%
7609     {\ifthenelse{\boolean{@bidituftefloat@changepage}}{\end{adjustwidth*}}{\end{adjustwidth
7610     {\end{adjustwidth}}%
7611   }
7612 \long\def\@caption#1[#2]#3{%
7613   \par%
7614   \addcontentsline{\csname ext@#1\endcsname}{#1}%
7615     {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
7616   \begingroup%
7617     \@parboxrestore%
7618     \if@minipage%
```

```
      \@setminipage%
    \fi%
    \@bidituftefloat@caption@font\@bidituftefloat@caption@justification%
    \noindent\csname fnum@#1\endcsname: \ignorespaces#3\par%
    %\@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
  \endgroup}
%%
% Turns newlines into spaces.  Based on code from the `titlesec' package.
\DeclareRobustCommand{\@bidituftefheading@newlinetospace}{%
  \@ifstar{\@bidituftefheading@newlinetospace@i}{\@bidituftefheading@newlinetospace@i}%
}
\def\@bidituftefheading@newlinetospace@i{%
  \ifdim\lastskip>\z@\else\space\fi
  \ignorespaces%
}
\DeclareRobustCommand{\newlinetospace}[1]{%
  \let\@bidituftefheading@orig@cr\\% save the original meaning of \\
  \def\\{\@bidituftefheading@newlinetospace}% turn \\ and \\* into \space
  \let\newline\\% turn \newline into \space
  #1%
  \let\\\@bidituftefheading@orig@cr% revert to original meaning of \\
}
\RequirePackage{fancyhdr}
\pagestyle{fancy}
\AtBeginDocument{%
  \ifthenelse{\boolean{@bidituftefloat@symmetric}}
    {\fancyhfoffset[LE,RO]{\@bidituftefloat@overhang}}
    {\fancyhfoffset[RE,RO]{\@bidituftefloat@overhang}}
}
% The running heads/feet don't have rules
\renewcommand{\headrulewidth}{0pt}
\renewcommand{\footrulewidth}{0pt}
% The 'fancy' page style is the default style for all pages.
\fancyhf{} % clear header and footer fields
    \ifthenelse{\boolean{@bidituftefloat@symmetric}}
    {\fancyhead[LE]{\thepage\quad\textsl{\newlinetospace{\plainauthor}}}%
    \fancyhead[RO]{\textsl{\newlinetospace{\plaintitle}}\quad\thepage}}%
    {\fancyhead[RE,RO]{\textsl{\newlinetospace{\plaintitle}}\quad\thepage}}%
% The `plain' page style is used on chapter opening pages.
% In Tufte's /Beautiful Evidence/ he never puts page numbers at the
% bottom of pages -- the folios are unexpressed.
\fancypagestyle{plain}{
  \fancyhf{} % clear header and footer fields
  % Uncomment the following five lines of code if you want the opening page
  % of the chapter to express the folio in the lower outside corner.
  %  \ifthenelse{\boolean{@bidituftefloat@symmetric}}
  %  {\fancyfoot[LE,RO]{\thepage}}
  %  {\fancyfoot[RE,RO]{\thepage}}
}
% The `empty' page style suppresses all headers and footers.
% It's used on title pages and `intentionally blank' pages.
\fancypagestyle{empty}{
  \fancyhf{} % clear header and footer fields
}
```

```
\def\morefloats{% provides a total of 52 floats
  \ifthenelse{\isundefined{\bx@S}}{%
    \bidituftefloatDebugInfoNL{Adding 34 more float slots.}
    \newinsert\bx@S
    \newinsert\bx@T
    \newinsert\bx@U
    \newinsert\bx@V
    \newinsert\bx@W
    \newinsert\bx@X
    \newinsert\bx@Y
    \newinsert\bx@Z
    \newinsert\bx@a
    \newinsert\bx@b
    \newinsert\bx@c
    \newinsert\bx@d
    \newinsert\bx@e
    \newinsert\bx@f
    \newinsert\bx@g
    \newinsert\bx@h
    \newinsert\bx@i
    \newinsert\bx@j
    \newinsert\bx@k
    \newinsert\bx@l
    \newinsert\bx@m
    \newinsert\bx@n
    \newinsert\bx@o
    \newinsert\bx@p
    \newinsert\bx@q
    \newinsert\bx@r
    \newinsert\bx@s
    \newinsert\bx@t
    \newinsert\bx@u
    \newinsert\bx@v
    \newinsert\bx@w
    \newinsert\bx@x
    \newinsert\bx@y
    \newinsert\bx@z
    \gdef\@freelist{\@elt\bx@A\@elt\bx@B\@elt\bx@C\@elt\bx@D\@elt\bx@E
                    \@elt\bx@F\@elt\bx@G\@elt\bx@H\@elt\bx@I\@elt\bx@J
                    \@elt\bx@K\@elt\bx@L\@elt\bx@M\@elt\bx@N
                    \@elt\bx@O\@elt\bx@P\@elt\bx@Q\@elt\bx@R
                    \@elt\bx@S\@elt\bx@T\@elt\bx@U\@elt\bx@V
                    \@elt\bx@W\@elt\bx@X\@elt\bx@Y\@elt\bx@Z
                    \@elt\bx@a\@elt\bx@b\@elt\bx@c\@elt\bx@d\@elt\bx@e
                    \@elt\bx@f\@elt\bx@g\@elt\bx@h\@elt\bx@i\@elt\bx@j
                    \@elt\bx@k\@elt\bx@l\@elt\bx@m\@elt\bx@n
                    \@elt\bx@o\@elt\bx@p\@elt\bx@q\@elt\bx@r
                    \@elt\bx@s\@elt\bx@t\@elt\bx@u\@elt\bx@v
                    \@elt\bx@w\@elt\bx@x\@elt\bx@y\@elt\bx@z}%
  }{% we've already added another 34 floats, so we'll add 26 more, but that's it!
    \ifthenelse{\isundefined{\bx@AA}}{%
      \bidituftefloatDebugInfoNL{Adding 26 more float slots.}
      \newinsert\bx@AA
      \newinsert\bx@BB
```

```
      \newinsert\bx@CC
      \newinsert\bx@DD
      \newinsert\bx@EE
      \newinsert\bx@FF
      \newinsert\bx@GG
      \newinsert\bx@HH
      \newinsert\bx@II
      \newinsert\bx@JJ
      \newinsert\bx@KK
      \newinsert\bx@LL
      \newinsert\bx@MM
      \newinsert\bx@NN
      \newinsert\bx@OO
      \newinsert\bx@PP
      \newinsert\bx@QQ
      \newinsert\bx@RR
      \newinsert\bx@SS
      \newinsert\bx@TT
      \newinsert\bx@UU
      \newinsert\bx@VV
      \newinsert\bx@WW
      \newinsert\bx@XX
      \newinsert\bx@YY
      \newinsert\bx@ZZ
      \gdef\@freelist{\@elt\bx@A\@elt\bx@B\@elt\bx@C\@elt\bx@D\@elt\bx@E
                      \@elt\bx@F\@elt\bx@G\@elt\bx@H\@elt\bx@I\@elt\bx@J
                      \@elt\bx@K\@elt\bx@L\@elt\bx@M\@elt\bx@N
                      \@elt\bx@O\@elt\bx@P\@elt\bx@Q\@elt\bx@R
                      \@elt\bx@S\@elt\bx@T\@elt\bx@U\@elt\bx@V
                      \@elt\bx@W\@elt\bx@X\@elt\bx@Y\@elt\bx@Z
                      \@elt\bx@a\@elt\bx@b\@elt\bx@c\@elt\bx@d\@elt\bx@e
                      \@elt\bx@f\@elt\bx@g\@elt\bx@h\@elt\bx@i\@elt\bx@j
                      \@elt\bx@k\@elt\bx@l\@elt\bx@m\@elt\bx@n
                      \@elt\bx@o\@elt\bx@p\@elt\bx@q\@elt\bx@r
                      \@elt\bx@s\@elt\bx@t\@elt\bx@u\@elt\bx@v
                      \@elt\bx@w\@elt\bx@x\@elt\bx@y\@elt\bx@z
                      \@elt\bx@AA\@elt\bx@BB\@elt\bx@CC\@elt\bx@DD\@elt\bx@EE
                      \@elt\bx@FF\@elt\bx@GG\@elt\bx@HH\@elt\bx@II\@elt\bx@JJ
                      \@elt\bx@KK\@elt\bx@LL\@elt\bx@MM\@elt\bx@NN
                      \@elt\bx@OO\@elt\bx@PP\@elt\bx@QQ\@elt\bx@RR
                      \@elt\bx@SS\@elt\bx@TT\@elt\bx@UU\@elt\bx@VV
                      \@elt\bx@WW\@elt\bx@XX\@elt\bx@YY\@elt\bx@ZZ}%
    }{%
      \bidituftefloatError{You may only call \string\morefloats\space twice. See the\Messag
        {There are already 78 float slots allocated. Try using \string\FloatBarrier\space o
    }%
  }%
}
\newboolean{@bidituftefloat@packages@subfigure}
\setboolean{@bidituftefloat@packages@subfigure}{false}
\AtBeginDocument{%
  \@ifpackageloaded{subfigure}
    {\GlobalSetBoolean{@bidituftefloat@packages@subfigure}{true}}
    {\GlobalSetBoolean{@bidituftefloat@packages@subfigure}{false}}%
```

```
}
\AtBeginDocument{%
  \@ifpackageloaded{float}{%
    % Save the redefined float environment (instead of the LaTeX float environment)
    \let\@bidituftefloat@orig@float\@float
    \let\@bidituftefloat@orig@endfloat\end@float

    % Define Tuftian float styles (with the caption in the margin)
    \newcommand{\floatc@bidituftefloatplain}[2]{%
      \begin{lrbox}{\@bidituftefloat@caption@box}%
        \begin{minipage}[\floatalignment]{\marginparwidth}\hbox{}%
          \@bidituftefloat@caption@font{\@fs@cfont #1:} #2\par%
        \end{minipage}%
      \end{lrbox}%
      \smash{\hspace{\@bidituftefloat@caption@fill}\usebox{\@bidituftefloat@caption@box}}%
    }
    \newcommand{\fs@bidituftefloatplain}{%
      \def\@fs@cfont{\@bidituftefloat@caption@font}%
      \let\@fs@capt\floatc@bidituftefloatplain%
      \def\@fs@pre{}%
      \def\@fs@post{}%
      \def\@fs@mid{}%
      \let\@fs@iftopcapt\iftrue%
    }
    \let\fs@bidituftefloatplaintop=\fs@bidituftefloatplain
    \let\floatc@bidituftefloatplaintop=\floatc@bidituftefloatplain
    \newcommand\floatc@bidituftefloatruled[2]{%
      {\@fs@cfont #1} #2\par%
    }
    \newcommand\fs@bidituftefloatruled{%
      \def\@fs@cfont{\@bidituftefloat@caption@font}%
      \let\@fs@capt\floatc@bidituftefloatplain%
      \def\@fs@pre{\hrule height.8pt depth0pt width\textwidth \kern2pt}%
      \def\@fs@post{\kern2pt\hrule width\textwidth\relax}%
      \def\@fs@mid{}%
      \let\@fs@iftopcapt\iftrue%
    }
    \newcommand\fs@bidituftefloatboxed{%
      \def\@fs@cfont{}%
      \let\@fs@capt\floatc@bidituftefloatplain%
      \def\@fs@pre{%
        \setbox\@currbox\vbox{\hbadness10000
        \moveleft3.4pt\vbox{\advance\hsize by6.8pt
          \hrule \hbox to\hsize{\vrule\kern3pt
            \vbox{\kern3pt\box\@currbox\kern3pt}\kern3pt\vrule}\hrule}}
      }%
      \def\@fs@mid{\kern2pt}%
      \def\@fs@post{}%
      \let\@fs@iftopcapt\iftrue%
    }
  }{%
    % Nothing to do
  }
}
```

```
\AtBeginDocument{%
  \@ifpackageloaded{algorithm}{%
    % Set the float style to the Tuftian version
    \ifthenelse{\equal{\ALG@floatstyle}{plain}\OR\equal{\ALG@floatstyle}{ruled}\OR\equal{\A
      \bidituftefloatInfoNL{Switching algorithm float style from \ALG@floatstyle\MessageBre
      \floatstyle{bidituftefloat\ALG@floatstyle}%
      \restylefloat{algorithm}%
    }{}%
  }{%
    % Nothing to do
  }
}
\PassOptionsToPackage{caption=false}{subfig}
```

54 File bidituftesidenote.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidituftesidenote}[2017/08/09 v0.4
bidi implementation of tufte sidenote]
\RequirePackage{xifthen}
\RequirePackage{ragged2e}
\RequirePackage{setspace}
\RequirePackage{biditools}
\def\bidituftesidenotemarginpar{%
  \ifhmode
    \@bsphack
    \@floatpenalty -\@Mii
  \else
    \@floatpenalty-\@Miii
  \fi
  \ifinner
    \@parmoderr
    \@floatpenalty\z@
  \else
    \@next\@currbox\@freelist{}{}%
    \@next\@marbox\@freelist{\global\count\@marbox\m@ne}%
       {\@floatpenalty\z@
        \@fltovf\def\@currbox{\@tempboxa}\def\@marbox{\@tempboxa}}%
  \fi
  \@ifnextchar [\@bidituftesidenotexmpar\@bidituftesidenoteympar}
\long\def\@bidituftesidenotexmpar[#1]#2{%
  \@bidituftesidenotesavemarbox\@marbox{#1}%
  \@bidituftesidenotesavemarbox\@currbox{#2}%
  \@xympar}
\long\def\@bidituftesidenoteympar#1{%
  \@bidituftesidenotesavemarbox\@marbox{#1}%
  \global\setbox\@currbox\copy\@marbox
  \@xympar}
\long\def \@bidituftesidenotesavemarbox #1#2{%
  \global\setbox #1%
    \color@vbox
      \vtop{%
        \hsize\marginparwidth
        \@parboxrestore
```

```
        \@bidituftesidenotemarginparreset
        #2%
        \@minipagefalse
        \outer@nobreak
        }%
    \color@endbox
}
\def \@bidituftesidenotemarginparreset {%
        \reset@font
        \normalsize
        \@minipagetrue
        \everypar{\@minipagefalse\everypar{}\if@RTL@footnote\beginR\else\beginL\fi}%
}
\def\LTRbidituftesidenotemarginpar{%
  \ifhmode
    \@bsphack
    \@floatpenalty -\@Mii
  \else
    \@floatpenalty-\@Miii
  \fi
  \ifinner
    \@parmoderr
    \@floatpenalty\z@
  \else
    \@next\@currbox\@freelist{}{}%
    \@next\@marbox\@freelist{\global\count\@marbox\m@ne}%
       {\@floatpenalty\z@
        \@fltovf\def\@currbox{\@tempboxa}\def\@marbox{\@tempboxa}}%
  \fi
  \@ifnextchar [\@LTRbidituftesidenotexmpar\@LTRbidituftesidenoteympar}
\long\def\@LTRbidituftesidenotexmpar[#1]#2{%
  \@LTRbidituftesidenotesavemarbox\@marbox{#1}%
  \@LTRbidituftesidenotesavemarbox\@currbox{#2}%
  \@xympar}
\long\def\@LTRbidituftesidenoteympar#1{%
  \@LTRbidituftesidenotesavemarbox\@marbox{#1}%
  \global\setbox\@currbox\copy\@marbox
  \@xympar}
\long\def \@LTRbidituftesidenotesavemarbox #1#2{%
  \global\setbox #1%
    \color@vbox
      \vtop{%
        \hsize\marginparwidth
        \@parboxrestore
        \@LTRbidituftesidenotemarginparreset
        #2%
        \@minipagefalse
        \outer@nobreak
        }%
    \color@endbox
}
\def \@LTRbidituftesidenotemarginparreset {%
        \reset@font
        \normalsize
```

```
        \@minipagetrue
        \everypar{\@minipagefalse\everypar{}\beginL}%
}
\def\RTLbidituftesidenotemarginpar{%
  \ifhmode
    \@bsphack
    \@floatpenalty -\@Mii
  \else
    \@floatpenalty-\@Miii
  \fi
  \ifinner
    \@parmoderr
    \@floatpenalty\z@
  \else
    \@next\@currbox\@freelist{}{}%
    \@next\@marbox\@freelist{\global\count\@marbox\m@ne}%
       {\@floatpenalty\z@
        \@fltovf\def\@currbox{\@tempboxa}\def\@marbox{\@tempboxa}}%
  \fi
  \@ifnextchar [\@RTLbidituftesidenotexmpar\@RTLbidituftesidenoteympar}
\long\def\@RTLbidituftesidenotexmpar[#1]#2{%
  \@RTLbidituftesidenotesavemarbox\@marbox{#1}%
  \@RTLbidituftesidenotesavemarbox\@currbox{#2}%
  \@xympar}
\long\def\@RTLbidituftesidenoteympar#1{%
  \@RTLbidituftesidenotesavemarbox\@marbox{#1}%
  \global\setbox\@currbox\copy\@marbox
  \@xympar}
\long\def \@RTLbidituftesidenotesavemarbox #1#2{%
  \global\setbox #1%
    \color@vbox
      \vtop{%
        \hsize\marginparwidth
        \@parboxrestore
        \@RTLbidituftesidenotemarginparreset
        #2%
        \@minipagefalse
        \outer@nobreak
        }%
    \color@endbox
}
\def \@RTLbidituftesidenotemarginparreset {%
        \reset@font
        \normalsize
        \@minipagetrue
        \everypar{\@minipagefalse\everypar{}\beginR}%
}
\newcommand*{\@bidituftesidenote@marginfont}{\normalfont\footnotesize}
\newcommand*{\@bidituftesidenote@LTRmarginfont}{\normalfont\footnotesize}
\newcommand*{\@bidituftesidenote@RTLmarginfont}{\normalfont\footnotesize}
\newcommand*{\@bidituftesidenote@sidenote@font}{\@bidituftesidenote@marginfont}
\newcommand*{\@bidituftesidenote@LTRsidenote@font}{\@bidituftesidenote@LTRmarginfont}
\newcommand*{\@bidituftesidenote@RTLsidenote@font}{\@bidituftesidenote@RTLmarginfont}
\newcommand*{\@bidituftesidenote@marginnote@font}{\@bidituftesidenote@marginfont}
```

```
\newcommand*{\@bidituftesidenote@LTRmarginnote@font}{\@bidituftesidenote@LTRmarginfont}
\newcommand*{\@bidituftesidenote@RTLmarginnote@font}{\@bidituftesidenote@RTLmarginfont}
\newcommand*{\@bidituftesidenote@citation@font}{\@bidituftesidenote@marginfont}
\newcommand*{\@bidituftesidenote@LTRcitation@font}{\@bidituftesidenote@LTRmarginfont}
\newcommand*{\@bidituftesidenote@RTLcitation@font}{\@bidituftesidenote@RTLmarginfont}
\newcommand*{\setsidenotefont}[1]{\renewcommand*{\@bidituftesidenote@sidenote@font}{#1}}
\newcommand*{\setLTRsidenotefont}[1]{\renewcommand*{\@bidituftesidenote@LTRsidenote@font}{#
\newcommand*{\setRTLsidenotefont}[1]{\renewcommand*{\@bidituftesidenote@RTLsidenote@font}{#
\newcommand*{\setmarginnotefont}[1]{\renewcommand*{\@bidituftesidenote@marginnote@font}{#1}
\newcommand*{\setLTRmarginnotefont}[1]{\renewcommand*{\@bidituftesidenote@LTRmarginnote@fon
\newcommand*{\setRTLmarginnotefont}[1]{\renewcommand*{\@bidituftesidenote@RTLmarginnote@fon
\newcommand*{\setcitationfont}[1]{\renewcommand*{\@bidituftesidenote@citation@font}{#1}}
\newcommand*{\setLTRcitationfont}[1]{\renewcommand*{\@bidituftesidenote@LTRcitation@font}{#
\newcommand*{\setRTLcitationfont}[1]{\renewcommand*{\@bidituftesidenote@RTLcitation@font}{#
\newcommand*{\@bidituftesidenote@sidenote@justification}{\@bidituftesidenote@justification@
\newcommand*{\@bidituftesidenote@marginnote@justification}{\@bidituftesidenote@justificatio
\newcommand*{\@bidituftesidenote@citation@justification}{\@bidituftesidenote@justification@
\newcommand*{\@bidituftesidenote@justification@autodetect}{\justifying}%
\newcommand{\@bidituftesidenote@margin@par}{%
  \setlength{\RaggedRightParindent}{0.5pc}%
  \setlength{\JustifyingParindent}{0.5pc}%
  \setlength{\parindent}{0.5pc}%
  \setlength{\parskip}{0pt}%
}
%%
% Globally sets the length
\@ifundefined{gsetlength}{%
\newcommand*{\gsetlength}[2]{%
  \setlength{#1}{#2}%
  \global#1=#1\relax%
}%
}{}

%%
% A function that removes leading and trailling spaces from the supplied macro.
% Based on code written by Michael Downes (See ``Around the Bend'', #15.)
% Executing \@bidituftesidenote@trim@spaces\xyzzy will result in the contents of \xyzzy
% being trimmed of leading and trailing white space.
\catcode`\Q=3
\def\@bidituftesidenote@trim@spaces#1{%
  % Use grouping to emulate a multi-token afterassignment queue
  \begingroup%
  % Put `\toks 0 {' into the afterassignment queue
  \aftergroup\toks\aftergroup0\aftergroup{%
  % Apply \trimb to the replacement text of #1, adding a leading
  % \noexpand to prevent brace stripping and to serve another purpose
  % later.
  \expandafter\@bidituftesidenote@trim@b\expandafter\noexpand#1Q Q}%
  % Transfer the trimmed text back into #1.
  \edef#1{\the\toks0}%
}
% \trimb removes a trailing space if present, then calls \@bidituftesidenote@trim@c to
% clean up any leftover bizarre Qs, and trim a leading space. In
% order for \trimc to work properly we need to put back a Q first.
```

```
\def\@bidituftesidenote@trim@b#1 Q{\@bidituftesidenote@trim@c#1Q}
% Execute \vfuzz assignment to remove leading space; the \noexpand
% will now prevent unwanted expansion of a macro or other expandable
% token at the beginning of the trimmed text. The \endgroup will feed
% in the \aftergroup tokens after the \vfuzz assignment is completed.
\def\@bidituftesidenote@trim@c#1Q#2{\afterassignment\endgroup \vfuzz\the\vfuzz#1}
\catcode`\Q=11
%%
% Citations should go in the margin as sidenotes

\RequirePackage{natbib}
\RequirePackage{bibentry}        % allows bibitems to be typeset outside thebibliography en
% Redefine the \BR@b@bibitem command to fix a bug with bibentry+chicago style
\renewcommand\BR@b@bibitem[2][]{%
  \ifthenelse{\isempty{#1}}%
    {\BR@bibitem{#2}}%
    {\BR@bibitem[#1]{#2}}%
  \BR@c@bibitem{#2}%
}
\bidi@AtEndPreamble{\nobibliography*}                % pre-loads the bibliography keys
%%
% Normal \cite behavior
\newcounter{@bidituftesidenote@num@bibkeys}%
\newcommand{\@bidituftesidenote@normal@cite}[2][0pt]{%
  % Snag the last bibentry in the list for later comparison
  \let\@temp@last@bibkey\@empty%
  \@for\@temp@bibkey:=#2\do{\let\@temp@last@bibkey\@temp@bibkey}%
  \sidenote[][#1]{%
    % Loop through all the bibentries, separating them with semicolons and spaces
    \normalsize\normalfont\@bidituftesidenote@citation@font%
    \setcounter{@bidituftesidenote@num@bibkeys}{0}%
    \@for\@temp@bibkeyx:=#2\do{%
      \ifthenelse{\equal{\@temp@last@bibkey}{\@temp@bibkeyx}}%
        {\ifthenelse{\equal{\value{@bidituftesidenote@num@bibkeys}}{0}}{}{and\ }%
         \@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
         \bibentry{\@temp@bibkeyx}}%
        {\@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
         \bibentry{\@temp@bibkeyx};\ }%
      \stepcounter{@bidituftesidenote@num@bibkeys}%
    }%
  }%
}
\newcommand{\@bidituftеLTRsidenote@normal@cite}[2][0pt]{%
  % Snag the last bibentry in the list for later comparison
  \let\@temp@last@bibkey\@empty%
  \@for\@temp@bibkey:=#2\do{\let\@temp@last@bibkey\@temp@bibkey}%
  \LTRsidenote[][#1]{%
    % Loop through all the bibentries, separating them with semicolons and spaces
    \normalsize\normalfont\@bidituftesidenote@LTRcitation@font%
    \setcounter{@bidituftesidenote@num@bibkeys}{0}%
    \@for\@temp@bibkeyx:=#2\do{%
      \ifthenelse{\equal{\@temp@last@bibkey}{\@temp@bibkeyx}}%
        {\ifthenelse{\equal{\value{@bidituftesidenote@num@bibkeys}}{0}}{}{and\ }%
         \@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
```

```
8102          \bibentry{\@temp@bibkeyx}}%
8103        {\@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
8104          \bibentry{\@temp@bibkeyx};\ }%
8105      \stepcounter{@bidituftesidenote@num@bibkeys}%
8106    }%
8107  }%
8108 }
8109 \newcommand{\@bidituftеRTLsidenote@normal@cite}[2][0pt]{%
8110   % Snag the last bibentry in the list for later comparison
8111   \let\@temp@last@bibkey\@empty%
8112   \@for\@temp@bibkey:=#2\do{\let\@temp@last@bibkey\@temp@bibkey}%
8113   \RTLsidenote[][#1]{%
8114     % Loop through all the bibentries, separating them with semicolons and spaces
8115     \normalsize\normalfont\@bidituftesidenote@citation@font%
8116     \setcounter{@bidituftesidenote@num@bibkeys}{0}%
8117     \@for\@temp@bibkeyx:=#2\do{%
8118       \ifthenelse{\equal{\@temp@last@bibkey}{\@temp@bibkeyx}}%
8119         {\ifthenelse{\equal{\value{@bidituftesidenote@num@bibkeys}}{0}}{}{and\ }%
8120          \@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
8121          \bibentry{\@temp@bibkeyx}}%
8122         {\@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
8123          \bibentry{\@temp@bibkeyx};\ }%
8124       \stepcounter{@bidituftesidenote@num@bibkeys}%
8125     }%
8126   }%
8127 }
8128 %%
8129 % Macros for holding the list of cite keys until after the \sidenote
8130 \gdef\@bidituftesidenote@citations{}% list of cite keys
8131 \newcommand\@bidituftesidenote@add@citation[1]{\relax% adds a new bibkey to the list of cit
8132   \ifx\@bidituftesidenote@citations\@empty\else
8133     \g@addto@macro\@bidituftesidenote@citations{,}% separate by commas
8134   \fi
8135   \g@addto@macro\@bidituftesidenote@citations{#1}
8136 }
8137 \newcommand{\@bidituftesidenote@print@citations}[1][0pt]{% puts the citations in a margin n
8138   % Snag the last bibentry in the list for later comparison
8139   \let\@temp@last@bibkey\@empty%
8140   \@for\@temp@bibkey:=\@bidituftesidenote@citations\do{\let\@temp@last@bibkey\@temp@bibkey}
8141   \marginpar{%
8142     \hbox{}\vspace*{#1}%
8143     \@bidituftesidenote@citation@font%
8144     \@bidituftesidenote@citation@justification%
8145     \@bidituftesidenote@margin@par% use parindent and parskip settings for marginal text
8146     \vspace*{-1\baselineskip}%
8147     % Loop through all the bibentries, separating them with semicolons and spaces
8148     \setcounter{@bidituftesidenote@num@bibkeys}{0}%
8149     \@for\@temp@bibkeyx:=\@bidituftesidenote@citations\do{%
8150       \ifthenelse{\equal{\@temp@last@bibkey}{\@temp@bibkeyx}}%
8151         {\ifthenelse{\equal{\value{@bidituftesidenote@num@bibkeys}}{0}}{}{and\ }%
8152          \@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
8153          \bibentry{\@temp@bibkeyx}}%
8154         {\@bidituftesidenote@trim@spaces\@temp@bibkeyx% trim spaces around bibkey
8155          \bibentry{\@temp@bibkeyx};\ }%
```

```
      \stepcounter{@bidituftesidenote@num@bibkeys}%
    }%
  }%
}
%%
% \cite behavior when executed within a sidenote
\newcommand{\@bidituftesidenote@sidenote@citations}{}% contains list of \cites in sidenote
\newcommand{\@bidituftesidenote@infootnote@cite}[1]{%
  \@bidituftesidenote@add@citation{#1}
}
%%
% Set the default \cite style.  This is set and reset by the \sidenote command.
\let\cite\@bidituftesidenote@normal@cite
\let\LTRcite\@biditufteLTRsidenote@normal@cite
\let\RTLcite\@biditufteRTLsidenote@normal@cite
%%
% Transform existing \footnotes into \sidenotes
% Sidenote: ``Where God meant footnotes to go.'' ---bidituftesidenote
\RequirePackage{optparams}% for our new sidenote commands -- provides multiple optional arg
\providecommand{\footnotelayout}{\@bidituftesidenote@sidenote@font\@bidituftesidenote@siden
\renewcommand{\footnotelayout}{\@bidituftesidenote@sidenote@font\@bidituftesidenote@sidenot
% Override footmisc's definition to set the sidenote marks (numbers) inside the
% sidenote's text block.
\bidi@patch@AfterPackage{bidi}{\long\def\@makefntext#1{\@textsuperscript{\@bidituftesidenot
% Set the in-text footnote mark in the same typeface as the body text itself.
\bidi@patch@AfterPackage{bidi}{\def\@makefnmark{\hbox{\@textsuperscript{\normalfont\footnot
\providecommand*{\multiplefootnotemarker}{3sp}
\providecommand*{\multfootsep}{,}
\bidi@patch@AfterPackage{bidi}{%
\renewcommand{\@footnotemark}{%
  \leavevmode%
  \ifhmode%
    \edef\@x@sf{\the\spacefactor}%
    \@bidituftesidenote@check@multiple@sidenotes%
    \nobreak%
  \fi%
  \@makefnmark%
  \ifhmode\spacefactor\@x@sf\fi%
  \relax%
}%
}
\newcommand{\@bidituftesidenote@check@multiple@sidenotes}{%
  \ifdim\lastkern=\multiplefootnotemarker\relax%
    \edef\@x@sf{\the\spacefactor}%
    \unkern%
    \textsuperscript{\multfootsep}%
    \spacefactor\@x@sf\relax%
  \fi
}
\bidi@patch@AfterPackage{bidi}{%
\renewcommand\@footnotetext[2][0pt]{%
  \bidituftesidenotemarginpar{%
    \hbox{}\vspace*{#1}%
    \def\baselinestretch {\setspace@singlespace}%
```

```
8210     \reset@font%
8211     \bidi@@footnotetext@font% \reset@font\footnotesize%
8212     \@bidituftesidenote@margin@par% use parindent and parskip settings for marginal text
8213     \vspace*{-1\baselineskip}\noindent%
8214     \protected@edef\@currentlabel{%
8215        \csname p@footnote\endcsname\@thefnmark%
8216     }%
8217     \color@begingroup%
8218        \@makefntext{%
8219          \ignorespaces#2%
8220        }%
8221     \color@endgroup%
8222   }%
8223 }%
8224 \renewcommand\@LTRfootnotetext[2][Opt]{%
8225   \LTRbidituftesidenotemarginpar{%
8226     \hbox{}\vspace*{#1}%
8227     \def\baselinestretch {\setspace@singlespace}%
8228     \reset@font%
8229     \bidi@@LTRfootnotetext@font% \reset@font\footnotesize%
8230     \@bidituftesidenote@margin@par% use parindent and parskip settings for marginal text
8231     \vspace*{-1\baselineskip}\noindent%
8232     \protected@edef\@currentlabel{%
8233        \csname p@footnote\endcsname\@thefnmark%
8234     }%
8235     \color@begingroup%
8236        \@makefntext{%
8237          \ignorespaces#2%
8238        }%
8239     \color@endgroup%
8240   }%
8241 }%
8242 \renewcommand\@RTLfootnotetext[2][Opt]{%
8243   \RTLbidituftesidenotemarginpar{%
8244     \hbox{}\vspace*{#1}%
8245     \def\baselinestretch {\setspace@singlespace}%
8246     \reset@font%
8247     \bidi@@RTLfootnotetext@font% \reset@font\footnotesize%
8248     \@bidituftesidenote@margin@par% use parindent and parskip settings for marginal text
8249     \vspace*{-1\baselineskip}\noindent%
8250     \protected@edef\@currentlabel{%
8251        \csname p@footnote\endcsname\@thefnmark%
8252     }%
8253     \color@begingroup%
8254        \@makefntext{%
8255          \ignorespaces#2%
8256        }%
8257     \color@endgroup%
8258   }%
8259 }%
8260 }
8261 %
8262 % Define \sidenote command.  Can handle \cite.
8263 \newlength{\@bidituftesidenote@sidenote@vertical@offset}
```

```
\setlength{\@bidituftesidenote@sidenote@vertical@offset}{0pt}
% #1 = footnote num, #2 = vertical offset, #3 = footnote text
\long\def\@bidituftesidenote@sidenote[#1][#2]#3{%
  \let\cite\@bidituftesidenote@infootnote@cite%   use the in-sidenote \cite command
  \gdef\@bidituftesidenote@citations{}%           clear out any old citations
  \ifthenelse{\NOT\isempty{#2}}{%
    \gsetlength{\@bidituftesidenote@sidenote@vertical@offset}{#2}%
  }{%
    \gsetlength{\@bidituftesidenote@sidenote@vertical@offset}{0pt}%
  }%
  \ifthenelse{\isempty{#1}}{%
    % no specific footnote number provided
    \stepcounter\@mpfn%
    \protected@xdef\@thefnmark{\thempfn}%
    \@footnotemark\@footnotetext[\@bidituftesidenote@sidenote@vertical@offset]{#3}%
  }{%
    % specific footnote number provided
    \begingroup%
      \csname c@\@mpfn\endcsname #1\relax%
      \unrestored@protected@xdef\@thefnmark{\thempfn}%
    \endgroup%
    \@footnotemark\@footnotetext[\@bidituftesidenote@sidenote@vertical@offset]{#3}%
  }%
  \@bidituftesidenote@print@citations%            print any citations
  \let\cite\@bidituftesidenote@normal@cite%       go back to using normal in-text \cite com
  \let\LTRcite\@bidiufteLTRsidenote@normal@cite%       go back to using normal in-text \LT
  \let\RTLcite\@bidiufteRTLsidenote@normal@cite%       go back to using normal in-text \RT
  \unskip\ignorespaces%               remove extra white space
  \kern-\multiplefootnotemarker%      remove \kern left behind by sidenote
  \kern\multiplefootnotemarker\relax% add new \kern here to replace the one we yanked
}
\long\def\@LTRbidituftesidenote@sidenote[#1][#2]#3{%
  \let\cite\@bidituftesidenote@infootnote@cite%   use the in-sidenote \cite command
  \gdef\@bidituftesidenote@citations{}%           clear out any old citations
  \ifthenelse{\NOT\isempty{#2}}{%
    \gsetlength{\@bidituftesidenote@sidenote@vertical@offset}{#2}%
  }{%
    \gsetlength{\@bidituftesidenote@sidenote@vertical@offset}{0pt}%
  }%
  \ifthenelse{\isempty{#1}}{%
    % no specific footnote number provided
    \stepcounter\@mpfn%
    \protected@xdef\@thefnmark{\thempfn}%
    \@footnotemark\@LTRfootnotetext[\@bidituftesidenote@sidenote@vertical@offset]{#3}%
  }{%
    % specific footnote number provided
    \begingroup%
      \csname c@\@mpfn\endcsname #1\relax%
      \unrestored@protected@xdef\@thefnmark{\thempfn}%
    \endgroup%
    \@footnotemark\@LTRfootnotetext[\@bidituftesidenote@sidenote@vertical@offset]{#3}%
  }%
  \@bidituftesidenote@print@citations%            print any citations
  \let\cite\@bidituftesidenote@normal@cite%       go back to using normal in-text \cite com
```

```
  \let\LTRcite\@bidituftelTRsidenote@normal@cite%       go back to using normal in-text \LT
  \let\RTLcite\@bidituftelTLsidenote@normal@cite%       go back to using normal in-text \RT
  \unskip\ignorespaces%               remove extra white space
  \kern-\multiplefootnotemarker%      remove \kern left behind by sidenote
  \kern\multiplefootnotemarker\relax% add new \kern here to replace the one we yanked
}
\long\def\@RTLbidituftesidenote@sidenote[#1][#2]#3{%
  \let\cite\@bidituftesidenote@infootnote@cite%   use the in-sidenote \cite command
  \gdef\@bidituftesidenote@citations{}%           clear out any old citations
  \ifthenelse{\NOT\isempty{#2}}{%
    \gsetlength{\@bidituftesidenote@sidenote@vertical@offset}{#2}%
  }{%
    \gsetlength{\@bidituftesidenote@sidenote@vertical@offset}{0pt}%
  }%
  \ifthenelse{\isempty{#1}}{%
    % no specific footnote number provided
    \stepcounter\@mpfn%
    \protected@xdef\@thefnmark{\thempfn}%
    \@footnotemark\@RTLfootnotetext[\@bidituftesidenote@sidenote@vertical@offset]{#3}%
  }{%
    % specific footnote number provided
    \begingroup%
      \csname c@\@mpfn\endcsname #1\relax%
      \unrestored@protected@xdef\@thefnmark{\thempfn}%
    \endgroup%
    \@footnotemark\@RTLfootnotetext[\@bidituftesidenote@sidenote@vertical@offset]{#3}%
  }%
  \@bidituftesidenote@print@citations%            print any citations
  \let\cite\@bidituftesidenote@normal@cite%       go back to using normal in-text \cite com
  \let\LTRcite\@bidituftelTRsidenote@normal@cite%       go back to using normal in-text \LT
  \let\RTLcite\@bidituftelTLsidenote@normal@cite%       go back to using normal in-text \RT
  \unskip\ignorespaces%               remove extra white space
  \kern-\multiplefootnotemarker%      remove \kern left behind by sidenote
  \kern\multiplefootnotemarker\relax% add new \kern here to replace the one we yanked
}
\newcommand{\sidenote}{\optparams{\@bidituftesidenote@sidenote}{[][0pt]}}
\newcommand{\LTRsidenote}{\optparams{\@LTRbidituftesidenote@sidenote}{[][0pt]}}
\newcommand{\RTLsidenote}{\optparams{\@RTLbidituftesidenote@sidenote}{[][0pt]}}
\bidi@patch@AfterPackage{bidi}{%
\renewcommand{\footnote}{\optparams{\@bidituftesidenote@sidenote}{[][0pt]}}%
\renewcommand{\LTRfootnote}{\optparams{\@LTRbidituftesidenote@sidenote}{[][0pt]}}%
\renewcommand{\RTLfootnote}{\optparams{\@RTLbidituftesidenote@sidenote}{[][0pt]}}%
}
%%
% Sidenote without the footnote mark
\newcommand\marginnote[2][0pt]{%
  \let\cite\@bidituftesidenote@infootnote@cite%   use the in-sidenote \cite command
  \gdef\@bidituftesidenote@citations{}%           clear out any old citations
  \bidituftesidenotemarginpar{\hbox{}\vspace*{#1}\@bidituftesidenote@marginnote@font\@bidit
  \@bidituftesidenote@print@citations%            print any citations
  \let\cite\@bidituftesidenote@normal@cite%       go back to using normal in-text \cite com
  \let\LTRcite\@bidituftelTRsidenote@normal@cite%       go back to using normal in-text \LT
  \let\RTLcite\@bidituftelTLsidenote@normal@cite%       go back to using normal in-text \RT
}
```

```
\newcommand\LTRmarginnote[2][0pt]{%
  \let\cite\@bidituftesidenote@infootnote@cite%   use the in-sidenote \cite command
  \gdef\@bidituftesidenote@citations{}%           clear out any old citations
  \LTRbidituftesidenotemarginpar{\hbox{}\vspace*{#1}\@bidituftesidenote@LTRmarginnote@font\
  \@bidituftesidenote@print@citations%            print any citations
  \let\cite\@bidituftesidenote@normal@cite%       go back to using normal in-text \cite com
  \let\LTRcite\@biditufteLTRsidenote@normal@cite%       go back to using normal in-text \LT
  \let\RTLcite\@biditufteRTLsidenote@normal@cite%       go back to using normal in-text \RT
}
\newcommand\RTLmarginnote[2][0pt]{%
  \let\cite\@bidituftesidenote@infootnote@cite%   use the in-sidenote \cite command
  \gdef\@bidituftesidenote@citations{}%           clear out any old citations
  \RTLbidituftesidenotemarginpar{\hbox{}\vspace*{#1}\@bidituftesidenote@RTLmarginnote@font\
  \@bidituftesidenote@print@citations%            print any citations
  \let\cite\@bidituftesidenote@normal@cite%       go back to using normal in-text \cite com
  \let\LTRcite\@biditufteLTRsidenote@normal@cite%       go back to using normal in-text \LT
  \let\RTLcite\@biditufteRTLsidenote@normal@cite%       go back to using normal in-text \RT
}
```

55 File bidituftetoc.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidituftetoc}[2011/06/17 v0.1
bidi implementation of tufte toc]
\RequirePackage{titlesec,titletoc,xifthen,biditools}
\newcommand{\@bidituftetoc@pkgname}{bidituftetoc}
\newcommand{\bidituftetocError}[2]{\PackageError{\@bidituftetoc@pkgname}{#1}{#2}}
%%
% Turn off section numbering
\setcounter{secnumdepth}{-1}
\newboolean{@bidituftetoc@toc}
\setboolean{@bidituftetoc@toc}{true}
\DeclareOption{notoc}{\setboolean{@bidituftetoc@toc}{false}}
\DeclareOption{toc}{\setboolean{@bidituftetoc@toc}{true}}
\ProcessOptions
%%
% Make Tuftian-style section headings and TOC formatting
\bidi@patch@AfterPackage{bidi}{%
\titleformat{\chapter}%
  [display]% shape
  {\relax\ifthenelse{\NOT\boolean{@bidituftefloat@symmetric}}{\begin{fullwidth}}{}}% format
  {\itshape\huge\thechapter}% label
  {0pt}% horizontal separation between label and title body
  {\huge\rmfamily\itshape}% before the title body
  [\ifthenelse{\NOT\boolean{@bidituftefloat@symmetric}}{\end{fullwidth}}{}]% after the titl
\titleformat{\section}%
  [hang]% shape
  {\normalfont\Large\itshape}% format applied to label+text
  {\thesection}% label
  {1em}% horizontal separation between label and title body
  {}% before the title body
  []% after the title body
\titleformat{\subsection}%
  [hang]% shape
```

```
  {\normalfont\large\itshape}% format applied to label+text
  {\thesubsection}% label
  {1em}% horizontal separation between label and title body
  {}% before the title body
  []% after the title body
\titleformat{\paragraph}%
  [runin]% shape
  {\normalfont\itshape}% format applied to label+text
  {\theparagraph}% label
  {1em}% horizontal separation between label and title body
  {}% before the title body
  []% after the title body
\titlespacing*{\chapter}{0pt}{50pt}{40pt}
\titlespacing*{\section}{0pt}{3.5ex plus 1ex minus .2ex}{2.3ex plus .2ex}
\titlespacing*{\subsection}{0pt}{3.25ex plus 1ex minus .2ex}{1.5ex plus.2ex}
}
% Subsubsection and following section headings shouldn't be used.
% See Bringhurst's _The Elements of Typography_, section 4.2.2.
\renewcommand\subsubsection{%
  \bidituftetocError{\noexpand\subsubsection is undefined by this class.%
    \MessageBreak See Robert Bringhurst's _The Elements of
    \MessageBreak Typographic Style_, section 4.2.2.
    \MessageBreak \noexpand\subsubsection was used}
    {From Bringhurst's _The Elements of Typographic Style_, section 4.2.2: Use as
    \MessageBreak many levels of headings as you need, no more and no fewer.  Also see the
    \MessageBreak related threads on Ask E.T. at http://www.edwardbidituftetoc.com/.}
}
\renewcommand\subparagraph{%
  \bidituftetocError{\noexpand\subparagraph is undefined by this class.%
    \MessageBreak See Robert Bringhurst's _The Elements of
    \MessageBreak Typographic Style_, section 4.2.2.
    \MessageBreak \noexpand\subparagraph was used}
    {From Bringhurst's _The Elements of Typographic Style_, section 4.2.2: Use as
    \MessageBreak many levels of headings as you need, no more and no fewer.  Also see the
    \MessageBreak related threads on Ask E.T. at http://www.edwardbidituftetoc.com/.}
}
% Formatting for main TOC (printed in front matter)
% {section} [left] {above} {before w/label} {before w/o label} {filler + page} [after]
\ifthenelse{\boolean{@bidituftetoc@toc}}{%
 \bidi@patch@AfterPackage{bidi}{%
 \titlecontents{part}% FIXME
    [0em] % distance from left margin
    {\vspace{1.5\baselineskip}\begin{fullwidth}\LARGE\rmfamily\itshape} % above (global for
    {\contentslabel{2em}} % before w/label (label = ``II'')
    {} % before w/o label
    {\rmfamily\upshape\qquad\thecontentspage} % filler + page (leaders and page num)
    [\end{fullwidth}] % after
  \titlecontents{chapter}%
    [0em] % distance from left margin
    {\vspace{1.5\baselineskip}\begin{fullwidth}\LARGE\rmfamily\itshape} % above (global for
    {\hspace*{0em}\contentslabel{2em}} % before w/label (label = ``2'')
    {\hspace*{0em}} % before w/o label
    {\rmfamily\upshape\qquad\thecontentspage} % filler + page (leaders and page num)
    [\end{fullwidth}] % after
```

```
  \titlecontents{section}% FIXME
    [0em] % distance from left margin
    {\vspace{0\baselineskip}\begin{fullwidth}\Large\rmfamily\itshape} % above (global forma
    {\hspace*{2em}\contentslabel{2em}} % before w/label (label = ``2.6'')
    {\hspace*{2em}} % before w/o label
    {\rmfamily\upshape\qquad\thecontentspage} % filler + page (leaders and page num)
    [\end{fullwidth}] % after
  \titlecontents{subsection}% FIXME
    [0em] % distance from left margin
    {\vspace{0\baselineskip}\begin{fullwidth}\large\rmfamily\itshape} % above (global forma
    {\hspace*{4em}\contentslabel{4em}} % before w/label (label = ``2.6.1'')
    {\hspace*{4em}} % before w/o label
    {\rmfamily\upshape\qquad\thecontentspage} % filler + page (leaders and page num)
    [\end{fullwidth}] % after
  \titlecontents{paragraph}% FIXME
    [0em] % distance from left margin
    {\vspace{0\baselineskip}\begin{fullwidth}\normalsize\rmfamily\itshape} % above (global
    {\hspace*{6em}\contentslabel{2em}} % before w/label (label = ``2.6.0.0.1'')
    {\hspace*{6em}} % before w/o label
    {\rmfamily\upshape\qquad\thecontentspage} % filler + page (leaders and page num)
    [\end{fullwidth}] % after
}%
}{}
%%
% Format lists of figures/tables
\renewcommand\listoffigures{%
  \@ifundefined{chapter}%
    {\section*{\listfigurename}}%
    {\chapter*{\listfigurename}}%
%  \begin{fullwidth}%
    \@starttoc{lof}%
%  \end{fullwidth}%
}
\renewcommand\listoftables{%
  \@ifundefined{chapter}%
    {\section*{\listtablename}}%
    {\chapter*{\listtablename}}%
%  \begin{fullwidth}%
    \@starttoc{lot}%
%  \end{fullwidth}%
}
\newcommand{\@bidituftetoc@lof@line}[2]{%
  % #1 is the figure/table number and its caption text
  % #2 is the page number on which the figure/table appears
  \leftskip 0.0em
  \rightskip 0em
  \parfillskip 0em plus 1fil
  \parindent 0.0em
  \@afterindenttrue
  \interlinepenalty\@M
  \leavevmode
  \@tempdima 2.0em
  \if@RTL\advance\rightskip\@tempdima\else\advance\leftskip\@tempdima\fi
  \null\nobreak\hskip -\if@RTL\rightskip\else\leftskip\fi
```

```
  {#1}\nobreak\qquad\nobreak#2%
  \par%
}
\renewcommand*\l@figure{\@bidituftetoc@lof@line}
\let\l@table\l@figure
```

56 File bidituftegeneralstructure.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidituftegeneralstructure}[2011/06/18 v0.1
bidi implementation of tufte general structure]
\renewcommand\small{%
   \@setfontsize\small\@ixpt{12}%
   \abovedisplayskip 8.5\p@ \@plus3\p@ \@minus4\p@
   \abovedisplayshortskip \z@ \@plus2\p@
   \belowdisplayshortskip 4\p@ \@plus2\p@ \@minus2\p@
   \def\@listi{\leftmargin\leftmargini
               \topsep 4\p@ \@plus2\p@ \@minus2\p@
               \parsep 2\p@ \@plus\p@ \@minus\p@
               \itemsep \parsep}%
   \belowdisplayskip \abovedisplayskip
}
\renewcommand\scriptsize{\@setfontsize\scriptsize\@viipt\@viiipt}
\renewcommand\tiny{\@setfontsize\tiny\@vpt\@vipt}
\renewcommand\large{\@setfontsize\large\@xipt{15}}
\renewcommand\Large{\@setfontsize\Large\@xiipt{16}}
\renewcommand\LARGE{\@setfontsize\LARGE\@xivpt{18}}
\renewcommand\huge{\@setfontsize\huge\@xxpt{30}}
\renewcommand\Huge{\@setfontsize\Huge{24}{36}}
\setlength\leftmargini   {1pc}
\setlength\leftmarginii  {1pc}
\setlength\leftmarginiii {1pc}
\setlength\leftmarginiv  {1pc}
\setlength\leftmarginv   {1pc}
\setlength\leftmarginvi  {1pc}
\setlength\labelsep      {.5pc}
\setlength\labelwidth    {\leftmargini}
\addtolength\labelwidth{-\labelsep}
\setlength{\parindent}{1.0pc}%
\setlength{\parskip}{0pt}%
\RequirePackage{ragged2e}
\setlength{\RaggedRightRightskip}{\z@ plus 0.08\hsize}
% Paragraph indentation and separation for normal text
\newcommand{\@bidituftegeneralstructure@reset@par}{%
  \setlength{\RaggedRightParindent}{1.0pc}%
  \setlength{\JustifyingParindent}{1.0pc}%
  \setlength{\parindent}{1pc}%
  \setlength{\parskip}{0pt}%
}
\@bidituftegeneralstructure@reset@par
% Require paralist package for tighter lists
\RequirePackage{paralist}
% Add rightmargin to compactenum
\def\@compactenum@{%
```

```
  \expandafter\list\csname label\@enumctr\endcsname{%
    \usecounter{\@enumctr}%
    \rightmargin=2em% added this
    \parsep\plparsep
    \itemsep\plitemsep
    \topsep\pltopsep
    \partopsep\plpartopsep
    \def\makelabel##1{\hss\llap{##1}}}}
%%
% An environment for paragraph-style section
\providecommand\newthought[1]{%
   \addvspace{1.0\baselineskip plus 0.5ex minus 0.2ex}%
   \noindent\textbf{#1}%
}
%%
% Redefine the display environments (quote, quotation, etc.)
\renewenvironment{verse}
               {\let\\\@centercr
                \list{}{\itemsep      \z@
                        \itemindent   -1pc%
                        \listparindent\itemindent
                        \rightmargin  \leftmargin
                        \advance\leftmargin 1pc}%
                \small%
                \item\relax}
               {\endlist}
\renewenvironment{quotation}
               {\list{}{\listparindent 1pc%
                        \itemindent    \listparindent
                        \rightmargin   \leftmargin
                        \parsep        \z@ \@plus\p@}%
                \small%
                \item\relax\noindent\ignorespaces}
               {\endlist}
\renewenvironment{quote}
               {\list{}{\rightmargin\leftmargin}%
                \small%
                \item\relax}
               {\endlist}
% Italicize description run-in headings (instead of the default bold)
\renewcommand*\descriptionlabel[1]{\hspace\labelsep\normalfont\em #1}
%%
% Redefine \bibsection to not mark the running heads.
% (Code modified from natbib.sty.)
\@ifundefined{chapter}%
  {\renewcommand\bibsection{\section*{\refname}}}
  {\@ifundefined{NAT@sectionbib}%
    {\renewcommand\bibsection{\chapter{\bibname}}}
    {\renewcommand\bibsection{\section*{\bibname}}}}
\RequirePackage{multicol}
\renewenvironment{theindex}{%
\@ifundefined{chapter}%
    {\section*{\indexname}}%
    {\chapter{\indexname}}%
```

```
  \begin{fullwidth}%
  \small%
  \parskip0pt%
  \parindent0pt%
  \let\item\@idxitem%
  \begin{multicols}{3}%
}{%
  \end{multicols}%
  \end{fullwidth}%
}
\AtBeginDocument{%
\renewcommand\@idxitem{\par\hangindent \if@RTL-\fi2em}%
\renewcommand\subitem{\par\hangindent \if@RTL-\fi3em\hspace*{1em}}%
\renewcommand\subsubitem{\par\hangindent \if@RTL-\fi4em\hspace*{2em}}}
\renewcommand\indexspace{\par\addvspace{1.0\baselineskip plus 0.5ex minus 0.2ex}\relax}%
\newcommand{\lettergroup}[1]{}% swallow the letter heading in the index
```

57 File bidituftehyperref.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidituftehyperref}[2011/06/18 v0.1
bidi implementation of tufte hyperref]
%%
% Color
\RequirePackage[usenames,dvipsnames,svgnames]{xcolor}%
\newboolean{@bidituftehyperref@loadhyper}
\setboolean{@bidituftehyperref@loadhyper}{true}
\DeclareOption{hyper}{\setboolean{@bidituftehyperref@loadhyper}{true}}
\DeclareOption{nohyper}{\setboolean{@bidituftehyperref@loadhyper}{false}}
\ProcessOptions
%% Loads the hyperref package and sets some default options.
\newcommand{\bidituftehyperrefLoadHyperref}{%
\RequirePackage[hyperfootnotes=false,colorlinks=true]{hyperref}
  \hypersetup{%
    bookmarksdepth = section,
    citecolor = DarkGreen,
    linkcolor = DarkBlue,
%    pagecolor = DarkBlue,
    urlcolor = DarkGreen,
  }%
}
\ifthenelse{\boolean{@bidituftehyperref@loadhyper}}{%
  \bidituftehyperrefLoadHyperref%
}{% hyperfootnotes override our modifications to the \footnote* and \@footnote* commands.
  \PassOptionsToPackage{hyperfootnotes=false}{hyperref}
}
```

58 File bidituftetitle.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidituftetitle}[2011/06/18 v0.1
bidi implementation of tufte title]
\RequirePackage{biditools}
%%
```

```
% `titlepage' option -- creates a full title page with \maketitle
\newboolean{@bidituftetitle@titlepage}
\DeclareOption{titlepage}{\setboolean{@bidituftetitle@titlepage}{true}}
\DeclareOption{notitlepage}{\setboolean{@bidituftetitle@titlepage}{false}}
% Default `book' and `handout' options
\@ifclassloaded{book}{%
\ExecuteOptions{titlepage}}{%
\@ifclassloaded{article}{%
\ExecuteOptions{notitlepage}}%
{}}
\ProcessOptions
%%
% Modified \title, \author, and \date commands.  These store the
% (footnote-less) values in \plaintitle, \plainauthor, and \thedate, respectively.
\newcommand{\plaintitle}{}%     plain-text-only title
\newcommand{\plainauthor}{}%    plain-text-only author
\newcommand{\plainpublisher}{}% plain-text-only publisher
\newcommand{\thanklesstitle}{}%     full title text minus \thanks{}
\newcommand{\thanklessauthor}{}%    full author text minus \thanks{}
\newcommand{\thanklesspublisher}{}% full publisher minus \thanks{}
\newcommand{\@publisher}{}% full publisher with \thanks{}
\newcommand{\thedate}{\today}
\bidi@patch@AfterPackage{bidi}{%
\renewcommand{\thanks}[1]{\footnote{#1}}
\renewcommand{\LTRthanks}[1]{\LTRfootnote{#1}}
\renewcommand{\RTLthanks}[1]{\RTLfootnote{#1}}
}
\renewcommand{\title}[2][]{%
  \gdef\@title{#2}%
  \begingroup%
    % TODO store contents of \thanks command
    \renewcommand{\thanks}[1]{}% swallow \thanks contents
    \renewcommand{\LTRthanks}[1]{}% swallow \LTRthanks contents
    \renewcommand{\RTLthanks}[1]{}% swallow \RTLthanks contents
    \protected@xdef\thanklesstitle{#2}%
  \endgroup%
  \ifthenelse{\isempty{#1}}%
    {\renewcommand{\plaintitle}{\thanklesstitle}}% use thankless title
    {\renewcommand{\plaintitle}{#1}}% use provided plain-text title
  \@ifundefined{hypersetup}%
    {}% hyperref is not loaded; do nothing
    {\hypersetup{pdftitle={\plaintitle}}}% set the PDF metadata title
}
\let\@author\@empty% suppress default latex.ltx ``no author'' warning
\renewcommand{\author}[2][]{%
  \ifthenelse{\isempty{#2}}{}{\gdef\@author{#2}}%
  \begingroup%
    % TODO store contents of \thanks command
    \renewcommand{\thanks}[1]{}% swallow \thanks contents
    \renewcommand{\LTRthanks}[1]{}% swallow \LTRthanks contents
    \renewcommand{\RTLthanks}[1]{}% swallow \RTLthanks contents
    \protected@xdef\thanklessauthor{#2}%
  \endgroup%
  \ifthenelse{\isempty{#1}}%
```

```
    {\renewcommand{\plainauthor}{\thanklessauthor}}% use thankless author
    {\renewcommand{\plainauthor}{#1}}% use provided plain-text author
  \@ifundefined{hypersetup}%
    {}% hyperref is not loaded; do nothing
    {\hypersetup{pdfauthor={\plainauthor}}}% set the PDF metadata author
}
\renewcommand{\date}[1]{%
  \gdef\@date{#1}%
  \begingroup%
    % TODO store contents of \thanks command
    \renewcommand{\thanks}[1]{}% swallow \thanks contents
    \renewcommand{\LTRthanks}[1]{}% swallow \LTRthanks contents
    \renewcommand{\RTLthanks}[1]{}% swallow \RTLthanks contents
    \protected@xdef\thedate{#1}%
  \endgroup%
}
%%
% Provides a \publisher command to set the publisher
\newcommand{\publisher}[2][]{%
  \gdef\@publisher{#2}%
  \begingroup%
    \renewcommand{\thanks}[1]{}% swallow \thanks contents
    \renewcommand{\LTRthanks}[1]{}% swallow \LTRthanks contents
    \renewcommand{\RTLthanks}[1]{}% swallow \RTLthanks contents
    \protected@xdef\thanklesspublisher{#2}%
  \endgroup%
  \ifthenelse{\isempty{#1}}
    {\renewcommand{\plainpublisher}{\thanklesspublisher}}% use thankless publisher
    {\renewcommand{\plainpublisher}{#1}}% use provided plain-text publisher
}
%%
% Produces a full title page
\newcommand{\maketitlepage}[0]{%
  \cleardoublepage%
  {%
  \bfseries%
  \begin{fullwidth}%
  \fontsize{18}{20}\selectfont\par\noindent\thanklessauthor%
  \vspace{11.5pc}%
  \fontsize{36}{40}\selectfont\par\noindent\thanklesstitle%
  \vfill%
  \fontsize{14}{16}\selectfont\par\noindent\thanklesspublisher%
  \end{fullwidth}%
  }
  \thispagestyle{empty}%
  \clearpage%
}
%%
% Title block
\bidi@AfterEndPreamble{%
\renewcommand{\maketitle}{%
  \newpage%
  \global\@topnum\z@% prevent floats from being placed at the top of the page
  \begingroup%
```

```
    \setlength{\parindent}{0pt}%
    \setlength{\parskip}{4pt}%
    \let\@@title\@empty%
    \let\@@author\@empty%
    \let\@@date\@empty%
      \gdef\@@title{\LARGE\itshape\@title\par}%
      \gdef\@@author{\Large\itshape\@author\par}%
      \gdef\@@date{\Large\itshape\@date\par}%
    \@@title%
    \@@author%
    \@@date%
  \endgroup%
  \thispagestyle{plain}% suppress the running head
}%
}
%%
% Title page (if the `titlepage' option was passed to the bidituftetitle-handout
% class.)
\bidi@AfterEndPreamble{%
\ifthenelse{\boolean{@bidituftetitle@titlepage}}
  {\renewcommand{\maketitle}{\maketitlepage}}
  {}
}
%%
% When \cleardoublepage is called, produce a blank (empty) page -- i.e.,
% without headers and footers
\def\cleardoublepage{\clearpage\if@twoside\ifodd\c@page\else
  \hbox{}
  %\vspace*{\fill}
  %\begin{center}
  %  This page intentionally contains only this sentence.
  %\end{center}
  %\vspace{\fill}
  \thispagestyle{empty}
  \newpage
  \if@twocolumn\hbox{}\newpage\fi\fi\fi}
```

59 File biditufte-handout.cls

```
\NeedsTeXFormat{LaTeX2e}[1994/06/01]
\ProvidesClass{bidituftе-handout}[2011/06/18 v0.1 bidituftе-handout class]
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{article}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftefloat}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftetoc}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftehyperref}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftetitle}}
\ProcessOptions\relax
\LoadClass{article}
\RequirePackage{bidituftefloat}
\RequirePackage{bidituftesidenote}
\RequirePackage{bidituftetoc}
\RequirePackage{bidituftegeneralstructure}
\RequirePackage{bidituftehyperref}
\RequirePackage{bidituftetitle}
```

```
\renewenvironment{abstract}
  {\begin{quotation}}
  {\end{quotation}}
\AtBeginDocument{%
\IfFileExists{bidituftе-handout.cfg}
  {\input{bidituftе-handout.cfg}
   \ClassInfo{bidituftе-handout}{Loading bidituftе-handout configuration file \@gobble}}
  {}%
}
```

60 File bidituftе-book.cls

```
\NeedsTeXFormat{LaTeX2e}[1994/06/01]
\ProvidesClass{bidituftе-book}[2011/06/18 v0.1 bidituftе-book class]
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{book}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftefloat}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftetoc}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftehyperref}}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{bidituftetitle}}
\ProcessOptions\relax
\LoadClass{book}
\RequirePackage{bidituftefloat}
\RequirePackage{bidituftesidenote}
\RequirePackage{bidituftetoc}
\RequirePackage{bidituftegeneralstructure}
\RequirePackage{bidituftehyperref}
\RequirePackage{bidituftetitle}
%%
% Set up any book-specific stuff now
%%
% The front matter in Tufte's /Beautiful Evidence/ contains everything up
% to the opening page of Chapter 1.  The running heads, when they appear,
% contain only the (arabic) page number in the outside corner.
%\newif\if@mainmatter \@mainmattertrue
\renewcommand\frontmatter{%
  \cleardoublepage%
  \@mainmatterfalse%
  \pagenumbering{arabic}%
  %\pagestyle{plain}%
  \fancyhf{}%
    \ifthenelse{\boolean{@bidituftefloat@twoside}}%
    {\fancyhead[LE,RO]{\thepage}}%
    {\fancyhead[RE,RO]{\thepage}}%
}
%%
% The main matter in Tufte's /Beautiful Evidence/ doesn't restart the page
% numbering---it continues where it left off in the front matter.
\renewcommand\mainmatter{%
  \cleardoublepage%
  \@mainmattertrue%
  \fancyhf{}%
  \ifthenelse{\boolean{@bidituftefloat@twoside}}%
      {\renewcommand{\chaptermark}[1]{\markboth{##1}{}}%
      \fancyhead[LE]{\thepage\quad\smallcaps{\newlinetospace{\plaintitle}}}% book title
```

```
      \fancyhead[RO]{\smallcaps{\newlinetospace{\leftmark}}\quad\thepage}}% chapter title
      {\fancyhead[RE,RO]{\smallcaps{\newlinetospace{\plaintitle}}\quad\thepage}}% book titl
}
%%
% The back matter contains appendices, indices, glossaries, endnotes,
% biliographies, list of contributors, illustration credits, etc.
\renewcommand\backmatter{%
  \if@openright%
    \cleardoublepage%
  \else%
    \clearpage%
  \fi%
  \@mainmatterfalse%
}
%%
% Only show the chapter titles in the table of contents
\setcounter{tocdepth}{0}
\AtBeginDocument{%
\IfFileExists{biditufte-book.cfg}
  {\input{biditufte-book.cfg}
   \ClassInfo{biditufte-book}{Loading biditufte-book configuration file \@gobble}}
  {}%
}
```

61 File bidipoem.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{bidipoem}%
[2019/03/03 v1.0 Environments for typesetting Persian traditional and modern poems]

% Usage:
%
% \Setversedim #1#2   % define the layout (within a group):
% #1 = length of both half-verses
% #2 = separation distance = length of a connection, if present
%  Variant:
% \Setversedim #1[#2]#3  % for half-verses of unequal length
% #1 = length of first (=right) half-verse
% #2 = length of second (=left) half-verse
% #3 = separation distance = length of a connection, if present
%
% \traditionalhalfverses #1#2  % typeset two separated half-verses
% #1 = text of first (=right) half-verse
% #2 = text of second (=left) half-verse
%  Variant:
% \traditionalhalfverses #1[#2]#3  % typeset two connected half-verses
% #1 = text of first (=right) half-verse
% #2 = text of connection
% #3 = text of second (=left) half-verse
%
% Alternative (if preferred):
%
% \traditionalconnverses #1#2#3  % = \traditionalhalfverses #1[#2]#3

```

```
8945
8946 \newcommand*{\bidipoem@spreadbox}[2]{\hbox to #1{#2}}
8947
8948 % define the layout, verses will be centered
8949
8950 \newdimen \bidipoem@hvlen \newdimen \bidipoem@hvsep
8951 \newdimen \bidipoem@hvind \newdimen \bidipoem@@hvlen
8952
8953 \newcommand*{\Setversedim}[2]{% set lengths of half-verse, [separation]
8954 \bidipoem@hvind \textwidth
8955 \bidipoem@hvlen #1\relax \advance \bidipoem@hvind -\bidipoem@hvlen
8956 \ifx [#2\def \bidipoem@next {\bidipoem@set@verseI [}\else
8957 \bidipoem@@hvlen \bidipoem@hvlen \def \bidipoem@next {\bidipoem@set@@verse {#2}}\fi \bidipo
8958
8959 \def \bidipoem@set@verseI [#1]{% optional parameter
8960 \bidipoem@@hvlen #1\relax \bidipoem@set@@verse }
8961
8962 \newcommand*{\bidipoem@set@@verse}[1]{% separation
8963 \advance \bidipoem@hvind -\bidipoem@@hvlen \bidipoem@hvsep #1\relax
8964 \advance \bidipoem@hvind -\bidipoem@hvsep  \divide \bidipoem@hvind 2 }
8965
8966 \newcommand*{\traditionalconnverses}[3]{% first half-verse, connection, second half-verse
8967 \ifdim 0pt > \bidipoem@hvind %
8968 \bidipoem@spreadbox \bidipoem@hvlen {#1}\\ \hfill % first block
8969 \else
8970 \noindent \hskip \bidipoem@hvind \relax \bidipoem@spreadbox \bidipoem@hvlen {#1}\fi
8971 \bidipoem@spreadbox \bidipoem@hvsep {#2}% separator
8972 \bidipoem@spreadbox \bidipoem@@hvlen {#3}% second block
8973 \par }
8974
8975 % macro for two half verses
8976 \newcommand*{\traditionalhalfverses}[2]{% optional parameter?
8977 \ifx [#2\def\bidipoem@half@verses@next{\bidipoem@half@verses {#1}[}%
8978 \else\def\bidipoem@half@verses@next{\bidipoem@half@verses {#1}[\hfill]{#2}}\fi%
8979 \bidipoem@half@verses@next}
8980
8981 \def \bidipoem@half@verses #1[#2]#3{% first[mid]second
8982 \traditionalconnverses {#1}{#2}{#3}}
8983
8984
8985 {\catcode`\^^M=\active % these lines must end with %
8986   \gdef\traditionalpoem@obeylines{\catcode`\^^M\active \let^^M\traditionalpoem@par}%
8987   \global\let^^M\traditionalpoem@par} % this is in case ^^M appears in a \write
8988 {\catcode`\^^M=\active % these lines must end with %
8989   \gdef\modernpoem@obeylines{\catcode`\^^M\active \let^^M\modernpoem@par}%
8990   \global\let^^M\modernpoem@par} % this is in case ^^M appears in a \write
8991 \def\poemcolsepskip{.1\versewidth plus .1\versewidth minus .05\versewidth}
8992 \def\poemmarginskip{1em plus 1fil minus 1em}
8993 \def\poemextrabaselineskip{0\baselineskip}
8994 \def\poemskip{\medskip}
8995 \newcommand{\bidipoem@openbox}{\leavevmode
8996   \hbox to.77778em{%
8997   \hfil\vrule
8998   \vbox to.675em{\hrule width.6em\vfil\hrule}%
```

```
  \vrule\hfil}}
\def\poemblocksep{\quad\hbox{\bidipoem@openbox}}
\newdimen\versewidth
\newtoks\bidipoem@p@ftn
\def\poem@verse#1{%
\ifdim\wd#1>\new@poem@width
\xdef\new@poem@width{\the\wd#1}%
\ifdim\new@poem@width>\poem@width
\xdef\poem@width{\new@poem@width}%
\global\let\poem@needrun\relax
\fi
\fi
\hbox to\poem@width{\unhbox#1}%
\global\bidipoem@p@ftn\expandafter{\expandafter}\the\bidipoem@p@ftn%
}
\def\poem@linebegin{\vadjust{}\hskip\@flushglue\hskip\poemmarginskip\relax}
\def\poem@lineend{\nobreak\hskip\poemmarginskip\hskip\@flushglue\vadjust{}}
\def\poem@lineversesep{%
\nobreak
\hskip\z@ plus 1filll%
\penalty600%
\hskip\poemcolsepskip
\hskip\z@ plus -2filll%
\vadjust{}%
\nobreak
\hskip\z@ plus 1filll%
}
\def\poem@lineparsebegin{%
\halign\bgroup
\global\setbox\verse@i=\hbox{%
\let\@footnotetext\bidipoem@p@ftntext%
\let\@LTRfootnotetext\bidipoem@p@LTRftntext%
\let\@RTLfootnotetext\bidipoem@p@RTLftntext%
\let\@xfootnotenext\bidipoem@p@xftntext%
\let\@xfootnote\bidipoem@p@xfootnote%
\let\@xLTRfootnotenext\bidipoem@p@xLTRftntext%
\let\@xLTRfootnote\bidipoem@p@xLTRfootnote%
\let\@xRTLfootnotenext\bidipoem@p@xRTLftntext%
\let\@xRTLfootnote\bidipoem@p@xRTLfootnote%
\ignorespaces##\unskip}&&
\global\setbox\verse@ii=\hbox{%
\let\@footnotetext\bidipoem@p@ftntext%
\let\@LTRfootnotetext\bidipoem@p@LTRftntext%
\let\@RTLfootnotetext\bidipoem@p@RTLftntext%
\let\@xfootnotenext\bidipoem@p@xftntext%
\let\@xfootnote\bidipoem@p@xfootnote%
\let\@xLTRfootnotenext\bidipoem@p@xLTRftntext%
\let\@xLTRfootnote\bidipoem@p@xLTRfootnote%
\let\@xRTLfootnotenext\bidipoem@p@xRTLftntext%
\let\@xRTLfootnote\bidipoem@p@xRTLfootnote%
\ignorespaces##\unskip}
\cr
}
\def\poem@lineparseend{%
```

```
\crcr\egroup
\vskip-\baselineskip
}
\def\traditionalpoem@cr{%
  \cr\poem@line
}
\newbox\verse@i
\newbox\verse@ii
\newif\ifpoem@started

\def\poem@line{%
\poem@lineparseend
\ifdim\wd\verse@i>\z@\global\poem@startedtrue\fi
\ifdim\wd\verse@ii>\z@\global\poem@startedtrue\fi
\ifpoem@started
  \ifdim\wd\verse@ii>\z@\else
  \nopagebreak[3]
  \fi
  \leavevmode
  \poem@linebegin
  \poem@verse\verse@i
  \ifdim\wd\verse@ii>\z@
  \poem@lineversesep
  \poem@verse\verse@ii
  \fi
  \poem@lineend
%  \nopagebreak
  \par
  \vskip\poemextrabaselineskip
\fi
\poem@lineparsebegin
}
\def\@traditionalpoem{%
\stepcounter{poem@no}
        \ifnum\max@poem@no<\number\c@poem@no%
\xdef\poem@width{\z@}%
        \else
\xdef\poem@width{\poem@prop{poem@width}}%
\fi
\xdef\new@poem@width{\z@}%
\global\versewidth=\poem@width
\poemskip\par
\begingroup
\tabskip=\z@
\parskip=\z@
\parindent=\z@
\parfillskip=\z@
\rightskip=\z@
\leftskip=\z@
\widowpenalty=10000% No break between verses of the same line.
\clubpenalty=10000% Same as above.  Not really needed.
\def\newblock{\hfil\poemblocksep\hfil\null}%
\def\traditionalpoem@par{\traditionalpoem@cr}% Redefine \par for possible \obeylines
\def\\{\global\poem@startedtrue\traditionalpoem@cr}%
```

```
\global\poem@startedfalse
\csname poem@obeylines\endcsname
\let\poem@obeylines\relax
\poem@lineparsebegin
}
\def\@endtraditionalpoem{%
\cr
\ifdim\wd\verse@i>\z@\poem@line\else\ifdim\wd\verse@ii>\z@\poem@line\else
\noalign{%
\skip0=\poemextrabaselineskip
\vskip-\skip0
\vskip-\baselineskip
}%
\fi\fi
\poem@lineparseend
\endgroup
\par
\vskip\baselineskip
\poemskip
\ifdim\new@poem@width<\poem@width
\global\let\poem@needrun\relax
\fi
        \poem@write@aux{poem@width@\romannumeral\c@poem@no}{\new@poem@width}%
\ifx\AtEndDocument\undefined\poem@finish\fi
\@endparenv
}


\long\def\bidipoem@p@ftntext#1{%
  \edef\@tempx{\the\bidipoem@p@ftn\noexpand\footnotetext[\the\csname c@\@mpfn\endcsname]}%
  \global\bidipoem@p@ftn\expandafter{\@tempx{#1}}}%
\long\def\bidipoem@p@LTRftntext#1{%
  \edef\@tempxi{\the\bidipoem@p@ftn\noexpand\LTRfootnotetext[\the\csname c@\@mpfn\endcsname
  \global\bidipoem@p@ftn\expandafter{\@tempxi{#1}}}%
\long\def\bidipoem@p@RTLftntext#1{%
  \edef\@tempxii{\the\bidipoem@p@ftn\noexpand\RTLfootnotetext[\the\csname c@\@mpfn\endcsnam
  \global\bidipoem@p@ftn\expandafter{\@tempxii{#1}}}%

\long\def\bidipoem@p@xftntext[#1]#2{%
  \global\bidipoem@p@ftn\expandafter{\the\bidipoem@p@ftn\footnotetext[#1]{#2}}}

\long\def\bidipoem@p@xLTRftntext[#1]#2{%
  \global\bidipoem@p@ftn\expandafter{\the\bidipoem@p@ftn\LTRfootnotetext[#1]{#2}}}

\long\def\bidipoem@p@xRTLftntext[#1]#2{%
  \global\bidipoem@p@ftn\expandafter{\the\bidipoem@p@ftn\RTLfootnotetext[#1]{#2}}}

\def\bidipoem@p@xfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\bidipoem@p@xftntext[#1]}

```

```
\def\bidipoem@p@xLTRfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\bidipoem@p@xLTRftntext[#1]}

\def\bidipoem@p@xRTLfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\bidipoem@p@xRTLftntext[#1]}



\newenvironment{traditionalpoem}{\@traditionalpoem}{\@endtraditionalpoem}
\expandafter\def\csname traditionalpoem*\endcsname{\let\poem@obeylines=\traditionalpoem@obe
\expandafter\def\csname endtraditionalpoem*\endcsname{\endtraditionalpoem}
\def\poem@finish{%
\poem@write@aux{max@poem@no}{\number\c@poem@no}%
\ifx\poem@needrun\relax
\PackageWarning{bidipoem}{Unjustified poem.  Rerun TeX to get poem right}%
\global\let\poem@needrun\undefined
\fi
}
\ifx\AtEndDocument\undefined\else\AtEndDocument\poem@finish\fi
\newcounter{poem@no}\setcounter{poem@no}{\z@}
\ifx\max@poem@no\undefined
        \def\max@poem@no{0}%
\fi
\newcommand{\poem@prop}[1]{\@nameuse{#1@\romannumeral\c@poem@no}}
\newcommand{\poem@write@aux}[2]{%
        \def\@x{\immediate\write\@auxout{\global\noexpand\@namedef{#1}{#2}}}%
        \@x
}
\def\@modernpoem{%
\par
\begingroup
\parskip=\z@
\parindent=\z@
\def\[{\@settab\@tabplus\ignorespaces}%
\def\]{\@tabminus\ignorespaces}%
\def\newblock{\poemblocksep}%
\let\newpoem@tabcr\@tabcr
\def\modernpoem@par{% Redefine \par for possible \obeylines
  \ifpoem@started\else
    \ifdim\wd\@curline>\z@\global\poem@startedtrue\else
      \@stopfield
      \ifdim\wd\@curfield>\z@\global\poem@startedtrue\fi
      \@contfield
    \fi
  \fi
  \ifpoem@started\newpoem@tabcr\fi}%
```

```
\def\@tabcr{\global\poem@startedtrue\newpoem@tabcr}%
\global\poem@startedfalse
\csname poem@obeylines\endcsname
\let\poem@obeylines\relax
\begin{tabbing}%
}
\def\@endmodernpoem{%
\global\poem@startedfalse
\ifdim\wd\@curline>\z@\global\poem@startedtrue\else
  \@stopfield
  \ifdim\wd\@curfield>\z@\global\poem@startedtrue\fi
  \@contfield
\fi
\ifpoem@started\else\let\@stopline\@stopfield\fi
\end{tabbing}%
\endgroup
\par
  \if@noparlist \else
    \ifdim\lastskip >\z@
      \@tempskipa\lastskip \vskip -\lastskip
      \advance\@tempskipa\parskip \advance\@tempskipa -\@outerparskip
      \vskip\@tempskipa
    \fi
    \@endparenv
  \fi
}
\newenvironment{modernpoem}{\@modernpoem}{\@endmodernpoem}
\expandafter\def\csname modernpoem*\endcsname{\let\poem@obeylines=\modernpoem@obeylines\mod
\expandafter\def\csname endmodernpoem*\endcsname{\endmodernpoem}
\gdef\@startfield{%
\global\setbox\@curfield\hbox\bgroup%
\let\@footnotetext\bidipoem@p@ftntext%
\let\@LTRfootnotetext\bidipoem@p@LTRftntext%
\let\@RTLfootnotetext\bidipoem@p@RTLftntext%
\let\@xfootnotenext\bidipoem@p@xftntext%
\let\@xfootnote\bidipoem@p@xfootnote%
\let\@xLTRfootnotenext\bidipoem@p@xLTRftntext%
\let\@xLTRfootnote\bidipoem@p@xLTRfootnote%
\let\@xRTLfootnotenext\bidipoem@p@xRTLftntext%
\let\@xRTLfootnote\bidipoem@p@xRTLfootnote%
\color@begingroup}
\gdef\@stopfield{%
  \color@endgroup\egroup\global\bidipoem@p@ftn\expandafter{\expandafter}\the\bidipoem@p@ftn
\gdef\@contfield{%
\global\setbox\@curfield\hbox\bgroup%
\let\@footnotetext\bidipoem@p@ftntext%
\let\@LTRfootnotetext\bidipoem@p@LTRftntext%
\let\@RTLfootnotetext\bidipoem@p@RTLftntext%
\let\@xfootnotenext\bidipoem@p@xftntext%
\let\@xfootnote\bidipoem@p@xfootnote%
\let\@xLTRfootnotenext\bidipoem@p@xLTRftntext%
\let\@xLTRfootnote\bidipoem@p@xLTRfootnote%
\let\@xRTLfootnotenext\bidipoem@p@xRTLftntext%
\let\@xRTLfootnote\bidipoem@p@xRTLfootnote%
```

```
\color@begingroup\unhbox\@curfield}
```

62 File boek3-xetex-bidi.def

```
\ProvidesFile{boek3-xetex-bidi.def}[2017/06/09 v0.4 bidi adaptations for boek3 class for Xe
\renewenvironment{theindex}{%
  \if@twocolumn
    \@restonecolfalse
  \else
    \@restonecoltrue
  \fi
  \columnseprule \z@
  \columnsep 35\p@
  \twocolumn[\@makeschapterhead{\indexname}]%
  \@mkboth{\MakeUppercase{\indexname}}{\MakeUppercase{\indexname}}%
  \thispagestyle{plain}\parindent\z@
  \parskip\z@ \@plus .3\p@\relax
  \let\item\@idxitem
  }{%
  \if@restonecol\onecolumn\else\clearpage\fi}
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
\renewcommand*\@regtocline[3]{%
  \ifnum #1>\c@tocdepth
  \else
    \vskip\z@\@plus.2\p@
    {\hangindent\z@ \@afterindenttrue \interlinepenalty\@M
     \if@RTL\rightskip\else\leftskip\fi\unitindent
     \if@RTL\leftskip\else\rightskip\fi\unitindent\@plus 1fil
     \parfillskip\z@
     \@tempdima\unitindent
     \parindent\z@
     \leavevmode
     \hbox{}\hskip -\if@RTL\rightskip\else\leftskip\fi\relax#2\nobreak
     \hskip 1em \nobreak{\slshape #3}\par
     }%
  \fi}
\if@oldtoc
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
        \nobreak
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
```

```
  \fi}
\else
   \renewcommand*\l@part{%
     \ifnum \c@tocdepth >-2\relax
     \addpenalty{-\@highpenalty}%
     \addvspace{2.25em \@plus \p@}%
     \@regtocline{0}%
   \fi}
\fi
\if@oldtoc
\renewcommand*\l@chapter[2]{%
    \addpenalty{-\@highpenalty}%
    \vskip 1.0em \@plus\p@
    \setlength\@tempdima{1.5em}%
    \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode \bfseries
    \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
    \hskip -\if@RTL\rightskip\else\leftskip\fi
    #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
    \penalty\@highpenalty
   \endgroup}
\else
  \renewcommand*\l@chapter{\@regtocline{0}}
\fi
\renewenvironment{abstract}{%
      \titlepage
      \null\vfil
      \section*{\SectFont \abstractname}
      \noindent\ignorespaces}
     {\par\vfil\null\endtitlepage}
\renewenvironment{thebibliography}[1]
     {\chapter*{\bibname}%
       \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand*\theenumiv{\@arabic\c@enumiv}}%
      \sloppy\clubpenalty4000\widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
\renewcommand*\left@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hrule\@width\unitindent
```

```
  \kern.4\baselineskip
}
\renewcommand*\right@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\unitindent\relax \hrulefill }
  \kern.4\baselineskip}
\renewcommand*\thesection{\thechapter\@SepMark\@arabic\c@section}
\renewcommand*\thesubsection{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand*\theparagraph{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*\thesubparagraph{\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewcommand*\theequation{%
  \ifnum \c@chapter>\z@ \thechapter\@SepMark\fi\@arabic\c@equation}
\renewcommand*\thefigure{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@figure}
\renewcommand*\thetable{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@table}
\renewcommand*\maketitle{%
  \begin{titlepage}%
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let \footnote \thanks
    \long\def\@makefntext##1{\parindent\z@
         \def\labelitemi{\textendash}\@revlabeltrue
         \leavevmode\@textsuperscript{\@thefnmark}\kern1em\relax ##1}
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \if@compatibility\setcounter{page}{0}\fi
    \null\vfil
    \vskip 60\p@
    \begin{center}%
      \TitleFont
      {\LARGE \def\\{\penalty -\@M}
        \if@allcaps
          \expandafter\uc@nothanks\@title\thanks\relax
        \else
          \@title
        \fi\par}%
      \vskip 3em%
      {\large
        \lineskip .75em \parindent\z@
        \begin{tabular}[t]{c}%
          \if@allcaps
            \expandafter\uc@authornothanks\@author\and\relax
          \else
            \@author
          \fi
        \end{tabular}\par}%
      \vskip 1.5em%
      {\large
        \if@allcaps
          \uppercase\expandafter{\@date}%
```

```
        \else
          \@date
        \fi\par}%
      \end{center}\par
    \@thanks
    \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
```

63 File boek-xetex-bidi.def

```
\ProvidesFile{boek-xetex-bidi.def}[2017/06/09 v0.4 bidi adaptations for boek class for XeTe
\renewenvironment{theindex}{%
  \if@twocolumn
    \@restonecolfalse
  \else
    \@restonecoltrue
  \fi
  \columnseprule \z@
  \columnsep 35\p@
  \twocolumn[\@makeschapterhead{\indexname}]%
  \@mkboth{\MakeUppercase{\indexname}}{\MakeUppercase{\indexname}}%
  \thispagestyle{plain}\parindent\z@
  \parskip\z@ \@plus .3\p@\relax
  \let\item\@idxitem
  }{%
  \if@restonecol\onecolumn\else\clearpage\fi}
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
\renewcommand*\@regtocline[3]{%
  \ifnum #1>\c@tocdepth
  \else
    \vskip\z@\@plus.2\p@
    {\hangindent\z@ \@afterindenttrue \interlinepenalty\@M
     \if@RTL\rightskip\else\leftskip\fi\unitindent
     \if@RTL\leftskip\else\rightskip\fi\unitindent\@plus 1fil
     \parfillskip\z@
     \@tempdima\unitindent
     \parindent\z@
     \leavevmode
     \hbox{}\hskip -\if@RTL\rightskip\else\leftskip\fi\relax#2\nobreak
```

```
      \hskip 1em \nobreak{\slshape #3}\par
      }%
  \fi}
\if@oldtoc
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
        \nobreak
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
  \fi}
\else
   \renewcommand*\l@part{%
     \ifnum \c@tocdepth >-2\relax
     \addpenalty{-\@highpenalty}%
     \addvspace{2.25em \@plus \p@}%
     \@regtocline{0}%
   \fi}
\fi
\if@oldtoc
\renewcommand*\l@chapter[2]{%
    \addpenalty{-\@highpenalty}%
    \vskip 1.0em \@plus\p@
    \setlength\@tempdima{1.5em}%
    \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode \bfseries
    \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
    \hskip -\if@RTL\rightskip\else\leftskip\fi
    #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
    \penalty\@highpenalty
   \endgroup}
\else
  \renewcommand*\l@chapter{\@regtocline{0}}
\fi
\renewcommand*\left@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hrule\@width\unitindent
  \kern.4\baselineskip
}
\renewcommand*\right@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\unitindent\relax \hrulefill }
```

```
  \kern.4\baselineskip}
\renewenvironment{abstract}{%
      \titlepage
      \null\vfil
      \section*{\SectFont \abstractname}
      \noindent\ignorespaces}
     {\par\vfil\null\endtitlepage}
\renewenvironment{thebibliography}[1]
     {\chapter*{\bibname}%
       \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand*\theenumiv{\@arabic\c@enumiv}}%
      \sloppy\clubpenalty4000\widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
\renewcommand*\thesection{\thechapter\@SepMark\@arabic\c@section}
\renewcommand*\thesubsection{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand*\theparagraph{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*\thesubparagraph{\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewcommand*\theequation{%
  \ifnum \c@chapter>\z@ \thechapter\@SepMark\fi\@arabic\c@equation}
\renewcommand*\thefigure{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@figure}
\renewcommand*\thetable{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@table}
\renewcommand*\maketitle{%
  \begin{titlepage}%
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let \footnote \thanks
    \long\def\@makefntext##1{\parindent\z@
         \def\labelitemi{\textendash}\@revlabeltrue
         \leavevmode\@textsuperscript{\@thefnmark}\kern1em\relax ##1}
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \if@compatibility\setcounter{page}{0}\fi
    \null\vfil
    \vskip 60\p@
    \begin{center}%
      \TitleFont
      {\LARGE \def\\{\penalty -\@M}
        \if@allcaps
```

```
          \expandafter\uc@nothanks\@title\thanks\relax
        \else
          \@title
        \fi\par}%
      \vskip 3em%
      {\large
        \lineskip .75em \parindent\z@
        \begin{tabular}[t]{c}%
          \if@allcaps
            \expandafter\uc@authornothanks\@author\and\relax
          \else
            \@author
          \fi
        \end{tabular}\par}%
      \vskip 1.5em%
      {\large
        \if@allcaps
          \uppercase\expandafter{\@date}%
        \else
          \@date
        \fi\par}%
      \end{center}\par
    \@thanks
    \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
```

64 File bookest-xetex-bidi.def

```
\ProvidesFile{bookest-xetex-bidi.def}[2010/07/25 v0.4 bidi adaptations for bookest class fo
\def\@makechapterhead#1{%
  \vspace*{20\p@}
  {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi \normalfont
    \ifnum \c@secnumdepth >\m@ne
      \if@mainmatter
        {\colorA\huge\scshape \@chapapp\space \thechapter}
        \par\nobreak
        \vskip 10\p@
      \fi
    \fi
    \interlinepenalty\@M
  {\colorB\hrule}
  \vskip 15\p@
```

```
   \if@RTL\begin{flushleft}\else\begin{flushright}\fi
     {\colorA\Huge \bfseries #1}\par\nobreak
   \if@RTL\end{flushleft}\else\end{flushright}\fi
  \vskip 5\p@
  {\colorB\hrule}
  \vskip 30\p@
  }}
\def\@makeschapterhead#1{%
  \vspace*{20\p@}
  {\parindent \z@ \raggedright \normalfont
  {\colorB\hrule}
  \vskip 15\p@
   \begin{center}
     {\colorA\Huge \bfseries #1}\par\nobreak
   \end{center}
  \vskip 5\p@
  {\colorB\hrule}
  \vskip 30\p@
  }}
```

65 File book-xetex-bidi.def

```
\ProvidesFile{book-xetex-bidi.def}[2025/09/04 v1.3 bidi adaptations for standard book class
\renewenvironment{theindex}
               {\if@twocolumn
                  \@restonecolfalse
                \else
                  \@restonecoltrue
                \fi
                \columnseprule \z@
                \columnsep 35\p@
                \twocolumn[\@makeschapterhead{\indexname}]%
                \@mkboth{\MakeUppercase\indexname}%
                        {\MakeUppercase\indexname}%
                \thispagestyle{plain}\parindent\z@
                \parskip\z@ \@plus .3\p@\relax
                \let\item\@idxitem}
               {\if@restonecol\onecolumn\else\clearpage\fi}
\IfClassLoadedF{bookest}{%
  \if@titlepage
  \renewcommand\maketitle{\begin{titlepage}%
  \let\footnotesize\small
  \let\right@footnoterule\relax
  \let\left@footnoterule\relax
  \let\textwidth@footnoterule\relax
  \let \footnote \thanks
  \let \LTRfootnote \LTRthanks
  \let \RTLfootnote \RTLthanks
  \null\vfil
  \vskip 60\p@
  \begin{center}%
    {\LARGE \@title \par}%
    \vskip 3em%
    {\large
```

```
    \lineskip .75em%
     \begin{tabular}[t]{c}%
       \@author
     \end{tabular}\par}%
     \vskip 1.5em%
   {\large \@date \par}%       % Set date in \large size.
 \end{center}\par
 \@thanks
 \vfil\null
 \end{titlepage}%
 \setcounter{footnote}{0}%
 \global\let\thanks\relax
 \global\let\LTRthanks\relax
 \global\let\RTLthanks\relax
 \global\let\maketitle\relax
 \global\let\@thanks\@empty
 \global\let\@author\@empty
 \global\let\@date\@empty
 \global\let\@title\@empty
 \global\let\title\relax
 \global\let\author\relax
 \global\let\date\relax
 \global\let\and\relax
}
\else
\renewcommand\maketitle{\par
 \begingroup
   \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
   \def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
   \long\def\@makefntext##1{\parindent 1em\noindent
           \hb@xt@1.8em{%
               \hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
   \if@twocolumn
     \ifnum \col@number=\@ne
       \@maketitle
     \else
       \twocolumn[\@maketitle]%
     \fi
   \else
     \newpage
     \global\@topnum\z@   % Prevents figures from going at top of page.
     \@maketitle
   \fi
   \thispagestyle{plain}\@thanks
 \endgroup
 \setcounter{footnote}{0}%
 \global\let\thanks\relax
 \global\let\LTRthanks\relax
 \global\let\RTLthanks\relax
 \global\let\maketitle\relax
 \global\let\@maketitle\relax
 \global\let\@thanks\@empty
 \global\let\@author\@empty
 \global\let\@date\@empty
```

```
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
  \let \footnote \thanks
  \let \LTRfootnote \LTRthanks
  \let \RTLfootnote \RTLthanks
    {\LARGE \@title \par}%
    \vskip 1.5em%
    {\large
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi}
\IfPackageLoadedF{tocloft}{%
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \setlength\@tempdima{3em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
       \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
       \nobreak
         \global\@nobreaktrue
         \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
  \fi}
\renewcommand*\l@chapter[2]{%
  \ifnum \c@tocdepth >\m@ne
    \addpenalty{-\@highpenalty}%
    \vskip 1.0em \@plus\p@
    \setlength\@tempdima{1.5em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      \leavevmode \bfseries
      \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
      \hskip -\if@RTL\rightskip\else\leftskip\fi
```

```
      #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
      \penalty\@highpenalty
    \endgroup
  \fi}
}
\renewcommand\left@footnoterule{%
  \kern-3\p@
  \hrule\@width.4\columnwidth
  \kern2.6\p@}
\renewcommand\right@footnoterule{%
  \kern-3\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern2.6\p@}
\renewcommand\theequation
  {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@equation}
\renewcommand \thefigure
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@figure}
\renewcommand \thetable
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@table}
\renewcommand \thechapter {\@arabic\c@chapter}
\renewcommand \thesection {\thechapter\@SepMark\@arabic\c@section}
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}
\def\@makechapterhead#1{%
  \vspace*{50\p@}%
  {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi \normalfont
    \ifnum \c@secnumdepth >\m@ne
      \if@mainmatter
        \huge\bfseries \@chapapp\space \thechapter
        \par\nobreak
        \vskip 20\p@
      \fi
    \fi
    \interlinepenalty\@M
    \Huge \bfseries #1\par\nobreak
    \vskip 40\p@
  }}
\def\@makeschapterhead#1{%
  \vspace*{50\p@}%
  {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi
    \normalfont
    \interlinepenalty\@M
    \Huge \bfseries  #1\par\nobreak
    \vskip 40\p@
  }}
\renewcommand\backmatter{%
  \if@openright
    \cleardoublepage
  \else
    \clearpage
  \fi
  \@mainmatterfalse}
```

```
\IfPackageLoadedF{natbib}{%
\renewenvironment{thebibliography}[1]
     {\chapter*{\bibname}%
      \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand\theenumiv{\@arabic\c@enumiv}}%
      \sloppy
      \clubpenalty4000
      \@clubpenalty \clubpenalty
      \widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
}
```

66 File breqn-xetex-bidi.def

```
\ProvidesFile{breqn-xetex-bidi.def}[2016/09/12 v0.2 bidi adaptations for breqn package for
\def\@dmath[#1]{\if@RTL\@RTLfalse\fi%
  \everydisplay\expandafter{\the\everydisplay \display@setup}%
  \if@noskipsec \leavevmode \fi
  \if@inlabel \leavevmode \global\@inlabelfalse \fi
  \if\eq@group\else\eq@prelim\fi
  \setkeys{breqn}{#1}%
  \the\eqstyle
  \eq@setnumber
  \begingroup
  \eq@setup@a
  \eq@startup
}
\def\@dgroup[#1]{\if@RTL\@RTLfalse\fi%
  \let\eq@group\@True \global\let\eq@GRP@first@dmath\@True
  \global\GRP@queue\@emptytoks \global\setbox\GRP@box\box\voidb@x
  \global\let\GRP@label\@empty
  \global\grp@wdL\z@\global\grp@wdR\z@\global\grp@wdT\z@
  \global\grp@linewidth\z@\global\grp@wdNum\z@
  \global\let\grp@eqs@numbered\@False
  \global\let\grp@aligned\@True
  \global\let\grp@shiftnumber\@False
  \eq@prelim
  \setkeys{breqn}{#1}%
  \if\grp@hasNumber \grp@setnumber \fi
}
\def\@dseries[#1]{\if@RTL\@RTLfalse\fi%
  \let\display@setup\dseries@display@setup
```

```
  % Question: should this be the default for dseries???
  \global\eq@wdCond\z@
  \@dmath[layout={M},#1]%
  \mathsurround\z@\@@math \penalty\@Mi
  \let\endmath\ends@math
  \def\premath{%
    \ifdim\lastskip<.3em \unskip
    \else\ifnum\lastpenalty<\@M \dquad\fi\fi
}%
  \def\postmath{\unpenalty\eq@addpunct \penalty\intermath@penalty \dquad \@ignoretrue}%
\ignorespaces
}
\def\eqnumform#1{\if@nonlatin\beginR\@RTLtrue\fi(#1\@@italiccorr)\if@nonlatin\endR\fi}
\renewenvironment{dsuspend}{%
  \global\setbox\EQ@box\vbox\bgroup\if@nonlatin\@RTLtrue\fi \@parboxrestore
    \parshape 1 \displayindent \displaywidth\relax
    \hsize=\columnwidth \noindent\ignorespaces
}{%
  \par\egroup
  \global\setbox\GRP@box\vbox{%
    \hbox{\copy\EQ@box\vtop{\unvbox\EQ@box}}%
    \unvbox\GRP@box
  }%
  \global\GRP@queue\@xp{\the\GRP@queue
     \@elt{\let\eq@isIntertext\@True}%
  }%
}
```

67 File cals-xetex-bidi.def

```
\ProvidesFile{cals-xetex-bidi.def}[2016/11/30 v0.4 bidi adaptations for cals package for Xe
\renewcommand\cals@setup@alignment[1]{%
\if c#1\relax \cals@vfillAdd \leftskip \cals@vfillAdd \rightskip \fi
\if l#1\relax \cals@vfillDrop\leftskip \cals@vfillDrop\rightskip \fi
\if r#1\relax \cals@vfillAdd \leftskip \cals@vfillDrop\rightskip \fi
}
\renewcommand\cals@table@alignment{\if@RTLtab r\else l\fi}
\renewenvironment{calstable}[1][\cals@table@alignment]{%
\if@RTLtab\cals@activate@rtl\fi
\let\cals@thead@tokens=\relax
\let\cals@tfoot@tokens=\relax
\let\cals@tbreak@tokens=\relax
\cals@tfoot@height=0pt \relax
\let\cals@last@context=n%
\let\cals@current@context=b%
\parindent=0pt \relax%
\cals@setup@alignment{#1}%
\cals@setpadding{Ag}\cals@setcellprevdepth{Al}\cals@set@tohsize%
%% Alignment inside is independent on center/flushright outside
\parfillskip=0pt plus1fil\relax
\let\cals@borderL=\relax
\let\cals@borderR=\relax
\let\cals@borderT=\relax
\let\cals@borderB=\relax
```

```
\setbox\cals@backup@row=\box\voidb@x\relax
\cals@AtBeginTable
}{% End of the table
\cals@tfoot@tokens\lastrule\cals@AtEndTable}
\renewcommand\alignL{%
\if@RTLtab
  \cals@vfillAdd\cals@paddingL
\else
  \cals@vfillDrop\cals@paddingL
\fi
\cals@vfillDrop\cals@paddingR}
\renewcommand\alignR{%
\if@RTLtab
  \cals@vfillDrop\cals@paddingL
\else
  \cals@vfillAdd\cals@paddingL
\fi
\cals@vfillDrop\cals@paddingR}
```

68 File caption-xetex-bidi.def

```
\ProvidesFile{caption-xetex-bidi.def}[2010/07/25 v0.1 bidi adaptations for caption package
\let\@makecaption\caption@makecaption
```

69 File caption3-xetex-bidi.def

```
\ProvidesFile{caption3-xetex-bidi.def}[2013/04/01 v0.1 bidi adaptations for caption3 packag
\renewcommand*\caption@@par{%
  \parindent\caption@parindent\hangindent\if@RTL-\fi\caption@hangindent}%
```

70 File colortbl-xetex-bidi.def

```
\ProvidesFile{colortbl-xetex-bidi.def}[2012/06/10 v0.2 bidi adaptations for colortbl packag
\def\CT@setup{%
  \@tempdimb\col@sep
  \@tempdimc\col@sep
  \def\CT@color{%
    \global\let\CT@do@color\CT@@do@color
    \bidicolor}}
\def\@classz{\@classx
   \@tempcnta \count@
   \prepnext@tok
\expandafter\CT@extract\the\toks\@tempcnta\columncolor!\@nil
   \@addtopreamble{\if@RTLtab\beginL\fi%
    \setbox\z@\hbox\bgroup\bgroup\if@RTLtab\beginR\fi
      \ifcase \@chnum
      \hskip\stretch{.5}\kern\z@
      \d@llarbegin
      \insert@column
      \d@llarend\hskip\stretch{.5}\or
      \d@llarbegin \insert@column \d@llarend \hfill \or
      \hfill\kern\z@ \d@llarbegin \insert@column \d@llarend \or
   $\vcenter
   \@startpbox{\@nextchar}\insert@column \@endpbox $\or
```

```
    \vtop \@startpbox{\@nextchar}\insert@column \@endpbox \or
    \vbox \@startpbox{\@nextchar}\insert@column \@endpbox
  \fi
 \if@RTLtab\endR\fi\egroup\egroup
\begingroup
  \CT@setup
  \CT@column@color
  \CT@row@color
  \CT@cell@color
  \CT@do@color
\endgroup
        \@tempdima\ht\z@
        \advance\@tempdima\minrowclearance
        \vrule\@height\@tempdima\@width\z@
        \unhbox\z@\if@RTLtab\endL\fi}%
  \prepnext@tok}
```

71 File color-xetex-bidi.def

```
\ProvidesFile{color-xetex-bidi.def}[2013/04/08 v0.2 bidi adaptations for color package for
\long\def\color@b@x#1#2#3{%
 \leavevmode\ifmmode\else\if@RTL\beginL\fi\fi
 \setbox\z@\hbox{\kern\fboxsep{\set@color\if@RTL\beginR\fi#3\if@RTL\endR\fi}\kern\fboxsep}%
 \dimen@\ht\z@\advance\dimen@\fboxsep\ht\z@\dimen@
 \dimen@\dp\z@\advance\dimen@\fboxsep\dp\z@\dimen@
 {#1{#2\color@block{\wd\z@}{\ht\z@}{\dp\z@}%
      \box\z@}}\ifmmode\else\if@RTL\endL\fi\fi}
\def\normalcolor{\let\current@color\default@color\ifhmode\if@RTL\beginL\aftergroup\endR\fi\
\DeclareRobustCommand\color{%
  \ifhmode\if@RTL\beginL\aftergroup\endR\fi\fi\@ifnextchar[\@undeclaredcolor\@declaredcolor
\def\@declaredcolor#1{%
  \@ifundefined{\string\color @#1}%
    {\c@lor@error{`#1'}}%
    {\expandafter\let\expandafter\current@color
     \csname\string\color @#1\endcsname
     \set@color}%
  \ifhmode\if@RTL\beginR\aftergroup\endL\fi\fi\ignorespaces}
\def\@undeclaredcolor[#1]#2{%
  \@ifundefined{color@#1}%
    {\c@lor@error{model `#1'}}%
    {\csname color@#1\endcsname\current@color{#2}%
     \set@color}%
  \ifhmode\if@RTL\beginR\aftergroup\endL\fi\fi\ignorespaces}
\DeclareRobustCommand\bidicolor{%
  \@ifnextchar[\@bidiundeclaredcolor\@bidideclaredcolor}
\def\@bidiundeclaredcolor[#1]#2{%
  \@ifundefined{color@#1}%
    {\c@lor@error{model `#1'}}%
    {\csname color@#1\endcsname\current@color{#2}%
     \set@color}%
  \ignorespaces}
\def\@bidideclaredcolor#1{%
  \@ifundefined{\string\color @#1}%
    {\c@lor@error{`#1'}}%
```

```
    {\expandafter\let\expandafter\current@color
     \csname\string\color @#1\endcsname
     \set@color}%
  \ignorespaces}
\def\color@box#1#2{\color@b@x\relax{\bidicolor#1{#2}}}
\def\color@fbox#1#2#3{%
  \color@b@x{\fboxsep\z@\bidicolor#1{#2}\fbox}{\bidicolor#1{#3}}}
\def\color@setgroup{\begingroup\ifhmode\if@RTL\beginL\aftergroup\endR\fi\fi\set@color\ifhmo
```

72 File combine-xetex-bidi.def

```
\ProvidesFile{combine-xetex-bidi.def}[2011/09/23 v0.1 bidi adaptations for combine class fo
\renewcommand{\c@ll@chapsecii}[2]{%
  \if@RTL\advance\rightskip\@tempdima\else\advance\leftskip\@tempdima\fi
  \if@RTL\hskip -\rightskip\else\hskip -\leftskip\fi
  #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
}
\renewcommand{\c@ll@chapseci}{%
  \setlength\@tempdima{0em}%
  \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode
}
\renewenvironment{tocindent}[1]{%
  \hangindent \if@RTL-\fi#1 \hangafter -100\relax}{}
```

73 File crop-xetex-bidi.def

```
\ProvidesFile{crop-xetex-bidi.def}[2025/01/03 v0.3 bidi adaptations for crop package for Xe
\IfClassLoadedT{memoir}{\endinput}
\RequirePackage{graphicx}
\renewcommand*\CROP@@ulc{%
   \if@RTLmain%
       \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(-40,0){\circle{10}}
        \put(-30,-5){\line(0,1){10}}
        \put(-35,0){\line(1,0){30}}
        \put(-10,30){\circle{10}}
        \put(-5,30){\line(1,0){10}}
        \put(0,35){\line(0,-1){30}}
    \end{picture}%
   \else%
    \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(-30,0){\circle{10}}
        \put(-30,-5){\line(0,1){10}}
        \put(-35,0){\line(1,0){30}}
        \put(0,30){\circle{10}}
        \put(-5,30){\line(1,0){10}}
        \put(0,35){\line(0,-1){30}}
    \end{picture}%
    \fi%
```

```
}
\renewcommand*\CROP@@urc{%
   \if@RTLmain%
       \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(20,0){\circle{10}}
        \put(30,-5){\line(0,1){10}}
        \put(35,0){\line(-1,0){30}}
        \put(-10,30){\circle{10}}
        \put(-5,30){\line(1,0){10}}
        \put(0,35){\line(0,-1){30}}
    \end{picture}%
   \else%
    \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(30,0){\circle{10}}
        \put(30,-5){\line(0,1){10}}
        \put(35,0){\line(-1,0){30}}
        \put(0,30){\circle{10}}
        \put(-5,30){\line(1,0){10}}
        \put(0,35){\line(0,-1){30}}
    \end{picture}%
    \fi%
}
\renewcommand*\CROP@@llc{%
   \if@RTLmain%
       \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(-40,0){\circle{10}}
        \put(-30,-5){\line(0,1){10}}
        \put(-35,0){\line(1,0){30}}
        \put(-10,-30){\circle{10}}
        \put(-5,-30){\line(1,0){10}}
        \put(0,-35){\line(0,1){30}}
    \end{picture}%
   \else%
    \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(-30,0){\circle{10}}
        \put(-30,-5){\line(0,1){10}}
        \put(-35,0){\line(1,0){30}}
        \put(0,-30){\circle{10}}
        \put(-5,-30){\line(1,0){10}}
        \put(0,-35){\line(0,1){30}}
    \end{picture}%
    \fi%
}
\renewcommand*\CROP@@lrc{%
    \if@RTLmain%
        \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(20,0){\circle{10}}
        \put(30,-5){\line(0,1){10}}
        \put(35,0){\line(-1,0){30}}
```

```
        \put(-10,-30){\circle{10}}
        \put(-5,-30){\line(1,0){10}}
        \put(0,-35){\line(0,1){30}}
    \end{picture}%
    \else%
    \begin{picture}(0,0)
        \unitlength\p@\thinlines
        \put(30,0){\circle{10}}
        \put(30,-5){\line(0,1){10}}
        \put(35,0){\line(-1,0){30}}
        \put(0,-30){\circle{10}}
        \put(-5,-30){\line(1,0){10}}
        \put(0,-35){\line(0,1){30}}
    \end{picture}%
    \fi%
}
\@ifpackagewith{crop}{cam}{%
\CROP@execopt{cam}%
}{}
```

74 File cutwin-xetex-bidi.def

```
\ProvidesFile{cutwin-xetex-bidi.def}[2011/11/12 v0.1 bidi adaptations for cutwin package fo
\renewcommand*{\c@twcompctr}[2]{%
  \def\c@twfirst{1}
  \loop\advance\c@twwinlines\m@ne
  \setbox\c@twslicea=\vsplit#1 to\baselineskip
  \setbox\c@twsliceb=\vsplit#1 to\baselineskip
  \c@twprune{\c@twslicea}{\c@twlftside}%
  \c@twprune{\c@twsliceb}{\c@twrtside}%
  \ifnum\c@twfirst=\@ne
    \setbox#2=\vbox{\unvbox#2\hbox
    to\hsize{\if@RTL\box\c@twsliceb\else\box\c@twslicea\fi\pageinwindow\hfil\if@RTL\box\c@t
  \else
    \setbox#2=\vbox{\unvbox#2\hbox
    to\hsize{\if@RTL\box\c@twsliceb\else\box\c@twslicea\fi\hfil\if@RTL\box\c@twslicea\else\
  \fi
  \def\c@twfirst{2}
  \ifnum\c@twwinlines>\z@\repeat}
\renewcommand*{\c@twcompoddctr}[2]{%
  \def\c@twrounds{1}
  \def\c@twfirst{1}
  \@for\c@twlspec:=\c@twb\do{%
    \ifnum\c@twrounds=1
      \setbox\c@twslicea=\vsplit#1 to\baselineskip % first of pair
      \c@twprune{\c@twslicea}{\c@twlspec}%
      \def\c@twrounds{2}
    \else
      \setbox\c@twsliceb=\vsplit#1 to\baselineskip % second of pair
      \c@twprune{\c@twsliceb}{\c@twlspec}%
      \ifnum\c@twfirst=1
        \setbox#2=\vbox{\unvbox#2\hbox
        to\hsize{\if@RTL\box\c@twsliceb\else\box\c@twslicea\fi\hfil\picinwindow\hfil\if@RTL
        \def\c@twfirst{2}
```

```
      \else
        \setbox#2=\vbox{\unvbox#2\hbox
        to\hsize{\if@RTL\box\c@twsliceb\else\box\c@twslicea\fi\hfil\if@RTL\box\c@twslicea\e
      \fi
      \def\c@twrounds{1}
    \fi}}
```

75 File cuted-xetex-bidi.def

```
\ProvidesFile{cuted-xetex-bidi.def}[2022/02/18 v0.7 bidi adaptations for cuted package for

\def\RTL@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
  \else
    \global\@firstcolumntrue
    \setbox\@outputbox\vbox{%
     \hb@xt@\textwidth{%
       \hskip \columnwidth
       \hfil
       {\normalcolor\vrule \@width\columnseprule}%
       \hfil
        \hb@xt@\columnwidth{%
        \bidi@firstcolumn@status@write%
        \box\@leftcolumn \hss}%
        \hskip -\textwidth
       \hb@xt@\columnwidth{%
       \bidi@lastcolumn@status@write%
       \box\@outputbox \hss}%
       \hskip \columnsep
      \hskip \columnwidth }}%
    \ifvoid\hold@viper
    \else
      \setbox\@outputbox \vbox to\textheight{%
                              \box\hold@viper
                              \box\@outputbox
                              \vss
                              }%
```

```
    \fi
  \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi{\@outputpage
     \@startdblcolumn}%
      \ifvoid\@viper
      \else
        \global\setbox\@viper\vbox{%
                   \vskip-\stripsep
                   \unvbox\@viper
                   }%
        \@viperoutput
      \fi
    \endgroup
  \fi}%

\def\LTR@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
  \else
    \global\@firstcolumntrue
    \setbox\@outputbox\vbox{%
     \hb@xt@\textwidth{%
        \hb@xt@\columnwidth{%
        \bidi@firstcolumn@status@write%
        \box\@leftcolumn \hss}%
        \hfil
        {\normalcolor\vrule \@width\columnseprule}%
        \hfil
       \hb@xt@\columnwidth{%
       \bidi@lastcolumn@status@write%
       \box\@outputbox \hss}}}%
    \ifvoid\hold@viper
    \else
```

```
      \setbox\@outputbox \vbox to\textheight{%
                              \box\hold@viper
                              \box\@outputbox
                              \vss
                              }%
    \fi
  \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi{\@outputpage
     \@startdblcolumn}%
      \ifvoid\@viper
      \else
        \global\setbox\@viper\vbox{%
                   \vskip-\stripsep
                   \unvbox\@viper
                   }%
        \@viperoutput
      \fi
    \endgroup
  \fi}%

\def\@addviper{%
    \@insertfalse
    \def\var@@thecol@num{2}%
    \if@firstcolumn
        \def\var@@thecol@num{1}%
        \@reqcolroom=.5\@pageht
        \ht@viper=\@reqcolroom
        \advance\@reqcolroom by\ht\@viper
        \advance\@reqcolroom by\stripsep
    \else
        \@reqcolroom=\@colht
        \advance\@reqcolroom by\@pageht
        \ht@viper.5\@reqcolroom
        \@reqcolroom=\ht@viper
        \advance\@reqcolroom by\ht\@viper
        \advance\@reqcolroom by\stripsep
        \global\setbox\@holdpg\vbox{%
            \setbox\cuted@@tempbox@a\vbox{%
                \aftergroup\unvbox
                \unvcopy\@leftcolumn
                \unskip\unkern\unpenalty
                \setbox\@tempboxa\lastbox
                \ifdim\dimexpr\ht\@tempboxa+\wd\@tempboxa+\dp\@tempboxa>\z@
                    %% keeps lastbox
                    \aftergroup\@leftcolumn
                \else
                    %% removes lastbox
                    \aftergroup\cuted@@tempbox@a
                \fi
```

```
10361                 }%
10362             \unskip\unkern\unpenalty
10363             \on@stripcols@break
10364             \the\At@ViperColsBreak
10365             \unvbox\@holdpg
10366             }%
10367         \global\At@ViperColsBreak{}%
10368         \ht@viper=.5\ht\@holdpg
10369         \ifdim\ht@viper>\@colht
10370             \ht@viper=\@colht
10371         \fi
10372     \fi
10373     %%
10374     %% calculations for breaking
10375     %%
10376     \ifvoid\hold@viper
10377         \ht@hold@viper=\z@
10378     \else
10379         \ht@hold@viper=\ht\hold@viper
10380     \fi
10381     \cuted@@tempdim@b\ht@viper
10382     \set@split@topskip@to\topskip
10383     \loop
10384         \xdef\saved@tempdimb{\the\cuted@@tempdim@b}%
10385         \setbox\cuted@@varbox@a\copy\@holdpg
10386         \setbox\cuted@@tempbox@a\vsplit\cuted@@varbox@a to\cuted@@tempdim@b
10387         %% set leftcolumn boxes
10388         \setbox\cuted@@tempbox@c\vbox{\unvbox\cuted@@tempbox@a}%
10389         \setbox\cuted@@tempbox@a\vbox to\cuted@@tempdim@b{\unvcopy\cuted@@tempbox@c}%
10390         \xdef\var@@leftcolumn@badness{\the\badness}%
10391         %% set rightcolumn boxes
10392         \setbox\cuted@@varbox@c\vbox{\unvbox\cuted@@varbox@a}%
10393         \setbox\cuted@@varbox@a\vbox to\cuted@@tempdim@b{\unvcopy\cuted@@varbox@c}%
10394         \xdef\var@@rightcolumn@badness{\the\badness}%
10395         %% analyzing split goodness
10396         \cuted@@tempdim@spread=\ht\cuted@@tempbox@c
10397         \advance\cuted@@tempdim@spread by\dp\cuted@@tempbox@c
10398         \advance\cuted@@tempdim@spread by-\ht\cuted@@varbox@c
10399         \advance\cuted@@tempdim@spread by-\dp\cuted@@varbox@c
10400         \cuted@@wlog@debug{CUTED [-----]%
10401               ^^JLeft: \the\ht\cuted@@tempbox@c
10402               +\the\dp\cuted@@tempbox@c\space/\var@@leftcolumn@badness
10403               ^^JRight: \the\ht\cuted@@varbox@c
10404               +\the\dp\cuted@@varbox@c\space/\var@@rightcolumn@badness
10405               ^^JSplit: \the\cuted@@tempdim@b
10406               ^^JExtra height: \the\cuted@@tempdim@spread
10407              }%
10408         \ifnum\var@@leftcolumn@badness<\cuted@@column@badness
10409             \ifnum\var@@rightcolumn@badness<\cuted@@column@badness
10410                 \cuted@@tempdim@spread=\z@
10411             \fi
10412         \fi
10413         \ifdim\cuted@@tempdim@spread<\z@
10414             \if@left@column@spread
```

```
10415               \if@right@column@shrink
10416                   \ifdim\dimexpr\cuted@@tempdim@spread+\pageshrink>\z@
10417                       \cuted@@tempdim@a=\dimexpr\ht\cuted@@tempbox@c-0.5\cuted@@tempdim@s
10418                   \else
10419                       \cuted@@tempdim@a=-\dimexpr\cuted@@tempdim@spread+.5\pageshrink\rel
10420                   \fi
10421                   \setbox\cuted@@varbox@a\vbox to\cuted@@tempdim@a{\unvcopy\cuted@@tempbo
10422                   \ifnum\badness<\cuted@@column@badness
10423                       \cuted@@tempdim@b=\cuted@@tempdim@a
10424                       \cuted@@tempdim@spread=\z@
10425                   \fi
10426                   \cuted@@wlog@debug{CUTED [leftcolumn badness]: \number\badness\space on
10427                   \setbox\cuted@@varbox@a\vbox to\cuted@@tempdim@a{\unvcopy\cuted@@varbox
10428                   \cuted@@wlog@debug{CUTED [rightcolumn badness]: \number\badness\space o
10429               \else
10430                   \setbox\cuted@@varbox@a\vbox to\ht\cuted@@varbox@c{%
10431                       \unvcopy\cuted@@tempbox@c
10432                       }%
10433                   \ifnum\badness<\cuted@@column@badness
10434                       \@tempdimb=\ht\cuted@@varbox@c
10435                       \cuted@@tempdim@spread=\z@
10436                   \fi
10437                   \cuted@@wlog@debug{CUTED [leftcolumn badness]: \number\badness on \the\
10438                   \setbox\cuted@@varbox@a\vbox to\ht\cuted@@varbox@c{%
10439                       \unvcopy\cuted@@varbox@c
10440                       }%
10441                   \cuted@@wlog@debug{CUTED [rightcolumn badness]: \number\badness on \the
10442               \fi
10443           \else
10444               \if@right@column@shrink
10445                   \ifdim\dimexpr\cuted@@tempdim@spread+\pageshrink<\z@
10446                   \else
10447                       \cuted@@tempdim@b=\ht\cuted@@tempbox@c
10448                       \cuted@@tempdim@spread=\z@
10449                   \fi
10450               \fi
10451           \fi
10452       \else
10453           \ifdim\cuted@@tempdim@spread>\z@
10454               \ifdim\dimexpr\@tempdimb+\p@\relax>\@colht
10455                   \cuted@@tempdim@b=\@colht
10456                   \cuted@@tempdim@spread=\z@
10457               \fi
10458           \fi
10459       \fi
10460   \ifdim\cuted@@tempdim@spread<\z@
10461       \advance\cuted@@tempdim@b 1\p@
10462   \repeat
10463   \wlog{CUTED [- LAST -]%
10464         ^^JExtra skip:\the\cuted@@tempdim@spread
10465         ^^JLeft:\the\ht\cuted@@tempbox@c/\the\dp\cuted@@tempbox@c
10466         ^^JRight:\the\ht\cuted@@varbox@c/\the\dp\cuted@@varbox@c
10467         ^^JSplit: \saved@tempdimb
10468         ^^JOutput:\the\cuted@@tempdim@b
```

```
10469         ^^JPageshrink: \the\pageshrink
10470         ^^JPagestretch: \the\pagestretch
10471         ^^J@colht:\the\@colht
10472         }%
10473     %%
10474     %% final construction of the cuted page above strip
10475     %%
10476     \setbox\cuted@@tempbox@c\vsplit\@holdpg to\saved@tempdimb
10477     \setbox\cuted@@tempbox@a\vbox to\cuted@@tempdim@b{%
10478         \cuted@@tempdim@a=\dimexpr
10479             \cuted@@tempdim@b-\ht\cuted@@tempbox@c
10480             \relax
10481         \cuted@@tempdim@spread=\dp\cuted@@tempbox@c
10482         \unvbox\cuted@@tempbox@c
10483         \ifdim\cuted@@tempdim@spread>\dp\strutbox
10484         \else
10485             \vskip-\cuted@@tempdim@spread
10486         \fi
10487         \prevdepth\z@
10488         \hrule\@height\cuted@@page@rule width\textwidth
10489         \vskip-\cuted@@page@rule
10490         \ifdim\cuted@@tempdim@a>\z@
10491             \if@left@column@spread
10492             \else
10493                 \vss
10494             \fi
10495         \else
10496             \ifdim\cuted@@tempdim@a<\z@
10497                 \if@left@column@shrink
10498                 \else
10499                     \vss
10500                 \fi
10501             \fi
10502         \fi
10503         }%
10504     \wlog{CUTED [output]: \the\cuted@@tempdim@b
10505           ^^JCUTED [leftcolumn badness]: \number\badness
10506          }%
10507     \setbox\cuted@@varbox@a\vbox to\cuted@@tempdim@b{%
10508         \cuted@@tempdim@a=\dimexpr
10509             \cuted@@tempdim@b-\ht\@holdpg
10510             \relax
10511         \unvbox\@holdpg
10512         \ifdim\cuted@@tempdim@a>\z@
10513             \if@right@column@spread
10514             \else
10515                 \vss
10516             \fi
10517         \else
10518             \ifdim\cuted@@tempdim@a<\z@
10519                 \if@right@column@shrink
10520                 \else
10521                     \vss
10522                 \fi
```

```
10523           \fi
10524       \fi
10525       }%
10526   \wlog{CUTED [rightcolumn badness]: \number\badness}%
10527   \setbox\cuted@@tempbox@var\vbox{%
10528       \hb@xt@\textwidth{%
10529          \if@RTLmain
10530             \hskip \columnwidth
10531             \hfil
10532             {\normalcolor\vrule \@width\columnseprule}%
10533             \hfil
10534             \hb@xt@\columnwidth{%
10535                \vbox to\ht@viper{\box\cuted@@tempbox@a\vss}%
10536                \hss
10537             }%
10538             \hskip -\textwidth
10539             \hb@xt@\columnwidth{%
10540                \vbox to\ht@viper{\box\cuted@@varbox@a\vss}%
10541                \hss
10542             }%
10543             \hskip \columnsep
10544             \hskip \columnwidth
10545          \else
10546             \hb@xt@\columnwidth{%
10547                \vbox to\ht@viper{\box\cuted@@tempbox@a\vss}%
10548                \hss
10549             }%
10550             \hfil
10551             {\normalcolor\vrule \@width\columnseprule}%
10552             \hfil
10553             \hb@xt@\columnwidth{%
10554                \vbox to\ht@viper{\box\cuted@@varbox@a\vss}%
10555                \hss
10556             }%
10557          \fi
10558           }%
10559       }%
10560   %%
10561   %% finalize cuted page
10562   %%
10563   \ifvoid\hold@viper
10564       \global\setbox\hold@viper\vbox{%
10565           \unvbox\cuted@@tempbox@var
10566           \penalty\interlinepenalty
10567           \vskip\stripsep
10568           \the\preCutedStrip
10569           \ifnum\outputpenalty<-\@Mii
10570               \vskip -\parskip
10571           \fi
10572           \outputpenalty\z@
10573           }%
10574   \else
10575       \global\setbox\hold@viper\vbox{%
10576            \unvbox\hold@viper
```

```
            \cuted@@tempbox@var
            \penalty\interlinepenalty
            \vskip\stripsep
            \the\preCutedStrip
            \ifnum\outputpenalty<-\@Mii
                \vskip -\parskip
            \fi
            \outputpenalty\z@
            }%
    \fi
    \ifdim\@colht>\@reqcolroom
        \global\setbox\hold@viper\vbox{%
            \unvbox\hold@viper
            \box\@viper
            \penalty\interlinepenalty
            \the\postCutedStrip
            \vskip\stripsep
            \ifnum\outputpenalty<-\@Mii
                \vskip -\parskip
            \fi
            \outputpenalty\z@
            }%
        \@inserttrue
        \global\@firstcolumntrue
        \advance\ht@hold@viper by-\ht\hold@viper
        \global\advance\@colht by\ht@hold@viper
        \ifdim\@colht<2.5\baselineskip
            \@latex@warning@no@line {Optional argument of \noexpand\twocolumn
                                     too tall on page \thepage (\var@@thecol@num column)}%
            \@emptycol
            \if@firstcolumn
            \else
                \@emptycol
            \fi
            \global\@lastvipertrue
        \else
            \global\vsize\@colht
            \global\@colroom\@colht
            \check@floats\cuted@@tempdim@a
            \ifdim\cuted@@tempdim@a>\z@
                \global\advance\@colroom by-\cuted@@tempdim@a
            \fi
            \ifdim\@colroom<\z@
                \global\@colroom1\p@
                \ifdim\cuted@@tempdim@a>\@colht
                    \@latex@warning@no@line{TOP and/or BOT FLOAT's
                        to large on \thepage (\var@@thecol@num column)}%
                \fi
                \@emptycol
                \if@firstcolumn
                \else
                    \@emptycol
                \fi
                \global\@lastvipertrue
```

```
            \fi
        \fi
    \fi
    \if@insert
    \else
        \advance\ht@hold@viper by-\ht\hold@viper
        \global\advance\@colht by\ht@hold@viper
        \global\setbox\hold@viper\vbox{%
            \unvbox\hold@viper
            \set@split@topskip@to{\z@ plus2\p@}%
            \vsplit\@viper to\@colht
            \vss
            }%
        \vbox{}%
        \global\@firstcolumnfalse
        \newpage
    \fi
    }
```

76 File cvthemebidicasual.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{cvthemebidicasual}
\DeclareOption{blue}{}
\newif\if@colourorange\@colourorangefalse
\DeclareOption{orange}{\@colourorangetrue}
\newif\if@colourgreen\@colourgreenfalse
\DeclareOption{green}{\@colourgreentrue}
\newif\if@colourred\@colourredfalse
\DeclareOption{red}{\@colourredtrue}
\newif\if@colourgrey\@colourgreyfalse
\DeclareOption{grey}{\@colourgreytrue}
\DeclareOption*{
  \PackageWarning{cvthemebidicasual}{Unknown option `\CurrentOption'}}
\ExecuteOptions{colour}
\ProcessOptions\relax
\renewcommand*{\listitemsymbol}{\textbullet}
\definecolor{firstnamecolor}{rgb}{0.65,0.65,0.65}
\familynamecolour{808080}
\firstnamecolour{A9A9A9}
\quotecolour{696969}
\addresscolour{696969}
\definecolor{sectionrectanglecolor}{rgb}{0.25,0.50,0.75}
\sectiontitlecolour{1E90FF}
\subsectioncolour{4682B4}
\definecolor{rulecolour}{gray}{0.6}
\definecolor{footersymbolcolour}{rgb}{0.25,0.50,0.75}
\definecolor{footersymbolcolor}{rgb}{0.25,0.50,0.75}
\if@colourorange
  \definecolor{sectionrectanglecolor}{rgb}{1.00,0.65,0.20}
  \definecolor{sectionrectanglecolor}{rgb}{1.00,0.65,0.20}
  \sectiontitlecolour{FF8C00}
  \subsectioncolour{FF8C00}
  \definecolor{footersymbolcolour}{rgb}{0.95,0.55,0.15}
```

```
10682   \definecolor{footersymbolcolor}{rgb}{0.95,0.55,0.15}\fi
10683 \if@colourgreen
10684   \definecolor{sectionrectanglecolor}{rgb}{0.55,0.85,0.35}
10685   \definecolor{sectionrectanglecolour}{rgb}{0.55,0.85,0.35}
10686   \sectiontitlecolour{008000}
10687   \subsectioncolour{008000}
10688   \definecolor{footersymbolcolour}{rgb}{0.30,0.65,0.15}
10689   \definecolor{footersymbolcolor}{rgb}{0.30,0.65,0.15}\fi
10690 \if@colourred
10691   \definecolor{sectionrectanglecolor}{rgb}{1.00,0.30,0.30}
10692   \definecolor{sectionrectanglecolour}{rgb}{1.00,0.30,0.30}
10693   \sectiontitlecolour{FF0000}
10694   \subsectioncolour{FF0000}
10695   \definecolor{footersymbolcolour}{rgb}{0.95,0.20,0.20}
10696   \definecolor{footersymbolcolor}{rgb}{0.95,0.20,0.20}\fi
10697 \if@colourgrey
10698   \definecolor{sectionrectanglecolor}{rgb}{0.75,0.75,0.75}
10699   \definecolor{sectionrectanglecolour}{rgb}{0.75,0.75,0.75}
10700   \sectiontitlecolour{808080}
10701   \subsectioncolour{808080}
10702   \definecolor{footersymbolcolour}{rgb}{0.35,0.35,0.35}
10703   \definecolor{footersymbolcolor}{rgb}{0.35,0.35,0.35}\fi
10704 \renewcommand*{\ttdefault}{pcr}
10705 \renewcommand*{\firstnamefont}{\fontsize{38}{40}\mdseries\upshape}
10706 \renewcommand*{\familynamefont}{\firstnamefont}
10707 \renewcommand*{\addressfont}{\normalsize\mdseries\slshape}
10708 \renewcommand*{\quotefont}{\large\slshape}
10709 \renewcommand*{\sectionfont}{\Large\mdseries\upshape}
10710 \renewcommand*{\subsectionfont}{\large\mdseries\upshape}
10711 \renewcommand*{\maketitle}{%
10712   {%
10713     \ifthenelse{\isundefined{\@photo}}%
10714       {}%
10715       {{\color{firstnamecolor}\framebox{\includegraphics[width=\@photowidth]{\@photo}}}}%
10716     \hfill%
10717     \bidi@raggedleft{\firstnamestyle{\@firstname}~\familynamestyle{\@familyname}}\\[-.35em]
10718    {\color{firstnamecolor}\rule{\textwidth}{.25ex}\\[2.5em]}%
10719   \ifthenelse{\isundefined{\@quote}}%
10720     {}%
10721     {\centering{\begin{minipage}{\quotewidth}\centering\quotestyle{\@quote}\end{minipage}}\
10722   }%
10723 \newif\if@firstfooterelement\@firstfooterelementtrue
10724 \providecommand*{\footersymbol}{}
10725 \renewcommand*{\footersymbol}{%
10726   \if@firstfooterelement%
10727   \else%
10728     { ~~\color{footersymbolcolor}\textbullet~~~}\fi}
10729 \providecommand*{\makefooter}{}
10730 \renewcommand*{\makefooter}{%
10731   \fancypagestyle{plain}{%
10732     \fancyfoot[c]{%
10733       \parbox{0.8\textwidth}{%
10734       \centering%
10735       \addressfont\@addresscolour%
```

```
      \ifthenelse{\isundefined{\@address}}{}{%
        \addresssymbol~\@address\\%
        \@firstfooterelementfalse}%
      \ifthenelse{\isundefined{\@mobile}}{}{\mobilesymbol~\@mobile\@firstfooterelementfalse
      \ifthenelse{\isundefined{\@phone}}{}{\footersymbol\phonesymbol~\@phone\@firstfooterel
      \ifthenelse{\isundefined{\@fax}}{}{\footersymbol\faxsymbol~\@fax\@firstfooterelementf
      \ifthenelse{\isundefined{\@email}}{}{\footersymbol\emailsymbol~\emaillink{\@email}\@f
      \ifthenelse{\isundefined{\@extrainfo}}{}{\footersymbol\@extrainfo\@firstfooterelement
  }%
  \pagestyle{plain}}
\AtBeginDocument{\makefooter}
```

77 File cvthemebidiclassic.sty

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{cvthemebidiclassic}
\DeclareOption{blue}{}
\newif\if@colourorange\@colourorangefalse
\DeclareOption{orange}{\@colourorangetrue}
\newif\if@colourgreen\@colourgreenfalse
\DeclareOption{green}{\@colourgreentrue}
\newif\if@colourred\@colourredfalse
\DeclareOption{red}{\@colourredtrue}
\newif\if@colourgrey\@colourgreyfalse
\DeclareOption{grey}{\@colourgreytrue}
\DeclareOption*{
  \PackageWarning{cvthemebidiclassic}{Unknown option `\CurrentOption'}}
\ExecuteOptions{colour}
\ProcessOptions\relax
\renewcommand*{\listitemsymbol}{\textbullet}
\firstnamecolour{}
\familynamecolour{}
\titlecolour{808080}
\quotecolour{696969}
\addresscolour{696969}
\definecolor{sectionrectanglecolour}{rgb}{0.25,0.50,0.75}
\definecolor{sectionrectanglecolor}{rgb}{0.25,0.5,0.75}
\sectiontitlecolour{1E90FF}
\subsectioncolour{4682B4}
\if@colourorange
  \addresscolour{FF8C00}
  \definecolor{sectionrectanglecolour}{rgb}{1.00,0.65,0.20}
  \definecolor{sectionrectanglecolor}{rgb}{1,0.65,0.20}
  \sectiontitlecolour{FF8C00}
  \subsectioncolour{FF8C00}\fi
\if@colourgreen
  \addresscolour{008000}
  \definecolor{sectionrectanglecolour}{rgb}{0.55,0.85,0.35}
  \definecolor{sectionrectanglecolor}{rgb}{0.55,0.85,0.35}
  \sectiontitlecolour{008000}
  \subsectioncolour{008000}\fi
\if@colourred
  \addresscolour{FF0000}
  \definecolor{sectionrectanglecolour}{rgb}{1.00,0.30,0.30}
```

```
  \definecolor{sectionrectanglecolor}{rgb}{1.00,0.30,0.30}
  \sectiontitlecolour{FF0000}
  \subsectioncolour{FF0000}\fi
\if@colourgrey
  \addresscolour{808080}
  \definecolor{sectionrectanglecolour}{rgb}{0.75,0.75,0.75}
  \definecolor{sectionrectanglecolor}{rgb}{0.75,0.75,0.75}
  \sectiontitlecolour{808080}
  \subsectioncolour{808080}\fi
\renewcommand*{\ttdefault}{pcr}
\renewcommand*{\firstnamefont}{\fontsize{34}{36}\mdseries\upshape}
\renewcommand*{\titlefont}{\LARGE\mdseries\slshape}
\renewcommand*{\addressfont}{\normalsize\mdseries\slshape}
\renewcommand*{\familynamefont}{\firstnamefont}
\renewcommand*{\quotefont}{\large\slshape}
\renewcommand*{\sectionfont}{\Large\mdseries\upshape}
\renewcommand*{\subsectionfont}{\large\mdseries\upshape}
\newlength{\maketitlenamemaxwidth}
\setlength{\maketitlenamemaxwidth}{.525\textwidth}
\newlength{\maketitlenamefullwidth}
\settowidth{\maketitlenamefullwidth}{\firstnamestyle{\@firstname~}\familynamestyle{\@family
\newlength{\maketitlenamewidth}
\ifnum\maketitlenamemaxwidth<\maketitlenamefullwidth\setlength{\maketitlenamewidth}{\maketi
\newlength{\maketitlepicturewidth}
\setlength{\maketitlepicturewidth}{\@photowidth}
\newlength{\maketitledetailswidth}
\renewcommand*{\recomputethemelengths}{%
  \setlength{\maketitledetailswidth}{\textwidth}%
  \addtolength{\maketitledetailswidth}{-\maketitlenamewidth}%
  \addtolength{\maketitledetailswidth}{-\separatorcolumnwidth}%
  \addtolength{\maketitledetailswidth}{-\maketitlepicturewidth}}
\recomputethemelengths
\newif\if@firstdetailselement\@firstdetailselementtrue
\newcommand*{\maketitledetailsnewline}{
  \if@firstdetailselement%
    \@firstdetailselementfalse%
  \else%
    \\[.2em]\fi}
\renewcommand*{\maketitle}{%
  % name and title
  \begin{minipage}[b]{\maketitlenamewidth}%
    \firstnamestyle{\@firstname~}\familynamestyle{\@familyname}%
    \ifthenelse{\equal{\@title}{}}{}{\\[1.25em]\titlestyle{\@title}}%
  \end{minipage}%
  % optional data
  \begin{minipage}[b]{\maketitledetailswidth}%
    \bidi@raggedleft\addressfont\@addresscolour%
   \ifthenelse{\isundefined{\@address}}{}{%
      \maketitledetailsnewline%
      \addresssymbol~\\\@address}%
    \ifthenelse{\isundefined{\@mobile}}{}{\maketitledetailsnewline\mobilesymbol~\@mobile}%
    \ifthenelse{\isundefined{\@phone}}{}{\maketitledetailsnewline\phonesymbol~\@phone}%
    \ifthenelse{\isundefined{\@fax}}{}{\maketitledetailsnewline\faxsymbol~\@fax}%
    \ifthenelse{\isundefined{\@email}}{}{\maketitledetailsnewline\emailsymbol~\emaillink{\@
```

```
    \ifthenelse{\isundefined{\@extrainfo}}{}{\maketitledetailsnewline\@extrainfo}%
  \end{minipage}%
  % optional photo
  \ifthenelse{\isundefined{\@photo}}%
    {}%
    {\hspace*{\separatorcolumnwidth}\color{firstnamecolor}\framebox{\includegraphics[width=
  % optional quote
  \ifthenelse{\isundefined{\@quote}}%
    {}%
    {\centering{\begin{minipage}{\quotewidth}\centering\quotestyle{\@quote}\end{minipage}}\
  }
```

78 File dblfnote-xetex-bidi.def

```
\ProvidesFile{dblfnote-xetex-bidi.def}[2012/12/12 v0.3 bidi adaptations for dblfnote packag
\let\autofootnoterule\relax
\let\rightfootnoterule\relax
\let\leftfootnoterule\relax
\let\textwidthfootnoterule\relax
\let\LRfootnoterule\relax
\def\footnoterule{\kern-3\p@
  \hrule \@width  \DFNcolumnwidth \kern 2.6\p@}%
\AtBeginDocument{\let\dfn@latex@footnotetext\@footnotetext
\let\@footnotetext\dfn@footnotetext}
\long\def\dfn@LTRfootnotetext#1{{\setbox\dfn@boxa\vbox{
        \let\insert\dfn@gobble
        \columnwidth\DFNcolumnwidth \hbadness\c@DFNsloppiness
        \def\@makefnmark{\smash{\dfn@makefnmark}}
        \dfn@latex@LTRfootnotetext{#1}\par \boxmaxdepth\dfn@fnmaxdp}%
        \dfn@dima\ht\dfn@boxa \advance\dfn@dima\dp\dfn@boxa
        \ifdim\dfn@dima>\z@\else
                \dfn@dima1sp\relax
                \setbox\dfn@boxa\vbox{\vbox to1sp{\unvbox\dfn@boxa\vfil}}\fi
        \global\setbox\dfn@ins\vbox{\boxmaxdepth\dfn@fnmaxdp
                \ifvoid\dfn@ins\else
                        \unvbox\dfn@ins \allowbreak \nointerlineskip \fi
                \ifdfn@allowcbreak \unvbox \else \box \fi \dfn@boxa}%
        \setbox\dfn@boxa\copy\dfn@ins
        \dfn@split{.5\ht\dfn@boxa}\dfn@boxa\dfn@boxb\dfn@fnmaxdp\footnotesep
        \advance\@tempdima\@tempdimb \@tempdimb\@tempdima
        \advance\@tempdima-\dfn@fnht \global\dfn@fnht\@tempdimb
        \insert\footins{\floatingpenalty\@MM \vbox to\@tempdima{}}%
        \xdef\dfn@list{\dfn@list\@elt{\number\dfn@dima}{\number\@tempdima}}}}
\AtBeginDocument{\let\dfn@latex@LTRfootnotetext\@LTRfootnotetext
\let\@LTRfootnotetext\dfn@LTRfootnotetext}
\long\def\dfn@RTLfootnotetext#1{{\setbox\dfn@boxa\vbox{
        \let\insert\dfn@gobble
        \columnwidth\DFNcolumnwidth \hbadness\c@DFNsloppiness
        \def\@makefnmark{\smash{\dfn@makefnmark}}
        \dfn@latex@RTLfootnotetext{#1}\par \boxmaxdepth\dfn@fnmaxdp}%
        \dfn@dima\ht\dfn@boxa \advance\dfn@dima\dp\dfn@boxa
        \ifdim\dfn@dima>\z@\else
                \dfn@dima1sp\relax
                \setbox\dfn@boxa\vbox{\vbox to1sp{\unvbox\dfn@boxa\vfil}}\fi
```

```
10892         \global\setbox\dfn@ins\vbox{\boxmaxdepth\dfn@fnmaxdp
10893                 \ifvoid\dfn@ins\else
10894                         \unvbox\dfn@ins \allowbreak \nointerlineskip \fi
10895                 \ifdfn@allowcbreak \unvbox \else \box \fi \dfn@boxa}%
10896         \setbox\dfn@boxa\copy\dfn@ins
10897         \dfn@split{.5\ht\dfn@boxa}\dfn@boxa\dfn@boxb\dfn@fnmaxdp\footnotesep
10898         \advance\@tempdima\@tempdimb \@tempdimb\@tempdima
10899         \advance\@tempdima-\dfn@fnht \global\dfn@fnht\@tempdimb
10900         \insert\footins{\floatingpenalty\@MM \vbox to\@tempdima{}}%
10901         \xdef\dfn@list{\dfn@list\@elt{\number\dfn@dima}{\number\@tempdima}}}}
10902 \AtBeginDocument{\let\dfn@latex@RTLfootnotetext\@RTLfootnotetext
10903 \let\@RTLfootnotetext\dfn@RTLfootnotetext}
10904 \def\dfn@RTLmakecol{{\ifvoid\footins\else
10905         \dfn@dima\ht\footins
10906         \@tempcnta\z@ \dfn@countins
10907         \@tempdima\z@ \let\@elt\dfn@elt@getht
10908         \dfn@list\@nil
10909         \ifdim\@tempdima=\z@\else
10910         \dfn@split\@tempdima\dfn@ins\dfn@boxa\z@\z@
10911         \global\setbox\dfn@ins\box\dfn@ins
10912         \@tempswatrue
10913         \ifdfn@trysingle
10914                 \setbox\dfn@boxb\vbox{\unvcopy\@cclv}\@tempdima\@colroom
10915                 \advance\@tempdima-\ht\dfn@boxb \advance\@tempdima-\dp\dfn@boxb
10916                 \advance\@tempdima-\skip\footins
10917                 \advance\@tempdima-\ht\dfn@boxa
10918                 \ifdim\@tempdima<\z@\else \@tempswafalse
10919                         \global\setbox\footins\vbox{\boxmaxdepth\dfn@fnmaxdp
10920                                 \footnoterule \unvbox\dfn@boxa}\fi\fi
10921         \if@tempswa
10922         \dfn@split{\dfn@dima}\dfn@boxa\dfn@boxb\dfn@fnmaxdp\footnotesep
10923         \global\setbox\footins\vbox{\hbox{%
10924                  \hskip \DFNcolumnwidth
10925                  \hskip\DFNcolumnsep
10926                 \hbox to\DFNcolumnwidth{\vbox to\@tempdima{\footnoterule
10927                         \unvbox\dfn@boxb\vss}\hss}
10928                 \hskip -\textwidth
10929                 \hbox to\DFNcolumnwidth{\ifvoid\dfn@boxa\else
10930                         \vbox to\@tempdima{
10931                                 \setbox\@tempboxa\vbox{\footnoterule}
10932                                 \ifdfn@ruleboth \unvbox\@tempboxa
10933                                 \else \@tempdima\ht\@tempboxa
10934                                         \advance\@tempdima\dp\@tempboxa
10935                                         \vskip\@tempdima
10936                                         \prevdepth\dp\@tempboxa \fi
10937                                 \unvbox\dfn@boxa\vss}\fi\hss}
10938                                  \hskip \DFNcolumnsep
10939                                  \hskip \DFNcolumnwidth}}\fi\fi
10940         \global\dfn@fnht\z@
10941         \ifx\dfn@list\@empty\else
10942                 \let\@elt\dfn@elt@adjust \dfn@dima\z@ \dfn@dimb\z@
10943                 \dfn@list \global\advance\dfn@fnht\dfn@dimb
10944                 \let\@elt\relax
10945                 \ifdim\dfn@dimb>\z@
```

```
10946                         \xdef\dfn@list{\@elt{0}{\number\dfn@dimb}\dfn@list}%
10947                         \insert\footins{\floatingpenalty\@MM
10948                                 \vbox to\dfn@dimb{}}\fi
10949                 \ifdim\dfn@fnht>\@tempdima
10950                         \@tempdimb\@tempdima \advance\@tempdimb-\dfn@fnht
10951                         \global\dfn@fnht\@tempdima
10952                         \xdef\dfn@list{\dfn@list\@elt{0}{\number\@tempdimb}}%
10953                         \xdef\dfn@afteroutput{\insert\footins{
10954                                         \floatingpenalty\@MM
10955                                         \vbox to\number\@tempdimb sp{}}%
10956                                 \global\let\noexpand\dfn@afteroutput\relax}%
10957                 \fi\fi
10958         \fi}%
10959         \let\footnoterule\relax \dfn@latex@makecol
10960         \let\footnoterule\dfn@footnoterule}
10961 \def\dfn@LTRmakecol{{\ifvoid\footins\else
10962         \dfn@dima\ht\footins
10963         \@tempcnta\z@ \dfn@countins
10964         \@tempdima\z@ \let\@elt\dfn@elt@getht
10965         \dfn@list\@nil
10966         \ifdim\@tempdima=\z@\else
10967         \dfn@split\@tempdima\dfn@ins\dfn@boxa\z@\z@
10968         \global\setbox\dfn@ins\box\dfn@ins
10969         \@tempswatrue
10970         \ifdfn@trysingle
10971                 \setbox\dfn@boxb\vbox{\unvcopy\@cclv}\@tempdima\@colroom
10972                 \advance\@tempdima-\ht\dfn@boxb \advance\@tempdima-\dp\dfn@boxb
10973                 \advance\@tempdima-\skip\footins
10974                 \advance\@tempdima-\ht\dfn@boxa
10975                 \ifdim\@tempdima<\z@\else \@tempswafalse
10976                         \global\setbox\footins\vbox{\boxmaxdepth\dfn@fnmaxdp
10977                                 \footnoterule \unvbox\dfn@boxa}\fi\fi
10978         \if@tempswa
10979         \dfn@split{\dfn@dima}\dfn@boxa\dfn@boxb\dfn@fnmaxdp\footnotesep
10980         \global\setbox\footins\vbox{\hbox{%
10981                 \hbox to\DFNcolumnwidth{\vbox to\@tempdima{\footnoterule
10982                         \unvbox\dfn@boxb\vss}\hss}\hskip\DFNcolumnsep
10983                 \hbox to\DFNcolumnwidth{\ifvoid\dfn@boxa\else
10984                         \vbox to\@tempdima{
10985                                 \setbox\@tempboxa\vbox{\footnoterule}
10986                                 \ifdfn@ruleboth \unvbox\@tempboxa
10987                                 \else \@tempdima\ht\@tempboxa
10988                                         \advance\@tempdima\dp\@tempboxa
10989                                         \vskip\@tempdima
10990                                         \prevdepth\dp\@tempboxa \fi
10991                                 \unvbox\dfn@boxa\vss}\fi\hss}}\fi\fi
10992         \global\dfn@fnht\z@
10993         \ifx\dfn@list\@empty\else
10994                 \let\@elt\dfn@elt@adjust \dfn@dima\z@ \dfn@dimb\z@
10995                 \dfn@list \global\advance\dfn@fnht\dfn@dimb
10996                 \let\@elt\relax
10997                 \ifdim\dfn@dimb>\z@
10998                         \xdef\dfn@list{\@elt{0}{\number\dfn@dimb}\dfn@list}%
10999                         \insert\footins{\floatingpenalty\@MM
```

```
                                \vbox to\dfn@dimb{}\fi
            \ifdim\dfn@fnht>\@tempdima
                    \@tempdimb\@tempdima \advance\@tempdimb-\dfn@fnht
                    \global\dfn@fnht\@tempdima
                    \xdef\dfn@list{\dfn@list\@elt{0}{\number\@tempdimb}}%
                    \xdef\dfn@afteroutput{\insert\footins{
                                \floatingpenalty\@MM
                                \vbox to\number\@tempdimb sp{}}%
                            \global\let\noexpand\dfn@afteroutput\relax}%
            \fi\fi
        \fi}%
        \let\footnoterule\relax \dfn@latex@makecol
        \let\footnoterule\dfn@footnoterule}
\renewcommand{\dfn@makecol}{\if@RTLmain\dfn@RTLmakecol\else\dfn@LTRmakecol\fi}
\newcommand{\RTLdfnmakecol}{\renewcommand{\dfn@makecol}{\dfn@RTLmakecol}}
\newcommand{\LTRdfnmakecol}{\renewcommand{\dfn@makecol}{\dfn@LTRmakecol}}
\DFNalwaysdouble
```

79 File diagbox-xetex-bidi.def

```
\ProvidesFile{diagbox-xetex-bidi.def}[2017/12/30 v0.2 bidi adaptations for diagbox package
\bidi@patchcmd{\diagbox@double}{%
    \begin{tabular}{@{\hspace{\diagbox@insepl}}>{\diagbox@font}l@{}}
}{\bidi@@diagbox@double@ii}{}{}
\bidi@patchcmd{\diagbox@double}{%
    \begin{tabular}{@{}>{\diagbox@font}r@{\hspace{\diagbox@insepr}}}
}{\bidi@@diagbox@double@iii}{}{}
\newcommand*{\bidi@@diagbox@double@ii}{%
  \if@RTL
    \begin{tabular}{@{}>{\diagbox@font}r@{\hspace{\diagbox@insepl}}}
  \else
    \begin{tabular}{@{\hspace{\diagbox@insepl}}>{\diagbox@font}l@{}}
  \fi
}
\newcommand*{\bidi@@diagbox@double@iii}{%
  \if@RTL
    \begin{tabular}{@{\hspace{\diagbox@insepr}}>{\diagbox@font}l@{}}
  \else
    \begin{tabular}{@{}>{\diagbox@font}r@{\hspace{\diagbox@insepr}}}
  \fi
}
\bidi@patchcmd{\diagbox@triple@setbox@NW}{%
    \begin{tabular}{@{\hspace{\diagbox@insepl}}>{\diagbox@font}l@{}}
}{\bidi@@diagbox@triple@setbox@NW@tabular@i@ii}{}{}
\bidi@patchcmd{\diagbox@triple@setbox@NW}{%
    \begin{tabular}{@{\hspace{\diagbox@insepl}}>{\diagbox@font}l@{}}
}{\bidi@@diagbox@triple@setbox@NW@tabular@i@ii}{}{}
\bidi@patchcmd{\diagbox@triple@setbox@NW}{%
    \begin{tabular}{@{}>{\diagbox@font}r@{\hspace{\diagbox@insepr}}}
}{\bidi@@diagbox@triple@setbox@NW@tabular@iii}{}{}
\newcommand*{\bidi@@diagbox@triple@setbox@NW@tabular@i@ii}{%
  \if@RTL
    \begin{tabular}{@{}>{\diagbox@font}r@{\hspace{\diagbox@insepl}}}
  \else
```

```
    \begin{tabular}{@{\hspace{\diagbox@insepl}}>{\diagbox@font}l@{}}
  \fi}
\newcommand*{\bidi@@diagbox@triple@setbox@NW@tabular@iii}{%
  \if@RTL
    \begin{tabular}{@{\hspace{\diagbox@insepr}}>{\diagbox@font}l@{}}
  \else
    \begin{tabular}{@{}>{\diagbox@font}r@{\hspace{\diagbox@insepr}}}
  \fi}
\let\diagbox@triple@setbox@SW\diagbox@triple@setbox@NW
\bidi@patchcmd{\diagbox@triple@setbox@SE}{%
    \begin{tabular}{@{\hspace{\diagbox@insepl}}l@{}}%
}{\bidi@@diagbox@triple@setbox@SE@tabular@i}{}{}
\bidi@patchcmd{\diagbox@triple@setbox@SE}{%
    \begin{tabular}{@{}r@{\hspace{\diagbox@insepr}}}%
}{\bidi@@diagbox@triple@setbox@SE@tabular@ii@iii}{}{}
\bidi@patchcmd{\diagbox@triple@setbox@SE}{%
    \begin{tabular}{@{}r@{\hspace{\diagbox@insepr}}}%
}{\bidi@@diagbox@triple@setbox@SE@tabular@ii@iii}{}{}
\newcommand*{\bidi@@diagbox@triple@setbox@SE@tabular@i}{%
  \if@RTL
    \begin{tabular}{@{}r@{\hspace{\diagbox@insepl}}}
  \else
    \begin{tabular}{@{\hspace{\diagbox@insepl}}l@{}}
  \fi
}
\newcommand*{\bidi@@diagbox@triple@setbox@SE@tabular@ii@iii}{%
  \if@RTL
    \begin{tabular}{@{\hspace{\diagbox@insepr}}l@{}}
  \else
    \begin{tabular}{@{}r@{\hspace{\diagbox@insepr}}}
  \fi
}
\let\diagbox@triple@setbox@NE\diagbox@triple@setbox@SE
\bidi@patchcmd{\diagbox@double@pict@SE}{%
  \diagbox@setlinecolor
  \Line(0,\strip@pt\diagbox@ht)(\strip@pt\diagbox@wd,0)%
}{%
  {\diagbox@setlinecolor
  \Line(0,\strip@pt\diagbox@ht)(\strip@pt\diagbox@wd,0)}%
}{}{}
\let\diagbox@double@pict@NW\diagbox@double@pict@SE
\bidi@patchcmd{\diagbox@double@pict@NE}{%
  \diagbox@setlinecolor
  \Line(0,0)(\strip@pt\diagbox@wd,\strip@pt\diagbox@ht)%
}{%
  {\diagbox@setlinecolor
  \Line(0,0)(\strip@pt\diagbox@wd,\strip@pt\diagbox@ht)}%
}{}{}
\let\diagbox@double@pict@SW\diagbox@double@pict@NE
\bidi@patchcmd{\diagbox@triple@pict@NW}{%
  \diagbox@setlinecolor
  \Line(0,\yym)(\x,0)
  \Line(\xm,\y)(\x,0)%
}{%
```

```
  {\diagbox@setlinecolor
  \Line(0,\yym)(\x,0)
  \Line(\xm,\y)(\x,0)}%
}{}{}
\bidi@patchcmd{\diagbox@triple@pict@NE}{%
  \diagbox@setlinecolor
  \Line(0,0)(\xxm,\y)
  \Line(0,0)(\x,\yym)%
}{%
  {\diagbox@setlinecolor
  \Line(0,0)(\xxm,\y)
  \Line(0,0)(\x,\yym)}%
}{}{}
\bidi@patchcmd{\diagbox@triple@pict@SW}{%
  \diagbox@setlinecolor
  \Line(0,\ym)(\x,\y)
  \Line(\xm,0)(\x,\y)%
}{%
  {\diagbox@setlinecolor
  \Line(0,\ym)(\x,\y)
  \Line(\xm,0)(\x,\y)}%
}{}{}
\bidi@patchcmd{\diagbox@triple@pict@SE}{%
  \diagbox@setlinecolor
  \Line(0,\y)(\xxm,0)
  \Line(0,\y)(\x,\ym)%
}{%
  {\diagbox@setlinecolor
  \Line(0,\y)(\xxm,0)
  \Line(0,\y)(\x,\ym)}%
}{}{}
```

80 File draftwatermark-xetex-bidi.def

```
\ProvidesFile{draftwatermark-xetex-bidi.def}[2010/07/25 v0.2 bidi adaptations for draftwate
\renewcommand\SetWatermarkText[1]{%
  \def\sc@wm@text{\if@RTLmain\beginR\fi#1\if@RTLmain\endR\fi}}
```

81 File eso-pic-xetex-bidi.def

```
\ProvidesFile{eso-pic-xetex-bidi.def}[2022/02/18 v0.4 bidi adaptations for eso-pic package
\renewcommand\AtPageLowerLeft[1]{\AtPageUpperLeft{%
  \put(\if@RTLmain\paperwidth\else 0\fi,-\paperheight){#1}}}

\ESO@isMEMOIR{%
  \renewcommand\AtTextUpperLeft[1]{%
    \begingroup
      \ifodd\c@page
        \if@RTLmain
          \ESO@tempdima=\paperwidth
          \advance\ESO@tempdima-\textwidth
          \advance\ESO@tempdima-\spinemargin
        \else
          \ESO@tempdima=\spinemargin
```

```
        \fi
      \else
        \if@RTLmain
          \ESO@tempdima=\spinemargin
        \else
          \ESO@tempdima=\paperwidth
          \advance\ESO@tempdima-\textwidth
          \advance\ESO@tempdima-\spinemargin
        \fi
      \fi
      \ESO@tempdimb=-\uppermargin
      \AtPageUpperLeft{%
        \put(\if@RTLmain-\textwidth-\fi\ESO@tempdima,\ESO@tempdimb){#1}%
      }%
    \endgroup
  }
}{%
  \renewcommand\AtTextUpperLeft[1]{%
    \begingroup
      \ESO@tempdima=1in\relax
      \if@twoside
        \ifodd\c@page
          \if@RTLmain
            \advance\ESO@tempdima\evensidemargin
          \else
            \advance\ESO@tempdima\oddsidemargin
          \fi
        \else
          \if@RTLmain
            \advance\ESO@tempdima\oddsidemargin
          \else
            \advance\ESO@tempdima\evensidemargin
          \fi
        \fi
      \else
        \advance\ESO@tempdima\oddsidemargin
      \fi
      \ESO@tempdimb=-1in\relax
      \advance\ESO@tempdimb-\topmargin
      \advance\ESO@tempdimb-\headheight
      \advance\ESO@tempdimb-\headsep
      \AtPageUpperLeft{%
        \put(\if@RTLmain-\textwidth-\fi\ESO@tempdima,\ESO@tempdimb){#1}%
      }%
    \endgroup
  }
}
```

82 File empheq-xetex-bidi.def

```
\ProvidesFile{empheq-xetex-bidi.def}[2018/01/08 v0.2 bidi adaptations for empheq package fo
\MHInternalSyntaxOn
\def\EQ_tag_plus_endmark:{%
  \iftagsleft@
```

```
    \gdef\maketag@@@##1{%
      \hfuzz\displaywidth
      \if@RTL\makebox[\widthof{##1}][r]{%
        \hbox to \displaywidth{\m@th\normalfont##1\hss
          \raisebox{-\dp\EQ_mathdisplay_box
                    -\depthof{\EQ_outerbox:{}}}
                   {\PotEndMark{\hss}}}}
      \else\makebox[\widthof{##1}][l]{%
        \hbox to \displaywidth{\m@th\normalfont##1\hss
          \raisebox{-\dp\EQ_mathdisplay_box
                    -\depthof{\EQ_outerbox:{}}}
                   {\PotEndMark{\hss}}}}\fi}%
  \MH_else:
    \gdef\maketag@@@##1{%
      \hbox{\m@th\normalfont##1\llap{\hss\PotEndMark{%
        \settoheight{\@tempdima}{\@nameuse{\InTheoType Symbol}}%
        \MH_addtolength:dn \@tempdima
          {\g_EQ_bottomtag_depth_dim+\mintagvsep}
        \setlength{\@tempdimb}
          {\g_EQ_bottomrow_depth_dim+\depthof{\EQ_outerbox:{}}
            +\depthof{\EQ_innerbox:{}}}
        \MH_if_dim:w \@tempdima>\@tempdimb
          \MH_setlength:dn \@tempdima{-\dp\EQ_mathdisplay_box
            -\@tempdima+\g_EQ_bottomrow_depth_dim}
          \addtolength{\@tempdima}{\depthof{\EQ_innerbox:{}}}%
          \def\EQ_next:{\raisebox{\@tempdima}}%
        \MH_else:
          \def\EQ_next:{
            \raisebox{-\dp\EQ_mathdisplay_box
                      -\depthof{\EQ_outerbox:{}}}}%
        \MH_fi:\EQ_next:}}}}%
  \MH_fi:}
\def\EQ_post_process:{%
  \EQ_initialize:
  \EQ_begin_equation:
  \MH_if_boolean:nT {outer_mult}{
    \setkeys{\MT_options_name:}{
      firstline-afterskip=0pt,
      lastline-preskip=0pt,
      multlined-width=0pt,
    }
    \ifodd \l_EQ_alignmentmode_int
      \setkeys{\MT_options_name:}{multlined-pos=b}
    \MH_else:
      \setkeys{\MT_options_name:}{multlined-pos=t}
    \MH_fi:
      \g@addto@macro\EQ_complete_mathdisplay:{
        \begin{MTmultlined}\relax}
  }
  \g@addto@macro\EQ_complete_mathdisplay:\EQ_mathbody:
  \MH_if_boolean:nT {outer_mult}{
    \g@addto@macro\EQ_complete_mathdisplay:{\end{MTmultlined}}
  }
  \EQ_end_equation:
```

```
\edef\EQ_hyperref_link_fint{\number\Hy@linkcounter}
\savecounters@
\EQ_typeset_tags:
\edef\l_EQ_equation_fint{\number\c@equation}
\restorecounters@
\Hy@linkcounter=\EQ_hyperref_link_fint
\settowidth\l_EQ_totalwidth_dim{%
  $\EQ_left_side:\EQ_innerbox:{}\EQ_right_side:$}%
\MH_if_boolean:nTF {outer_mult}
  { \def\EQ_next:{_mult} }
  { \def\EQ_next:{} }
\@nameuse{EQ_modify_linewidth_
          \romannumeral\l_EQ_equationtype_int\EQ_next: :}%
\EQ_typeset_display:
\@nameuse{EQ_find_displaywidth_
         \romannumeral\l_EQ_equationtype_int\EQ_next: :}
\MH_addtolength:dn
  \l_EQ_totalwidth_dim{\l_EQ_displaywidth_dim}
\savebox\EQ_mathdisplay_box[\l_EQ_totalwidth_dim][c]{%
  $\EQ_left_side:
  \EQ_innerbox:{%
    \MH_if_case:w \l_EQ_alignmentmode_int\MH_or:
      \makebox[\l_EQ_displaywidth_dim][c]
        {\usebox{\EQ_mathdisplay_box}}%
    \MH_or:
      \makebox[\l_EQ_displaywidth_dim][c]
        {\usebox{\EQ_mathdisplay_box}}%
    \MH_or:
      \if@RTL\makebox[\l_EQ_displaywidth_dim][r]{%
        \MH_if_num:w \l_EQ_equationtype_int=5 \MH_else:
          \MH_if_num:w \l_EQ_equationtype_int=6 \MH_else:
            \kern-\@mathmargin
          \MH_fi:
        \MH_fi:
        \usebox{\EQ_mathdisplay_box}}%
      \else\makebox[\l_EQ_displaywidth_dim][l]{%
        \MH_if_num:w \l_EQ_equationtype_int=5 \MH_else:
          \MH_if_num:w \l_EQ_equationtype_int=6 \MH_else:
            \kern-\@mathmargin
          \MH_fi:
        \MH_fi:
        \usebox{\EQ_mathdisplay_box}}\fi%
    \MH_or:
      \if@RTL\makebox[\l_EQ_displaywidth_dim][r]{%
        \MH_if_num:w \l_EQ_equationtype_int=5 \MH_else:
          \MH_if_num:w \l_EQ_equationtype_int=6 \MH_else:
            \kern-\@mathmargin
          \MH_fi:
        \MH_fi:
        \usebox{\EQ_mathdisplay_box}}
      \else\makebox[\l_EQ_displaywidth_dim][l]{%
        \MH_if_num:w \l_EQ_equationtype_int=5 \MH_else:
          \MH_if_num:w \l_EQ_equationtype_int=6 \MH_else:
            \kern-\@mathmargin
```

```
            \MH_fi:
          \MH_fi:
          \usebox{\EQ_mathdisplay_box}}\fi%
      \MH_fi:}%
    \EQ_right_side:$}%
  \begin{AmSequation*}
  \@nameuse{EQ_place_display_
           \romannumeral\l_EQ_equationtype_int\EQ_next: :}
  \MH_if_dim:w \g_EQ_widesttag_dim>\z@
  \MH_set_boolean_T:n {show_manual_tags}
    \MH_if_case:w \l_EQ_alignmentmode_int
    \MH_or: \if@RTL\EQ_place_tag:N l\else\EQ_place_tag:N r\fi %#1
    \MH_or: \if@RTL\EQ_place_tag:N r\else\EQ_place_tag:N l\fi %#2
    \MH_or: \if@RTL\EQ_place_tag:N l\else\EQ_place_tag:N r\fi %#3
    \MH_or: \if@RTL\EQ_place_tag:N r\else\EQ_place_tag:N l\fi %#4
    \MH_fi:
  \MH_fi:
  \end{AmSequation*}
  \global\c@equation=\l_EQ_equation_fint\relax
}
\AtBeginDocument{%
  \@ifpackageloaded{fancybox}{%
    \@ifpackageloaded{color}{\definecolor{shadowcolor}{rgb}{0,0,0}}%
    {\renewcommand*\textcolor[2]{\normalcolor{#2}}}%
    \renewcommand*\shadowbox{%
      \@ifstar{\MH_set_boolean_T:n {shadowbox_star}
               \VerbBox\EQ_shadowbox:n}
              {\MH_set_boolean_F:n {shadowbox_star}
               \VerbBox\EQ_shadowbox:n}}
    \def\EQ_shadowbox:n #1{%
      \sbox{\z@}{\fbox{#1}}%
      \MH_if_boolean:nTF {shadowbox_star}{
        \MH_setlength:dn \@tempdima{\z@}%
      }{
        \MH_setlength:dn \@tempdima{\dp\z@+\shadowsize}%
      }
      \raisebox{\@tempdima}{%
        \if@RTL\makebox[\z@][r]{%
          \kern\shadowsize \textcolor{shadowcolor}{%
            \rule[-\dp\z@-\shadowsize]{\wd\z@}{\shadowsize}}%
        }%
        \else\makebox[\z@][l]{%
          \kern\shadowsize \textcolor{shadowcolor}{%
            \rule[-\dp\z@-\shadowsize]{\wd\z@}{\shadowsize}}%
        }\fi%
        \usebox\z@\textcolor{shadowcolor}{%
          \rule[-\dp\z@-\shadowsize]{\shadowsize}{\ht\z@+\dp\z@}}}}%
  }{}%
}
\MHInternalSyntaxOff
```

83 File extarticle-xetex-bidi.def

```
\ProvidesFile{extarticle-xetex-bidi.def}[2025/09/08 v0.7 bidi adaptations for extarticle cl
```

```
\renewcommand*\l@section[2]{%
  \ifnum \c@tocdepth >\z@
    \addpenalty\@secpenalty
    \addvspace{1.0em \@plus\p@}%
    \setlength\@tempdima{1.5em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      \leavevmode \bfseries
      \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
      \hskip -\if@RTL\rightskip\else\leftskip\fi
      #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
    \endgroup
  \fi}
  \renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty\@secpenalty
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
       \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
       \nobreak
    \endgroup
  \fi}
\ApplyPatchIfPackageLoaded{nameref}{%
  \bidi@patchcmd\NR@part\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\NR@part' failed}}%
  \bidi@patchcmd\NR@spart\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\NR@spart' failed}}%
}{%
  \bidi@patchcmd\@part\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\@part' failed}}%
  \bidi@patchcmd\@spart\raggedright{%
    \if@RTL\raggedleft\else\raggedright\fi
  }{}{\bidi@warningnoline{Oops! patching `\string\@spart' failed}}%
}
\renewenvironment{thebibliography}[1]
     {\section*{\refname
        \@mkboth{\MakeUppercase\refname}{\MakeUppercase\refname}}%
         \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
         \bidi@@thebibliography@font@hook%
         \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
```

```
11417             \renewcommand\theenumiv{\@arabic\c@enumiv}}%
11418       \sloppy\clubpenalty4000\widowpenalty4000%
11419       \sfcode`\.\@m}
11420      {\def\@noitemerr
11421        {\@latex@warning{Empty `thebibliography' environment}}%
11422       \endlist}
11423 \renewcommand\left@footnoterule{%
11424   \kern-3\p@
11425   \hrule\@width.4\columnwidth
11426   \kern2.6\p@}
11427 \renewcommand\right@footnoterule{%
11428   \kern-3\p@
11429   \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
11430   \kern2.6\p@}
11431     \if@titlepage
11432   \renewcommand\maketitle{\begin{titlepage}%
11433   \let\footnotesize\small
11434   \let\right@footnoterule\relax
11435   \let\left@footnoterule\relax
11436   \let\textwidth@footnoterule\relax
11437   \let \footnote \thanks
11438   \null\vfil
11439   \vskip 60\p@
11440   \begin{center}%
11441     {\LARGE \@title \par}%
11442     \vskip 3em%
11443     {\large
11444      \lineskip .75em%
11445       \begin{tabular}[t]{c}%
11446         \@author
11447       \end{tabular}\par}%
11448       \vskip 1.5em%
11449     {\large \@date \par}%       % Set date in \large size.
11450   \end{center}\par
11451   \@thanks
11452   \vfil\null
11453   \end{titlepage}%
11454   \setcounter{footnote}{0}%
11455   \global\let\thanks\relax
11456   \global\let\maketitle\relax
11457   \global\let\@thanks\@empty
11458   \global\let\@author\@empty
11459   \global\let\@date\@empty
11460   \global\let\@title\@empty
11461   \global\let\title\relax
11462   \global\let\author\relax
11463   \global\let\date\relax
11464   \global\let\and\relax
11465 }
11466 \else
11467 \renewcommand\maketitle{\par
11468   \begingroup
11469     \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
11470     \def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
```

```
    \long\def\@makefntext##1{\parindent 1em\noindent
            \hb@xt@1.8em{%
                \hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@   % Prevents figures from going at top of page.
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
  \let \footnote \thanks
    {\LARGE \@title \par}%
    \vskip 1.5em%
    {\large
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}%%
```

84 File extbook-xetex-bidi.def

```
\ProvidesFile{extbook-xetex-bidi.def}[2017/06/09 v0.4 bidi adaptations for extbook class fo
  \if@titlepage
  \renewcommand\maketitle{\begin{titlepage}%
  \let\footnotesize\small
  \let\right@footnoterule\relax
  \let\left@footnoterule\relax
  \let\textwidth@footnoterule\relax
  \let \footnote \thanks
  \let \LTRfootnote \LTRthanks
  \let \RTLfootnote \RTLthanks
  \null\vfil
  \vskip 60\p@
  \begin{center}%
    {\LARGE \@title \par}%
    \vskip 3em%
    {\large
     \lineskip .75em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
      \vskip 1.5em%
    {\large \@date \par}%       % Set date in \large size.
  \end{center}\par
  \@thanks
  \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\LTRthanks\relax
  \global\let\RTLthanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\else
\renewcommand\maketitle{\par
  \begingroup
    \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext##1{\parindent 1em\noindent
            \hb@xt@1.8em{%
                \hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
```

```
11575         \twocolumn[\@maketitle]%
11576       \fi
11577     \else
11578       \newpage
11579       \global\@topnum\z@   % Prevents figures from going at top of page.
11580       \@maketitle
11581     \fi
11582     \thispagestyle{plain}\@thanks
11583   \endgroup
11584   \setcounter{footnote}{0}%
11585   \global\let\thanks\relax
11586   \global\let\LTRthanks\relax
11587   \global\let\RTLthanks\relax
11588   \global\let\maketitle\relax
11589   \global\let\@maketitle\relax
11590   \global\let\@thanks\@empty
11591   \global\let\@author\@empty
11592   \global\let\@date\@empty
11593   \global\let\@title\@empty
11594   \global\let\title\relax
11595   \global\let\author\relax
11596   \global\let\date\relax
11597   \global\let\and\relax
11598 }
11599 \def\@maketitle{%
11600   \newpage
11601   \null
11602   \vskip 2em%
11603   \begin{center}%
11604   \let \footnote \thanks
11605   \let \LTRfootnote \LTRthanks
11606   \let \RTLfootnote \RTLthanks
11607     {\LARGE \@title \par}%
11608     \vskip 1.5em%
11609     {\large
11610       \lineskip .5em%
11611       \begin{tabular}[t]{c}%
11612         \@author
11613       \end{tabular}\par}%
11614     \vskip 1em%
11615     {\large \@date}%
11616   \end{center}%
11617   \par
11618   \vskip 1.5em}
11619 \fi
11620 \renewcommand*\l@part[2]{%
11621   \ifnum \c@tocdepth >-2\relax
11622     \addpenalty{-\@highpenalty}%
11623     \addvspace{2.25em \@plus\p@}%
11624     \begingroup
11625       \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
11626       \parfillskip -\@pnumwidth
11627       {\leavevmode
11628        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
```

```
      \nobreak
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
  \fi}
\renewcommand\theequation
  {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@equation}
\renewcommand \thefigure
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@figure}
\renewcommand \thetable
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@table}
\renewcommand \thechapter {\@arabic\c@chapter}
\renewcommand \thesection {\thechapter\@SepMark\@arabic\c@section}
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}
\def\@makechapterhead#1{%
  \vspace*{50\p@}%
  {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi \normalfont
    \ifnum \c@secnumdepth >\m@ne
      \if@mainmatter
        \huge\bfseries \@chapapp\space \thechapter
        \par\nobreak
        \vskip 20\p@
      \fi
    \fi
    \interlinepenalty\@M
    \Huge \bfseries #1\par\nobreak
    \vskip 40\p@
  }}

\def\@makeschapterhead#1{%
  \vspace*{50\p@}%
  {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi
    \normalfont
    \interlinepenalty\@M
    \Huge \bfseries  #1\par\nobreak
    \vskip 40\p@
  }}
\renewcommand\backmatter{%
  \if@openright
    \cleardoublepage
  \else
    \clearpage
  \fi
  \@mainmatterfalse}
\renewenvironment{thebibliography}[1]
     {\chapter*{\bibname
        \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
```

```
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand\theenumiv{\@arabic\c@enumiv}}%
      \sloppy
      \clubpenalty4000
      \@clubpenalty \clubpenalty
      \widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
```

85 File extletter-xetex-bidi.def

```
\ProvidesFile{extletter-xetex-bidi.def}[2015/11/14 v0.2 bidi adaptations for extletter clas
\renewcommand*{\opening}[1]{\ifx\@empty\fromaddress
  \thispagestyle{firstpage}%
    {\if@RTL\raggedright\else\raggedleft\fi\@date\par}%
  \else  % home address
    \thispagestyle{empty}%
    {\if@RTL\raggedright\begin{tabular}{r@{}}\else\raggedleft\begin{tabular}{l@{}}\fi\ignor
      \fromaddress \\*[2\parskip]%
      \@date \end{tabular}\par}%
  \fi
  \vspace{2\parskip}%
  {\if@RTL\raggedleft\else\raggedright\fi \toname \\ \toaddress \par}%
  \vspace{2\parskip}%
  #1\par\nobreak}
\renewcommand{\closing}[1]{\par\nobreak\vspace{\parskip}%
  \stopbreaks
  \noindent
  \ifx\@empty\fromaddress\else
  \hspace*{\longindentation}\fi
  \parbox{\indentedwidth}{\if@RTL\raggedleft\else\raggedright\fi
       \ignorespaces #1\\[6\medskipamount]%
       \ifx\@empty\fromsig
           \fromname
       \else \fromsig \fi\strut}%
   \par}
\renewcommand\left@footnoterule{%
  \kern-\p@
  \hrule \@width .4\columnwidth
  \kern .6\p@}
\renewcommand\right@footnoterule{%
  \kern-\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern .6\p@}
```

86 File extrafootnotefeatures-xetex-bidi.def

```
\ProvidesFile{extrafootnotefeatures-xetex-bidi.def}[2025/09/13 v2.8 bidi extra footnote fea
```

```
\newdimen\bidi@columnwidth
\def\bidi@floathook{%
  \bidi@columnwidth\columnwidth
}
\newcommand*{\@bidi@before@Hy@hyperfootnotes}{%
\if@bidi@csundef{ifHy@hyperfootnotes}{}{%
\if@bidi@csundef{HLTR@@LTRfootnotetext}{}{%
\ifHy@hyperfootnotes
  \let\@@H@@footnotetext\@footnotetext
  \let\@@HLTR@@LTRfootnotetext\@LTRfootnotetext
  \let\@@HRTL@@RTLfootnotetext\@RTLfootnotetext
  \let\@@H@@mpfootnotetext\@mpfootnotetext
  \let\@@HLTR@@mpLTRfootnotetext\@mpLTRfootnotetext
  \let\@@HRTL@@mpRTLfootnotetext\@mpRTLfootnotetext
\fi
}%
}%
}
\newcommand*{\@bidi@after@Hy@hyperfootnotes}{%
\if@bidi@csundef{ifHy@hyperfootnotes}{}{%
\if@bidi@csundef{HLTR@@LTRfootnotetext}{}{%
\ifHy@hyperfootnotes
  \let\H@@footnotetext\@footnotetext
  \let\@footnotetext\@@H@@footnotetext
  \let\HLTR@@LTRfootnotetext\@LTRfootnotetext
  \let\@LTRfootnotetext\@@HLTR@@LTRfootnotetext
  \let\HRTL@@RTLfootnotetext\@RTLfootnotetext
  \let\@RTLfootnotetext\@@HRTL@@RTLfootnotetext
  \let\H@@mpfootnotetext\@mpfootnotetext
  \let\@mpfootnotetext\@@H@@mpfootnotetext
  \let\HLTR@@mpLTRfootnotetext\@mpLTRfootnotetext
  \let\@mpLTRfootnotetext\@@HLTR@@mpLTRfootnotetext
  \let\HRTL@@mpRTLfootnotetext\@mpRTLfootnotetext
  \let\@mpRTLfootnotetext\@@HRTL@@mpRTLfootnotetext
\fi
}%
}%
}
\let\autofootnoterule\relax
\let\rightfootnoterule\relax
\let\leftfootnoterule\relax
\let\textwidthfootnoterule\relax
\let\LRfootnoterule\relax
\def\footnoterule{\kern-3\p@
  \hrule \@width \columnwidth \kern 2.6\p@}
\newcommand{\@preamnormalfmt}{%
  \parindent 1em%
  \noindent
}
\newcommand{\@normalfootfmt}[1]{%
  \@preamnormalfmt
  \footfootmark
  \rule\z@\footnotesep\ignorespaces{\foottextfont #1}%
  \@finalstrut\strutbox
```

```
}
\newcommand{\@normalRTLfootfmt}[1]{%
  \@preamnormalfmt
  \RTLfootfootmark
  \rule\z@\footnotesep\ignorespaces{\RTLfoottextfont #1}%
  \@finalstrut\strutbox
}
\newcommand{\@normalLTRfootfmt}[1]{%
  \@preamnormalfmt
  \LTRfootfootmark
  \rule\z@\footnotesep\ignorespaces{\LTRfoottextfont #1}%
  \@finalstrut\strutbox
}
\renewcommand{\@footnotetext}[1]{%
    \insert\footins{%
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font
    \foottextfont
    \@preamfntext
    \hsize\columnwidth
    \protected@edef\@currentlabel{%
      \csname p@footnote\endcsname\@thefnmark}%
    \color@begingroup
      \@normalfootfmt{#1}%
    \color@endgroup}%
      \m@mmf@prepare}
\renewcommand{\@RTLfootnotetext}[1]{%
    \insert\footins{%
    \@RTLtrue%
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font
    \RTLfoottextfont
    \@preamfntext
    \hsize\columnwidth
    \protected@edef\@currentlabel{%
      \csname p@footnote\endcsname\@thefnmark}%
    \color@begingroup
      \@normalRTLfootfmt{#1}%
    \color@endgroup}%
      \m@mmf@prepare}
\renewcommand{\@LTRfootnotetext}[1]{%
    \insert\footins{%
    \@RTLfalse%
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font
    \LTRfoottextfont
    \@preamfntext
    \hsize\columnwidth
    \protected@edef\@currentlabel{%
      \csname p@footnote\endcsname\@thefnmark}%
    \color@begingroup
      \@normalLTRfootfmt{#1}%
    \color@endgroup}%
```

```
      \m@mmf@prepare}
\renewcommand{\@mpfootnotetext}[1]{%
  \global\setbox\@mpfootins\vbox{%
    \unvbox\@mpfootins
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font%
    \foottextfont \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@normalfootfmt{#1}%
  \color@endgroup}}
\renewcommand{\@mpLTRfootnotetext}[1]{%
  \global\setbox\@mpfootins\vbox{%
    \unvbox\@mpfootins
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font%
    \LTRfoottextfont \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@normalLTRfootfmt{#1}%
  \color@endgroup}}
\renewcommand{\@mpRTLfootnotetext}[1]{%
  \global\setbox\@mpfootins\vbox{%
    \unvbox\@mpfootins
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font%
    \RTLfoottextfont \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@normalRTLfootfmt{#1}%
  \color@endgroup}}
\let\m@mold@footnotetext\@footnotetext
\let\m@mold@LTRfootnotetext\@LTRfootnotetext
\let\m@mold@RTLfootnotetext\@RTLfootnotetext
\let\m@mold@mpfootnotetext\@mpfootnotetext
\let\m@mold@mpLTRfootnotetext\@mpLTRfootnotetext
\let\m@mold@mpRTLfootnotetext\@mpRTLfootnotetext
\bidi@ensure@newcommand{\normalfootnotes}{%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\m@mold@footnotetext
  \let\@LTRfootnotetext\m@mold@LTRfootnotetext
  \let\@RTLfootnotetext\m@mold@RTLfootnotetext
  \let\@mpfootnotetext\m@mold@mpfootnotetext
  \let\@mpLTRfootnotetext\m@mold@mpLTRfootnotetext
  \let\@mpRTLfootnotetext\m@mold@mpRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
```

```
\IfClassLoadedT{memoir}{\let\plainfootnotes\normalfootnotes}
\bidi@ensure@newcommand*{\setSingleSpace}[1]{%
  \def\m@m@singlespace{#1}%
  \def\m@m@footnote@spacing{#1}%
  \def\m@m@float@spacing{#1} %
}
\setSingleSpace{1}
\bidi@ensure@newcommand*{\multiplefootnotemarker}{3sp}
\bidi@ensure@newcommand*{\m@mmf@prepare}{%
  \kern-\multiplefootnotemarker
  \kern\multiplefootnotemarker\relax}
\bidi@ensure@newlength{\footmarkwidth}
\bidi@ensure@newcommand*{\footmarkstyle}[1]{\def\footscript##1{#1}}
\bidi@ensure@newcommand*{\LTRfootmarkstyle}[1]{\def\LTRfootscript##1{#1}}
\bidi@ensure@newcommand*{\RTLfootmarkstyle}[1]{\def\RTLfootscript##1{#1}}
\bidi@ensure@newcommand{\footfootmark}{%
  \ifdim\footmarkwidth < \z@
    \llap{\hb@xt@ -\footmarkwidth{%
            \hss\normalfont\footscript{\@thefnmark}}%
          \hspace*{-\footmarkwidth}}%
  \else
    \ifdim\footmarkwidth = \z@
      {\normalfont\footscript{\@thefnmark}}%
    \else
      \hb@xt@\footmarkwidth{\hss\normalfont\footscript{\@thefnmark}}%
    \fi
  \fi}
\bidi@ensure@newcommand{\LTRfootfootmark}{%
  \ifdim\footmarkwidth < \z@
    \llap{\hb@xt@ -\footmarkwidth{%
            \hss\normalfont\LTRfootscript{\@thefnmark}}%
          \hspace*{-\footmarkwidth}}%
  \else
    \ifdim\footmarkwidth = \z@
      {\normalfont\LTRfootscript{\@thefnmark}}%
    \else
      \hb@xt@\footmarkwidth{\hss\normalfont\LTRfootscript{\@thefnmark}}%
    \fi
  \fi}
\bidi@ensure@newcommand{\RTLfootfootmark}{%
  \ifdim\footmarkwidth < \z@
    \llap{\hb@xt@ -\footmarkwidth{%
            \hss\normalfont\RTLfootscript{\@thefnmark}}%
          \hspace*{-\footmarkwidth}}%
  \else
    \ifdim\footmarkwidth = \z@
      {\normalfont\RTLfootscript{\@thefnmark}}%
    \else
      \hb@xt@\footmarkwidth{\hss\normalfont\RTLfootscript{\@thefnmark}}%
    \fi
  \fi}
\footmarkstyle{\textsuperscript{#1}}
\LTRfootmarkstyle{\textsuperscript{#1}}
\RTLfootmarkstyle{\textsuperscript{#1}}
```

```
\newcommand*{\bidi@normal@footmarkwidth}{%
  \setlength{\footmarkwidth}{1em plus.3em minus.3em}%
}
\newcommand*{\bidi@star@footmarkwidth}{%
  \setlength{\footmarkwidth}{0em plus.3em minus.3em}%
}
\bidi@normal@footmarkwidth
\bidi@ensure@newcommand{\m@mdoextrafeet}{\extrafeetins}
\bidi@ensure@newcommand*{\extrafeetins}{%
  \bidi@joinfootnotes\footinsv@r\@footstartv@r\@footgroupv@r
  \bidi@joinfootnotes\footinsv@l\@footstartv@l\@LTRfootgroupv@l
  \bidi@joinfootnotes\@bidi@copyins@{}{\unvbox\@bidi@copyins@}%
    \extrafeetinshook}
\bidi@ensure@newcommand{\extrafeetinshook}{}
\bidi@ensure@newcommand{\foottextfont}{\footnotesize}
\bidi@ensure@newcommand{\LTRfoottextfont}{\footnotesize}
\bidi@ensure@newcommand{\RTLfoottextfont}{\footnotesize}
\bidi@ensure@newlength{\footinsdim}
  \setlength{\footinsdim}{8in}   % standard for \dimen\footins
\bidi@ensure@newcommand{\@preamfntext}{%
  \interlinepenalty\interfootnotelinepenalty
  \floatingpenalty \@MM
  \splittopskip=\footnotesep
  \splitmaxdepth=\dp\strutbox
  \@parboxrestore}
\def\bidi@ifmulticol#1#2{\@tempswafalse
  \ifnum\col@number>\@ne
    \ifnum\count\footins>1999 \@tempswatrue \fi
  \fi
  \if@tempswa #1\else #2\fi
}
\def\bidi@joinfootnotes#1#2#3{%
  \ifvoid#1
  \else
    \@tempskipa\skip#1%
    \bidi@ifmulticol{\divide\@tempskipa\col@number}{}%
    \edef\bidi@footskip{\vskip\the\@tempskipa\relax}%
    \bidi@removexfootskip
    \ifvoid\footins
      \global\setbox\footins\vbox{#2#3}%
    \else
      \global\setbox\footins\vbox{%
         \unvbox\footins
         \bidi@footskip
         #2#3%
       }%
    \fi
  \fi
}
\def\bidi@joinmpfootnotes#1#2#3{%
  \ifvoid#1
  \else
    \@tempskipa\skip#1%
    \bidi@ifmulticol{\divide\@tempskipa\col@number}{}%
```

```
    \edef\bidi@footskip{\vskip\the\@tempskipa\relax}%
    \bidi@removexfootskip
    \ifvoid\@mpfootins
      \global\setbox\@mpfootins\vbox{#2#3}%
    \else
      \global\setbox\@mpfootins\vbox{%
         \unvbox\@mpfootins
         \bidi@footskip
         #2#3%
       }%
    \fi
  \fi
}
\bidi@ensure@newcommand{\m@mdoextrafeetmini}{%
  \extrafeetminihook}
\bidi@ensure@newcommand{\extrafeetendmini}{%
\bidi@joinmpfootnotes\@mpfootinsv@r\@footstartv@r\mp@footgroupv@r
  \bidi@joinmpfootnotes\@mpfootinsv@l\@footstartv@l\mp@LTRfootgroupv@l
  \extrafeetendminihook}
\bidi@ensure@newcommand{\extrafeetendminihook}{}
\bidi@ensure@newcommand{\m@mdoextrafeetendmini}{\extrafeetendmini}
\def\endminipage{%
  \par
  \unskip
  \m@mdoextrafeetendmini
  \ifvoid\@mpfootins
  \else
    \vskip\skip\@mpfootins
    \normalcolor
    \footnoterule
    \unvbox\@mpfootins
  \fi
  \@minipagefalse
  \color@endgroup
  \egroup
  \expandafter\@iiiparbox\@mpargs{\unvbox\@tempboxa}}
\bidi@ensure@newcommand{\m@make@footstart}[1]{%
  \@namedef{@footstart#1}{%
    \leftskip=\z@
    \rightskip=\z@
    \parindent=\z@
  }%
}
\newinsert\footinsv@r
\skip\footinsv@r\skip\footins
\count\footinsv@r=1000 % no magnifcation
\dimen\footinsv@r=\footinsdim
\m@make@footstart{v@r}
\newinsert\footinsv@l
\skip\footinsv@l\skip\footins
\count\footinsv@l=1000 % no magnifcation
\dimen\footinsv@l=\footinsdim
\m@make@footstart{v@l}
\bidi@ensure@newcommand{\@footgroupv@r}{}
```

```
\newinsert\@mpfootinsv@r
\skip\@mpfootinsv@r\skip\@mpfootins
\newinsert\@mpfootinsv@l
\skip\@mpfootinsv@l\skip\@mpfootins
\bidi@ensure@newcommand{\mp@footgroupv@r}{}
\newcount\m@m@k \newdimen\m@m@h
\bidi@ensure@newcommand*{\m@mrigidbalance}[3]{\setbox0=\box#1 \m@m@k=#2 \m@m@h=#3
  \@@line{\beginR\splittopskip=\m@m@h \vbadness=\@M \hfilneg
  \valign{##\vfill\cr\m@mdosplits}\endR}}
\newcommand*{\bidi@LTRrigidbalance}[3]{\setbox0=\box#1 \m@m@k=#2 \m@m@h=#3
  \@@line{\beginL\splittopskip=\m@m@h \vbadness=\@M \hfilneg
  \valign{##\vfill\cr\m@mdosplits}\endL}}
\bidi@ensure@newcommand*{\m@mdosplits}{\ifnum\m@m@k>0 \noalign{\hfil}\m@msplitoff
  \global\advance\m@m@k-1\cr\m@mdosplits\fi}
\bidi@ensure@newcommand*{\m@msplitoff}{\dimen0=\ht0
  \divide\dimen0 by\m@m@k \advance\dimen0 by\m@m@h
  \setbox2 \vsplit0 to \dimen0
  \unvbox2 }
\bidi@ensure@newcommand{\twocolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@twocolfootnotetext
  \let\@LTRfootnotetext\@twocolLTRfootnotetext
  \let\@RTLfootnotetext\@twocolRTLfootnotetext
  \dimen\footinsv@r=2\footinsdim
  \count\footinsv@r=500\relax
  \m@make@twocol@footgroup{v@r}%
  \let\@footgroupv@r\@twocol@footgroupv@r
  \dimen\footinsv@l=2\footinsdim
  \count\footinsv@l=500\relax
  \bidi@make@twocol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@twocol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mptwocolfootnotetext
  \let\@mpLTRfootnotetext\@mptwocolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mptwocolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mptwocol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mptwocol@footgroupv@r
  \bidi@make@mptwocol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mptwocol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@twocolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
```

```
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@twocolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@twocolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@twocolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@twocolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@twocolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@preamtwofmt}{%
  \hsize .45\hsize
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@twocolfootfmt}[1]{%
  \@preamtwofmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@twocolLTRfootfmt}[1]{%
  \@preamtwofmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@twocolRTLfootfmt}[1]{%
  \@preamtwofmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mptwocolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
```

```
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@twocolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mptwocolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@twocolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mptwocolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@twocolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@twocol@footgroup}[1]{%
  \@namedef{@twocol@footgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \m@mrigidbalance{\@nameuse{footins#1}}{\tw@}{\splittopskip}}}}
\newcommand{\bidi@make@twocol@LTRfootgroup}[1]{%
  \@namedef{@twocol@LTRfootgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \bidi@LTRrigidbalance{\@nameuse{footins#1}}{\tw@}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mptwocol@footgroup}[1]{%
\@namedef{@mptwocol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{\tw@}{\splittopskip}}}}
\newcommand{\bidi@make@mptwocol@LTRfootgroup}[1]{%
\@namedef{@mptwocol@LTRfootgroup#1}{{%
```

```
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{\tw@}{\splittopskip}}}}
\bidi@ensure@newcommand{\threecolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@threecolfootnotetext
  \let\@LTRfootnotetext\@threecolLTRfootnotetext
  \let\@RTLfootnotetext\@threecolRTLfootnotetext
  \dimen\footinsv@r=3\footinsdim
  \count\footinsv@r=333\relax
  \m@make@threecol@footgroup{v@r}%
  \let\@footgroupv@r\@threecol@footgroupv@r
  \dimen\footinsv@l=3\footinsdim
  \count\footinsv@l=333\relax
  \bidi@make@threecol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@threecol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mpthreecolfootnotetext
  \let\@mpLTRfootnotetext\@mpthreecolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpthreecolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mpthreecol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mpthreecol@footgroupv@r
  \bidi@make@mpthreecol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mpthreecol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@threecolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@threecolfootfmt{#1}%
  \color@endgroup}\m@mmf@prepare}
\bidi@ensure@newcommand{\@threecolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@threecolLTRfootfmt{#1}%
  \color@endgroup}\m@mmf@prepare}
\bidi@ensure@newcommand{\@threecolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
```

```
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@threecolRTLfootfmt{#1}%
  \color@endgroup}\m@mmf@prepare}
\bidi@ensure@newcommand{\@preamthreefmt}{%
  \hsize .3\hsize
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@threecolfootfmt}[1]{%
  \@preamthreefmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@threecolLTRfootfmt}[1]{%
  \@preamthreefmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@threecolRTLfootfmt}[1]{%
  \@preamthreefmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mpthreecolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@threecolfootfmt{#1}%
  \color@endgroup}\m@mmf@prepare}
\bidi@ensure@newcommand{\@mpthreecolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
```

```
    \@threecolLTRfootfmt{#1}%
  \color@endgroup}\m@mmf@prepare}
\bidi@ensure@newcommand{\@mpthreecolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@threecolRTLfootfmt{#1}%
  \color@endgroup}\m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@threecol@footgroup}[1]{%
\@namedef{@threecol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
 \hsize\bidi@columnwidth
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{footins#1}}{\thr@@}{\splittopskip}}}}
\newcommand{\bidi@make@threecol@LTRfootgroup}[1]{%
\@namedef{@threecol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
 \hsize\bidi@columnwidth
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{footins#1}}{\thr@@}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mpthreecol@footgroup}[1]{%
\@namedef{@mpthreecol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{\thr@@}{\splittopskip}}}}
\newcommand{\bidi@make@mpthreecol@LTRfootgroup}[1]{%
\@namedef{@mpthreecol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{\thr@@}{\splittopskip}}}}
\bidi@ensure@newcommand{\fourcolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@fourcolfootnotetext
  \let\@LTRfootnotetext\@fourcolLTRfootnotetext
  \let\@RTLfootnotetext\@fourcolRTLfootnotetext
  \dimen\footinsv@r=4\footinsdim
  \count\footinsv@r=250\relax
  \m@make@fourcol@footgroup{v@r}%
  \let\@footgroupv@r\@fourcol@footgroupv@r
  \dimen\footinsv@l=4\footinsdim
  \count\footinsv@l=250\relax
  \bidi@make@fourcol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@fourcol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mpfourcolfootnotetext
  \let\@mpLTRfootnotetext\@mpfourcolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpfourcolRTLfootnotetext
```

```
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mpfourcol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mpfourcol@footgroupv@r
  \bidi@make@mpfourcol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mpfourcol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@fourcolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fourcolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@fourcolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fourcolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@fourcolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fourcolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@preamfourfmt}{%
  \hsize .25\hsize
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@fourcolfootfmt}[1]{%
  \@preamfourfmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@fourcolLTRfootfmt}[1]{%
  \@preamfourfmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
```

```
\bidi@ensure@newcommand{\@fourcolRTLfootfmt}[1]{%
  \@preamfourfmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mpfourcolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fourcolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpfourcolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fourcolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpfourcolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fourcolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@fourcol@footgroup}[1]{%
```

```
  \@namedef{@fourcol@footgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \m@mrigidbalance{\@nameuse{footins#1}}{4}{\splittopskip}}}}
\newcommand{\bidi@make@fourcol@LTRfootgroup}[1]{%
  \@namedef{@fourcol@LTRfootgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \bidi@LTRrigidbalance{\@nameuse{footins#1}}{4}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mpfourcol@footgroup}[1]{%
\@namedef{@mpfourcol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{4}{\splittopskip}}}}
\newcommand{\bidi@make@mpfourcol@LTRfootgroup}[1]{%
\@namedef{@mpfourcol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{4}{\splittopskip}}}}
\bidi@ensure@newcommand{\fivecolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@fivecolfootnotetext
  \let\@LTRfootnotetext\@fivecolLTRfootnotetext
  \let\@RTLfootnotetext\@fivecolRTLfootnotetext
  \dimen\footinsv@r=5\footinsdim
  \count\footinsv@r=200\relax
  \m@make@fivecol@footgroup{v@r}%
  \let\@footgroupv@r\@fivecol@footgroupv@r
  \dimen\footinsv@l=5\footinsdim
  \count\footinsv@l=200\relax
  \bidi@make@fivecol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@fivecol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mpfivecolfootnotetext
  \let\@mpLTRfootnotetext\@mpfivecolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpfivecolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mpfivecol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mpfivecol@footgroupv@r
  \bidi@make@mpfivecol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mpfivecol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@fivecolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
```

```
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fivecolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@fivecolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fivecolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@fivecolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fivecolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@preamfivefmt}{%
  \hsize .2\hsize
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@fivecolfootfmt}[1]{%
  \@preamfivefmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@fivecolLTRfootfmt}[1]{%
  \@preamfivefmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@fivecolRTLfootfmt}[1]{%
  \@preamfivefmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mpfivecolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
```

```
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fivecolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpfivecolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fivecolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpfivecolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@fivecolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@fivecol@footgroup}[1]{%
  \@namedef{@fivecol@footgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \m@mrigidbalance{\@nameuse{footins#1}}{5}{\splittopskip}}}}
\newcommand{\bidi@make@fivecol@LTRfootgroup}[1]{%
  \@namedef{@fivecol@LTRfootgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \bidi@LTRrigidbalance{\@nameuse{footins#1}}{5}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mpfivecol@footgroup}[1]{%
\@namedef{@mpfivecol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
```

```
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{5}{\splittopskip}}}}
\newcommand{\bidi@make@mpfivecol@LTRfootgroup}[1]{%
\@namedef{@mpfivecol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{5}{\splittopskip}}}}
\bidi@ensure@newcommand{\sixcolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@sixcolfootnotetext
  \let\@LTRfootnotetext\@sixcolLTRfootnotetext
  \let\@RTLfootnotetext\@sixcolRTLfootnotetext
  \dimen\footinsv@r=6\footinsdim
  \count\footinsv@r=166\relax
  \m@make@sixcol@footgroup{v@r}%
  \let\@footgroupv@r\@sixcol@footgroupv@r
  \dimen\footinsv@l=6\footinsdim
  \count\footinsv@l=166\relax
  \bidi@make@sixcol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@sixcol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mpsixcolfootnotetext
  \let\@mpLTRfootnotetext\@mpsixcolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpsixcolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mpsixcol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mpsixcol@footgroupv@r
  \bidi@make@mpsixcol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mpsixcol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@sixcolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sixcolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@sixcolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
```

```
    \@sixcolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@sixcolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sixcolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@preamsixfmt}{%
  \hsize .16\hsize
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@sixcolfootfmt}[1]{%
  \@preamsixfmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@sixcolLTRfootfmt}[1]{%
  \@preamsixfmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@sixcolRTLfootfmt}[1]{%
  \@preamsixfmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mpsixcolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sixcolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpsixcolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
```

```
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sixcolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpsixcolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sixcolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@sixcol@footgroup}[1]{%
  \@namedef{@sixcol@footgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \m@mrigidbalance{\@nameuse{footins#1}}{6}{\splittopskip}}}}
\newcommand{\bidi@make@sixcol@LTRfootgroup}[1]{%
  \@namedef{@sixcol@LTRfootgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \bidi@LTRrigidbalance{\@nameuse{footins#1}}{6}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mpsixcol@footgroup}[1]{%
\@namedef{@mpsixcol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{6}{\splittopskip}}}}
\newcommand{\bidi@make@mpsixcol@LTRfootgroup}[1]{%
\@namedef{@mpsixcol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{6}{\splittopskip}}}}
\bidi@ensure@newcommand{\sevencolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@sevencolfootnotetext
  \let\@LTRfootnotetext\@sevencolLTRfootnotetext
  \let\@RTLfootnotetext\@sevencolRTLfootnotetext
  \dimen\footinsv@r=7\footinsdim
  \count\footinsv@r=142\relax
```

```
  \m@make@sevencol@footgroup{v@r}%
  \let\@footgroupv@r\@sevencol@footgroupv@r
  \dimen\footinsv@l=7\footinsdim
  \count\footinsv@l=142\relax
  \bidi@make@sevencol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@sevencol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mpsevencolfootnotetext
  \let\@mpLTRfootnotetext\@mpsevencolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpsevencolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mpsevencol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mpsevencol@footgroupv@r
  \bidi@make@mpsevencol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mpsevencol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@sevencolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sevencolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@sevencolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sevencolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@sevencolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sevencolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@preamsevenfmt}{%
  \hsize .142\hsize
```

```
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@sevencolfootfmt}[1]{%
  \@preamsevenfmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@sevencolLTRfootfmt}[1]{%
  \@preamsevenfmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@sevencolRTLfootfmt}[1]{%
  \@preamsevenfmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mpsevencolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
     \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sevencolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpsevencolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sevencolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpsevencolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
```

```
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@sevencolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@sevencol@footgroup}[1]{%
  \@namedef{@sevencol@footgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \m@mrigidbalance{\@nameuse{footins#1}}{7}{\splittopskip}}}}
\newcommand{\bidi@make@sevencol@LTRfootgroup}[1]{%
  \@namedef{@sevencol@LTRfootgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \bidi@LTRrigidbalance{\@nameuse{footins#1}}{7}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mpsevencol@footgroup}[1]{%
\@namedef{@mpsevencol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{7}{\splittopskip}}}
\newcommand{\bidi@make@mpsevencol@LTRfootgroup}[1]{%
\@namedef{@mpsevencol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{7}{\splittopskip}}}
\bidi@ensure@newcommand{\eightcolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@eightcolfootnotetext
  \let\@LTRfootnotetext\@eightcolLTRfootnotetext
  \let\@RTLfootnotetext\@eightcolRTLfootnotetext
  \dimen\footinsv@r=8\footinsdim
  \count\footinsv@r=125\relax
  \m@make@eightcol@footgroup{v@r}%
  \let\@footgroupv@r\@eightcol@footgroupv@r
  \dimen\footinsv@l=8\footinsdim
  \count\footinsv@l=125\relax
  \bidi@make@eightcol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@eightcol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mpeightcolfootnotetext
  \let\@mpLTRfootnotetext\@mpeightcolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpeightcolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mpeightcol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mpeightcol@footgroupv@r
  \bidi@make@mpeightcol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mpeightcol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
```

```
}
\bidi@ensure@newcommand{\@eightcolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@eightcolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@eightcolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@eightcolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@eightcolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@eightcolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@preameightfmt}{%
  \hsize .125\hsize
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@eightcolfootfmt}[1]{%
  \@preameightfmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@eightcolLTRfootfmt}[1]{%
  \@preameightfmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@eightcolRTLfootfmt}[1]{%
  \@preameightfmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mpeightcolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
```

```
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@eightcolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpeightcolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@eightcolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpeightcolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@eightcolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@eightcol@footgroup}[1]{%
  \@namedef{@eightcol@footgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \m@mrigidbalance{\@nameuse{footins#1}}{8}{\splittopskip}}}}
\newcommand{\bidi@make@eightcol@LTRfootgroup}[1]{%
```

```
  \@namedef{@eightcol@LTRfootgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \bidi@LTRrigidbalance{\@nameuse{footins#1}}{8}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mpeightcol@footgroup}[1]{%
\@namedef{@mpeightcol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{8}{\splittopskip}}}}
\newcommand{\bidi@make@mpeightcol@LTRfootgroup}[1]{%
\@namedef{@mpeightcol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{8}{\splittopskip}}}}
\bidi@ensure@newcommand{\ninecolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@ninecolfootnotetext
  \let\@LTRfootnotetext\@ninecolLTRfootnotetext
  \let\@RTLfootnotetext\@ninecolRTLfootnotetext
  \dimen\footinsv@r=9\footinsdim
  \count\footinsv@r=111\relax
  \m@make@ninecol@footgroup{v@r}%
  \let\@footgroupv@r\@ninecol@footgroupv@r
  \dimen\footinsv@l=9\footinsdim
  \count\footinsv@l=111\relax
  \bidi@make@ninecol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@ninecol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mpninecolfootnotetext
  \let\@mpLTRfootnotetext\@mpninecolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpninecolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mpninecol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mpninecol@footgroupv@r
  \bidi@make@mpninecol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mpninecol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@ninecolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@ninecolfootfmt{#1}%
```

```
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@ninecolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@ninecolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@ninecolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@ninecolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@preamninefmt}{%
  \hsize .1\hsize
  \parindent=\z@
  \tolerance=5000\relax
  \leavevmode}
\bidi@ensure@newcommand{\@ninecolfootfmt}[1]{%
  \@preamninefmt
  {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@ninecolLTRfootfmt}[1]{%
  \@preamninefmt
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@ninecolRTLfootfmt}[1]{%
  \@preamninefmt
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
\bidi@ensure@newcommand{\@mpninecolfootnotetext}[1]{%
  \global\setbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
```

```
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@ninecolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpninecolLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
    \unvbox\@mpfootinsv@l
    \@RTLfalse
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@ninecolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@mpninecolRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
    \unvbox\@mpfootinsv@r
    \@RTLtrue
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
    \@ninecolRTLfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@ninecol@footgroup}[1]{%
  \@namedef{@ninecol@footgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \m@mrigidbalance{\@nameuse{footins#1}}{9}{\splittopskip}}}}
\newcommand{\bidi@make@ninecol@LTRfootgroup}[1]{%
  \@namedef{@ninecol@LTRfootgroup#1}{{%
   \def\baselinestretch{\m@m@footnote@spacing}%
   \hsize\bidi@columnwidth
    \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
     \bidi@LTRrigidbalance{\@nameuse{footins#1}}{9}{\splittopskip}}}}
\bidi@ensure@newcommand{\m@make@mpninecol@footgroup}[1]{%
\@namedef{@mpninecol@footgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \m@mrigidbalance{\@nameuse{@mpfootins#1}}{9}{\splittopskip}}}
\newcommand{\bidi@make@mpninecol@LTRfootgroup}[1]{%
\@namedef{@mpninecol@LTRfootgroup#1}{{%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
  \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{9}{\splittopskip}}}}
```

```
\bidi@ensure@newcommand{\tencolumnfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@tencolfootnotetext
  \let\@LTRfootnotetext\@tencolLTRfootnotetext
  \let\@RTLfootnotetext\@tencolRTLfootnotetext
  \dimen\footinsv@r=10\footinsdim
  \count\footinsv@r=100\relax
  \m@make@tencol@footgroup{v@r}%
  \let\@footgroupv@r\@tencol@footgroupv@r
  \dimen\footinsv@l=10\footinsdim
  \count\footinsv@l=100\relax
  \bidi@make@tencol@LTRfootgroup{v@l}%
  \let\@LTRfootgroupv@l\@tencol@LTRfootgroupv@l
  \let\@mpfootnotetext\@mptencolfootnotetext
  \let\@mpLTRfootnotetext\@mptencolLTRfootnotetext
  \let\@mpRTLfootnotetext\@mptencolRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mptencol@footgroup{v@r}%
  \let\mp@footgroupv@r\@mptencol@footgroupv@r
  \bidi@make@mptencol@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mptencol@LTRfootgroupv@l
  \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@tencolfootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
{\if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@tencolfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@tencolLTRfootnotetext}[1]{\insert\footinsv@l{\@RTLfalse%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \color@begingroup
    \@tencolLTRfootfmt{#1}%
  \color@endgroup}%
  \m@mmf@prepare}
\bidi@ensure@newcommand{\@tencolRTLfootnotetext}[1]{\insert\footinsv@r{\@RTLtrue%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
```

```
13297   \@preamfntext
13298   \protected@edef\@currentlabel{%
13299     \csname p@footnote\endcsname\@thefnmark}%
13300   \color@begingroup
13301     \@tencolRTLfootfmt{#1}%
13302   \color@endgroup}%
13303   \m@mmf@prepare}
13304 \bidi@ensure@newcommand{\@preamtenfmt}{%
13305   \hsize .1\hsize
13306   \parindent=\z@
13307   \tolerance=5000\relax
13308   \leavevmode}
13309 \bidi@ensure@newcommand{\@tencolfootfmt}[1]{%
13310   \@preamtenfmt
13311   {\footfootmark\strut {\foottextfont #1}\strut\par}\allowbreak}
13312 \bidi@ensure@newcommand{\@tencolLTRfootfmt}[1]{%
13313   \@preamtenfmt
13314   {\LTRfootfootmark\strut {\LTRfoottextfont #1}\strut\par}\allowbreak}
13315 \bidi@ensure@newcommand{\@tencolRTLfootfmt}[1]{%
13316   \@preamtenfmt
13317   {\RTLfootfootmark\strut {\RTLfoottextfont #1}\strut\par}\allowbreak}
13318 \bidi@ensure@newcommand{\@mptencolfootnotetext}[1]{%
13319   \global\setbox
13320     \if@RTL@footnote
13321     \@mpfootinsv@r
13322   \else
13323     \@mpfootinsv@l
13324   \fi
13325   \vbox{%
13326     \unvbox
13327     \if@RTL@footnote
13328     \@mpfootinsv@r
13329   \else
13330     \@mpfootinsv@l
13331   \fi
13332     \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
13333     \def\baselinestretch{\m@m@footnote@spacing}%
13334     \reset@font\foottextfont
13335     \hsize\columnwidth \@parboxrestore
13336     \protected@edef\@currentlabel{%
13337       \csname p@mpfootnote\endcsname\@thefnmark}%
13338   \color@begingroup
13339     \@tencolfootfmt{#1}%
13340   \color@endgroup}%
13341   \m@mmf@prepare}
13342 \bidi@ensure@newcommand{\@mptencolLTRfootnotetext}[1]{%
13343   \global\setbox\@mpfootinsv@l\vbox{%
13344     \unvbox\@mpfootinsv@l
13345     \@RTLfalse
13346     \def\baselinestretch{\m@m@footnote@spacing}%
13347     \reset@font\LTRfoottextfont
13348     \hsize\columnwidth \@parboxrestore
13349     \protected@edef\@currentlabel{%
13350       \csname p@mpfootnote\endcsname\@thefnmark}%
```

```
13351   \color@begingroup
13352     \@tencolLTRfootfmt{#1}%
13353   \color@endgroup}%
13354   \m@mmf@prepare}
13355 \bidi@ensure@newcommand{\@mptencolRTLfootnotetext}[1]{%
13356   \global\setbox\@mpfootinsv@r\vbox{%
13357     \unvbox\@mpfootinsv@r
13358     \@RTLtrue
13359     \def\baselinestretch{\m@m@footnote@spacing}%
13360     \reset@font\RTLfoottextfont
13361     \hsize\columnwidth \@parboxrestore
13362     \protected@edef\@currentlabel{%
13363       \csname p@mpfootnote\endcsname\@thefnmark}%
13364   \color@begingroup
13365     \@tencolRTLfootfmt{#1}%
13366   \color@endgroup}%
13367   \m@mmf@prepare}
13368 \bidi@ensure@newcommand{\m@make@tencol@footgroup}[1]{%
13369   \@namedef{@tencol@footgroup#1}{{%
13370    \def\baselinestretch{\m@m@footnote@spacing}%
13371    \hsize\bidi@columnwidth
13372     \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
13373      \m@mrigidbalance{\@nameuse{footins#1}}{10}{\splittopskip}}}}
13374 \newcommand{\bidi@make@tencol@LTRfootgroup}[1]{%
13375   \@namedef{@tencol@LTRfootgroup#1}{{%
13376    \def\baselinestretch{\m@m@footnote@spacing}%
13377    \hsize\bidi@columnwidth
13378     \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
13379      \bidi@LTRrigidbalance{\@nameuse{footins#1}}{10}{\splittopskip}}}}
13380 \bidi@ensure@newcommand{\m@make@mptencol@footgroup}[1]{%
13381 \@namedef{@mptencol@footgroup#1}{{%
13382  \def\baselinestretch{\m@m@footnote@spacing}%
13383   \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
13384   \m@mrigidbalance{\@nameuse{@mpfootins#1}}{10}{\splittopskip}}}}
13385 \newcommand{\bidi@make@mptencol@LTRfootgroup}[1]{%
13386 \@namedef{@mptencol@LTRfootgroup#1}{{%
13387  \def\baselinestretch{\m@m@footnote@spacing}%
13388   \@nameuse{foottextfont#1} \splittopskip=\ht\strutbox
13389   \bidi@LTRrigidbalance{\@nameuse{@mpfootins#1}}{10}{\splittopskip}}}}
13390 \bidi@ensure@newcommand{\m@munvxh}[1]{%
13391   \setbox0=\vbox{\unvbox#1%
13392     \global\setbox1=\lastbox}%
13393   \unhbox1
13394   \unskip
13395   \unskip
13396   \unpenalty
13397   \hskip\m@mipn@skip}
13398 \bidi@ensure@newcommand{\m@mungebox}{%
13399   \setbox0=\hbox{\m@munvxh0}%
13400   \dp0=\z@
13401   \ht0=\footfudgefactor\wd0
13402   \box0
13403   \penalty0}
13404 \newskip\m@mipn@skip
```

```
\bidi@ensure@newcommand*{\m@minterparanoteglue}[1]{%
  {\foottextfont\global\m@mipn@skip=#1\relax}}
\m@minterparanoteglue{1em plus.3em minus.3em}
\bidi@ensure@newcommand*{\m@mmakehboxofhboxes}{%
 \setbox0=\hbox{}%
  \loop
    \unpenalty
    \setbox2=\lastbox
  \ifhbox2
    \setbox0=\hbox{\box2\unhbox0}
  \repeat}
\bidi@ensure@newcommand*{\m@mremovehboxes}{\setbox0=\lastbox
  \ifhbox0{\m@mremovehboxes}\unhbox0 \fi}
\newcommand*\AddExtraParaSkip[1]{%
    \def\bidi@xparaskip{\advance\@tempdima#1\relax}%
}
\let\bidi@xparaskip\relax
\@onlypreamble\AddExtraParaSkip
\@onlypreamble\bidi@xparaskip
\def\bidi@startparafootskip#1{%
  \global\advance\skip#1\bidi@paraskip
}
\@onlypreamble\bidi@startparafootskip
\bidi@ensure@newcommand{\paragraphfootnotes}{%
  \@namedef{foottextfontv@r}{\foottextfont}%  % [RS]
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \let\@footnotetext\@parafootnotetext
  \let\@LTRfootnotetext\@paraLTRfootnotetext
  \let\@RTLfootnotetext\@paraRTLfootnotetext
  \dimen\footinsv@r=\footinsdim
  \count\footinsv@r=1000\relax
  \let\bidi@removexfootskip\bidi@removexparafootskip
  \m@make@para@footgroup{v@r}%
  \m@make@para@footstart{v@r}%
  \let\@footgroupv@r\@para@footgroupv@r
  \let\@footstartv@r\@para@footstartv@r
  \dimen\footinsv@l=\footinsdim
  \count\footinsv@l=1000\relax
  \bidi@make@para@LTRfootgroup{v@l}%
  \m@make@para@footstart{v@l}%
  \let\@LTRfootgroupv@l\@para@LTRfootgroupv@l
  \let\@footstartv@l\@para@footstartv@l
  \let\@mpfootnotetext\@mpparafootnotetext
  \let\@mpLTRfootnotetext\@mpparaLTRfootnotetext
  \let\@mpRTLfootnotetext\@mpparaRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \m@make@mppara@footgroup{v@r}%
  \bidi@make@mppara@LTRfootgroup{v@l}%
  \let\mp@footgroupv@r\@mppara@footgroupv@r
  \let\mp@LTRfootgroupv@l\@mppara@LTRfootgroupv@l
  \g@addto@macro\bidi@floathook{%
    \begingroup
      \foottextfont \@tempdima\normalbaselineskip
```

```
      \multiply \@tempdima \@cclvi
      \@tempdimb \columnwidth
      \divide \@tempdimb \@cclvi
      \divide \@tempdima \@tempdimb
      \xdef\footfudgefactor{\strip@pt\@tempdima}%
    \endgroup
  }
  \AtBeginDocument{%
    \begingroup
      \foottextfont
      \@tempdima\footnotesep
      \advance\@tempdima -\ht\strutbox
      \ifdim\@tempdima<\z@ \@tempdima\z@ \fi
      \advance\@tempdima.5\normalbaselineskip
      \bidi@xparaskip
      \xdef\bidi@paraskip{\the\@tempdima\relax}%
    \endgroup
    \bidi@startparafootskip\footinsv@r
    \bidi@startparafootskip\footinsv@l
  }
   \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\newcommand{\normalRTLparaLTRfootnotes}{%
  \@namedef{foottextfontv@l}{\LTRfoottextfont}%
  \@bidi@before@Hy@hyperfootnotes
  \if@RTL@footnote
    \let\@footnotetext\m@mold@footnotetext
  \else
    \let\@footnotetext\@parafootnotetext
  \fi
  \let\@LTRfootnotetext\@paraLTRfootnotetext
  \let\@RTLfootnotetext\m@mold@RTLfootnotetext
  \dimen\footinsv@l=\footinsdim
  \count\footinsv@l=1000\relax
  \let\bidi@removexfootskip\bidi@removexparafootskip
  \bidi@make@para@LTRfootgroup{v@l}%
  \m@make@para@footstart{v@l}%
  \let\@LTRfootgroupv@l\@para@LTRfootgroupv@l
  \let\@footstartv@l\@para@footstartv@l
  \if@RTL@footnote
    \let\@mpfootnotetext\m@mold@mpfootnotetext
  \else
    \let\@mpfootnotetext\@mpparafootnotetext
  \fi
  \let\@mpLTRfootnotetext\@mpparaLTRfootnotetext
  \let\@mpRTLfootnotetext\m@mold@mpRTLfootnotetext
  \@bidi@after@Hy@hyperfootnotes
  \bidi@make@mppara@LTRfootgroup{v@l}%
  \let\mp@LTRfootgroupv@l\@mppara@LTRfootgroupv@l
  \g@addto@macro\bidi@floathook{%
    \begingroup
      \LTRfoottextfont \@tempdima\normalbaselineskip
      \multiply \@tempdima \@cclvi
      \@tempdimb \columnwidth
```

```
      \divide \@tempdimb \@cclvi
      \divide \@tempdima \@tempdimb
      \xdef\footfudgefactor{\strip@pt\@tempdima}%
    \endgroup
  }
  \AtBeginDocument{%
    \begingroup
      \LTRfoottextfont
      \@tempdima\footnotesep
      \advance\@tempdima -\ht\strutbox
      \ifdim\@tempdima<\z@ \@tempdima\z@ \fi
      \advance\@tempdima.5\normalbaselineskip
      \bidi@xparaskip
      \xdef\bidi@paraskip{\the\@tempdima\relax}%
    \endgroup
    \bidi@startparafootskip\footinsv@l
  }
   \@ifstar\bidi@star@footmarkwidth\bidi@normal@footmarkwidth
}
\bidi@ensure@newcommand{\@parafootnotetext}[1]{\insert
  \if@RTL@footnote
    \footinsv@r
  \else
    \footinsv@l
  \fi
  {%
  \let\bidi@RTL@everypar\@empty%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\foottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \setbox0=\vbox{\hsize=\maxdimen
    \color@begingroup
      \noindent \@parafootfmt{#1}%
    \color@endgroup}%
  \m@mungebox}\m@mmf@prepare}
\bidi@ensure@newcommand{\@paraLTRfootnotetext}[1]{\insert\footinsv@l{%
 \let\bidi@RTL@everypar\@empty%
 \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\LTRfoottextfont
  \@preamfntext
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \setbox0=\vbox{\hsize=\maxdimen
    \color@begingroup
      \noindent \@paraLTRfootfmt{#1}%
    \color@endgroup}%
  \m@mungebox}\m@mmf@prepare}
\bidi@ensure@newcommand{\@paraRTLfootnotetext}[1]{\insert\footinsv@r{%
  \let\bidi@RTL@everypar\@empty%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \reset@font\RTLfoottextfont
  \@preamfntext
```

```
  \protected@edef\@currentlabel{%
    \csname p@footnote\endcsname\@thefnmark}%
  \setbox0=\vbox{\hsize=\maxdimen
    \color@begingroup
      \noindent \@paraRTLfootfmt{#1}%
    \color@endgroup}%
  \m@mungebox}\m@mmf@prepare}
\bidi@ensure@newcommand{\@parafootfmt}[1]{%
  \parindent=\z@
  \parfillskip=0pt \@plus 1fil
  {\footfootmark\strut {\foottextfont #1}\penalty-10}}
\bidi@ensure@newcommand{\@paraLTRfootfmt}[1]{%
  \parindent=\z@
  \parfillskip=0pt \@plus 1fil
  {\LTRfootfootmark\strut {\LTRfoottextfont #1}\penalty-10}}
\bidi@ensure@newcommand{\@paraRTLfootfmt}[1]{%
  \parindent=\z@
  \parfillskip=0pt \@plus 1fil
  {\RTLfootfootmark\strut {\RTLfoottextfont #1}\penalty-10}}
\bidi@ensure@newcommand{\@mpparafootnotetext}[1]{%
  \global\setbox
  \if@RTL@footnote
    \@mpfootinsv@r
  \else
    \@mpfootinsv@l
  \fi
  \vbox{%
    \unvbox
    \if@RTL@footnote
      \@mpfootinsv@r
    \else
      \@mpfootinsv@l
    \fi
    \let\bidi@RTL@everypar\@empty
    \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\foottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
    \setbox0=\vbox{\hsize=\maxdimen
      \color@begingroup
      \noindent \@parafootfmt{#1}%
      \color@endgroup}%
  \m@mungebox}\m@mmf@prepare}
\bidi@ensure@newcommand{\@mpparaLTRfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@l\vbox{%
   \unvbox\@mpfootinsv@l
   \let\bidi@RTL@everypar\@empty
   \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\LTRfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
    \setbox0=\vbox{\hsize=\maxdimen
```

```
      \color@begingroup
      \noindent \@paraLTRfootfmt{#1}%
      \color@endgroup}%
  \m@mungebox}\m@mmf@prepare}
\bidi@ensure@newcommand{\@mpparaRTLfootnotetext}[1]{%
  \global\setbox\@mpfootinsv@r\vbox{%
  \unvbox\@mpfootinsv@r
   \let\bidi@RTL@everypar\@empty
   \def\baselinestretch{\m@m@footnote@spacing}%
    \reset@font\RTLfoottextfont
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
      \csname p@mpfootnote\endcsname\@thefnmark}%
    \setbox0=\vbox{\hsize=\maxdimen
      \color@begingroup
      \noindent \@paraRTLfootfmt{#1}%
      \color@endgroup}%
  \m@mungebox}\m@mmf@prepare}
\bidi@ensure@newcommand{\m@make@para@footgroup}[1]{%
\@namedef{@para@footgroup#1}{%
  \unvbox\@nameuse{footins#1}
  \@RTLtrue
  \m@mmakehboxofhboxes
  \setbox0=\hbox{\unhbox0 \m@mremovehboxes}%
  \hsize\bidi@columnwidth
  \@parboxrestore
  \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1}%
  \noindent\unhbox0\par}}
\bidi@ensure@newcommand{\bidi@make@para@LTRfootgroup}[1]{%
\@namedef{@para@LTRfootgroup#1}{%
  \unvbox\@nameuse{footins#1}
  \@RTLfalse
  \m@mmakehboxofhboxes
  \setbox0=\hbox{\unhbox0 \m@mremovehboxes}%
  \hsize\bidi@columnwidth
  \@parboxrestore
  \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1}%
  \noindent\unhbox0\par}}
\newcommand{\bidi@removexparafootskip}{%
  \advance\@tempskipa -\bidi@paraskip
  \edef\bidi@footskip{\vskip\the\@tempskipa\relax}%
}
\let\bidi@removexfootskip\relax
\bidi@ensure@newcommand{\m@make@mppara@footgroup}[1]{%
\@namedef{@mppara@footgroup#1}{%
  \unvbox\@nameuse{@mpfootins#1}
  \@RTLtrue
  \m@mmakehboxofhboxes
  \setbox0=\hbox{\unhbox0 \m@mremovehboxes}%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1}%
  \noindent\unhbox0\par}}
```

```
\bidi@ensure@newcommand{\bidi@make@mppara@LTRfootgroup}[1]{%
\@namedef{@mppara@LTRfootgroup#1}{%
  \unvbox\@nameuse{@mpfootins#1}
  \@RTLfalse
  \m@mmakehboxofhboxes
  \setbox0=\hbox{\unhbox0 \m@mremovehboxes}%
  \def\baselinestretch{\m@m@footnote@spacing}%
  \@nameuse{foottextfont#1}%
  \noindent\unhbox0\par}}
\bidi@ensure@newcommand{\m@make@para@footstart}[1]{%
\@namedef{@para@footstart#1}{%
  \leftskip=\z@
  \rightskip=\z@
  \parindent=\z@
  }%
}
\bidi@ensure@newcommand*{\m@m@makecolfloats}{%
  \xdef\@freelist{\@freelist\@midlist}%
  \global\let\@midlist\@empty
  \@combinefloats}
\bidi@ensure@newcommand*{\m@m@makecoltext}{%
  \ifvbox\@kludgeins
    \@makespecialcolbox
  \else
    \setbox\@outputbox \vbox to\@colht{%
      \@texttop
      \dimen@ \dp\@outputbox
      \unvbox \@outputbox
      \vskip -\dimen@
      \@textbottom}%
  \fi}
\bidi@ensure@newcommand*{\m@m@makecolintro}{}
\bidi@ensure@newcommand*{\m@mopfootnote}{\setbox\@outputbox \vbox{%
  \boxmaxdepth\@maxdepth
  \@tempdima\dp\@cclv
  \unvbox\@cclv
  \vskip-\@tempdima
  \bidi@mopfn@bottom
  \vskip \skip\footins
  \color@begingroup
    \normalcolor
    \footnoterule
    \unvbox \footins
  \color@endgroup
  }%
}
\newcommand*{\bidi@mopfootnotebf}{%
  \setbox\@outputbox \vbox{%
  \boxmaxdepth\@maxdepth
  \unvbox\@outputbox
  \bidi@mopfn@bottom
  \vskip\skip\footins
  \color@begingroup
    \normalcolor
```

```
    \footnoterule
    \unvbox \footins
  \color@endgroup
  }%
}
\gdef\mem@makecol{%
  \m@m@makecolintro
  \m@mdoextrafeet
  \ifvoid\footins
    \setbox\@outputbox \box\@cclv
  \else
    \m@mopfootnote
  \fi
  \m@m@makecolfloats
  \m@m@makecoltext
  \global \maxdepth \@maxdepth}
\gdef\bidi@makecolbf{%
  \m@m@makecolintro
  \m@mdoextrafeet
  \setbox\@outputbox \box\@cclv
  \m@m@makecolfloats
  \ifvoid\footins
  \else
    \bidi@mopfootnotebf
  \fi
  \m@m@makecoltext
  \global \maxdepth \@maxdepth}
\newcommand{\FeetAboveFloat}{\gdef\@makecol{\mem@makecol}}
\newcommand{\FeetBelowFloat}{\gdef\@makecol{\bidi@makecolbf}}
\newcommand\FeetAtBottom{\def\bidi@mopfn@bottom{\vfill\relax}}
\newcommand\FeetBelowRagged{\let\bidi@mopfn@bottom\relax}
\FeetAboveFloat
\FeetBelowRagged
\def\bidi@reinserts#1{\ifvoid#1\else
    \ifnum\count\@currbox>\z@
      \advance\@pageht \ht#1%
      \advance\@pageht \skip#1%
      \advance\@pageht \dp#1%
    \fi
    \insert#1{\unvbox#1}%
  \fi
}
\def\bidi@init@multi@footins#1{%
    \multiply\count#1\col@number
    \multiply\skip#1\col@number
}
\def\bidi@reinsert@footnotes#1{\ifvoid#1\else
          \insert#1{}\fi}
\AtBeginDocument{%
  \bidi@preto\@doclearpage\m@mdoextrafeet
  \g@addto@macro\@reinserts{%
    \bidi@reinserts\footinsv@r
    \bidi@reinserts\footinsv@l
  }
```

```
  \bidi@floathook
  \g@addto@macro\@floatplacement{%
    \bidi@ifmulticol{}{\bidi@floathook}%
  }%
  \if@bidi@csundef{multi@column@out}{%
    \@onlypreamble\bidi@init@multi@footins
    \let\bidi@ifmulticol\@secondoftwo
  }{%
    \bidi@preto\multi@column@out\m@mdoextrafeet
    \g@addto@macro\init@mult@footins{%
      \bidi@init@multi@footins\footinsv@r
      \bidi@init@multi@footins\footinsv@l
    }%
    \g@addto@macro\reinsert@footnotes{%
      \bidi@reinsert@footnotes\footinsv@r
      \bidi@reinsert@footnotes\footinsv@l
    }%
  }%
}
```

87 File extreport-xetex-bidi.def

```
\ProvidesFile{extreport-xetex-bidi.def}[2017/06/09 v0.3 bidi adaptations for extreport clas
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
       \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
       \nobreak
         \global\@nobreaktrue
         \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
  \fi}
\renewcommand*\l@chapter[2]{%
  \ifnum \c@tocdepth >\m@ne
    \addpenalty{-\@highpenalty}%
    \vskip 1.0em \@plus\p@
    \setlength\@tempdima{1.5em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      \leavevmode \bfseries
      \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
      \hskip -\if@RTL\rightskip\else\leftskip\fi
      #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
      \penalty\@highpenalty
    \endgroup
  \fi}
\def\@makechapterhead#1{%
```

```
13834   \vspace*{50\p@}%
13835   {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi \normalfont
13836     \ifnum \c@secnumdepth >\m@ne
13837         \huge\bfseries \@chapapp\space \thechapter
13838         \par\nobreak
13839         \vskip 20\p@
13840     \fi
13841     \interlinepenalty\@M
13842     \Huge \bfseries #1\par\nobreak
13843     \vskip 40\p@
13844   }}
13845 \def\@makeschapterhead#1{%
13846   \vspace*{50\p@}%
13847   {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi
13848     \normalfont
13849     \interlinepenalty\@M
13850     \Huge \bfseries  #1\par\nobreak
13851     \vskip 40\p@
13852   }}
13853 \renewcommand\left@footnoterule{%
13854   \kern-3\p@
13855   \hrule\@width.4\columnwidth
13856   \kern2.6\p@}
13857 \renewcommand\right@footnoterule{%
13858   \kern-3\p@
13859   \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
13860   \kern2.6\p@}
13861 \renewenvironment{thebibliography}[1]
13862      {\chapter*{\bibname
13863         \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}}%
13864       \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
13865       \bidi@@thebibliography@font@hook%
13866       \list{\@biblabel{\@arabic\c@enumiv}}%
13867            {\settowidth\labelwidth{\@biblabel{#1}}%
13868             \leftmargin\labelwidth
13869             \advance\leftmargin\labelsep
13870             \@openbib@code
13871             \usecounter{enumiv}%
13872             \let\p@enumiv\@empty
13873             \renewcommand\theenumiv{\@arabic\c@enumiv}}%
13874       \sloppy\clubpenalty4000\widowpenalty4000%
13875       \sfcode`\.\@m}
13876      {\def\@noitemerr
13877        {\@latex@warning{Empty `thebibliography' environment}}%
13878       \endlist}
13879   \if@titlepage
13880   \renewcommand\maketitle{\begin{titlepage}%
13881   \let\footnotesize\small
13882   \let\right@footnoterule\relax
13883   \let\left@footnoterule\relax
13884   \let\textwidth@footnoterule\relax
13885   \let \footnote \thanks
13886   \null\vfil
13887   \vskip 60\p@
```

```
  \begin{center}%
    {\LARGE \@title \par}%
    \vskip 3em%
    {\large
     \lineskip .75em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
      \vskip 1.5em%
    {\large \@date \par}%       % Set date in \large size.
  \end{center}\par
  \@thanks
  \vfil\null
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\else
\renewcommand\maketitle{\par
  \begingroup
    \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext##1{\parindent 1em\noindent
            \hb@xt@1.8em{%
                \hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@   % Prevents figures from going at top of page.
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
```

```
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
  \let \footnote \thanks
    {\LARGE \@title \par}%
    \vskip 1.5em%
    {\large
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi
\renewcommand\thesection      {\thechapter\@SepMark\@arabic\c@section}
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewcommand\theequation{%
  \ifnum \c@chapter>\z@ \thechapter\@SepMark\fi\@arabic\c@equation}
\renewcommand\thefigure{%
  \ifnum \c@chapter>\z@\thechapter\@SepMark\fi \@arabic\c@figure}
\renewcommand\thetable{%
  \ifnum \c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@table}
```

88 File fancybox-xetex-bidi.def

```
\ProvidesFile{fancybox-xetex-bidi.def}[2013/05/01 v0.1 bidi adaptations for fancybox packag
\def\fancy@@oval#1#2#3{%
  \boxmaxdepth \maxdimen
  \@ovttrue \@ovbtrue \@ovltrue \@ovrtrue
  \@tfor\@tempa :=#3\do{\csname @ov\@tempa false\endcsname}%
  \@ovxx#1\relax
  \advance\@ovxx-\@wholewidth
  \@ovyy#2\relax
  \advance\@ovyy-\@wholewidth
  \@tempdimb \ifdim \@ovyy >\@ovxx \@ovxx\else \@ovyy \fi
  \advance\@tempdimb-2\p@
  \ifdim\@tempdimb>\the@cornersize\relax
    \@tempdimb=\the@cornersize
  \fi
  \@getcirc\@tempdimb
```

```
  \@ovro\ht\@tempboxa \@ovri\dp\@tempboxa
  \@ovdx\@ovxx \advance\@ovdx-\@tempdima \divide\@ovdx \tw@
  \@ovdy\@ovyy \advance\@ovdy-\@tempdima \divide\@ovdy \tw@
  \@circlefnt
  \setbox\@tempboxa\hbox{\beginL%
    \if@ovr \@ovvert32\kern -\@tempdima \fi
    \if@ovl \kern \@ovxx \@ovvert01\kern -\@tempdima \kern -\@ovxx \fi
    \if@ovt \@ovhorz \kern -\@ovxx \fi
    \if@ovb \raise \@ovyy \@ovhorz \fi\endL}%
  \advance\@ovdx\@ovro
  \advance\@ovdy\@ovro
  \advance\@ovxx\@wholewidth
  \wd\@tempboxa=\@ovxx
  \dp\@tempboxa=\z@}
```

89 File fancyhdr-xetex-bidi.def

```
\ProvidesFile{fancyhdr-xetex-bidi.def}[2025/09/03 v1.0 bidi adaptations for fancyhdr packag

\let\f@nch@everypar\everypar

\def\f@nch@parbox@align@hl{\def\f@nch@align@@h{\bidi@raggedright}}
\def\f@nch@parbox@align@hr{\def\f@nch@align@@h{\bidi@raggedleft}}

```

90 File fix2col-xetex-bidi.def

```
\ProvidesFile{fix2col-xetex-bidi.def}[2017/05/06 v0.4 bidi adaptations for fix2col package
\def\RTL@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
    \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
\else  \global\@firstcolumntrue
\setbox\@outputbox \vbox {\hbox to\textwidth {%
\hskip \columnwidth
\hfil \vrule width\columnseprule \hfil
\hbox to\columnwidth {%
\bidi@firstcolumn@status@write%
\box\@leftcolumn \hss}%
\hskip -\textwidth
```

```
\hbox to\columnwidth{%
\bidi@lastcolumn@status@write%
\box\@outputbox \hss}%
\hskip \columnsep
\hskip \columnwidth }}%
\@combinedblfloats \@setmarks \@outputpage
\begingroup \@dblfloatplacement \@startdblcolumn
\@whilesw\if@fcolmade \fi
{\@outputpage \@startdblcolumn }\endgroup
\fi}
\def\LTR@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
    \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
  \else
    \global\@firstcolumntrue
    \setbox\@outputbox\vbox{%
     \hb@xt@\textwidth{%
        \hb@xt@\columnwidth{%
        \bidi@firstcolumn@status@write%
        \box\@leftcolumn \hss}%
        \hfil
        \vrule \@width\columnseprule
        \hfil
       \hb@xt@\columnwidth{%
       \bidi@lastcolumn@status@write%
       \box\@outputbox \hss}}}%
  \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi{\@outputpage\@startdblcolumn}%
    \endgroup
  \fi}
```

91 File fleqn-xetex-bidi.def

```
\ProvidesFile{fleqn-xetex-bidi.def}[2024/12/07 v0.2 bidi adaptations for fleqn tag for XeTe
```

```
\DeclareRobustCommand\[{\relax
                \ifmmode\@badmath
                \else
                  \begin{trivlist}%
                    \@beginparpenalty\predisplaypenalty
                    \@endparpenalty\postdisplaypenalty
                    \item[]\leavevmode
                    \hb@xt@\linewidth\bgroup \beginL$\m@th\displaystyle %$
                      \hskip\mathindent\bgroup
                \fi}
\DeclareRobustCommand\]{\relax
                \ifmmode
                      \egroup $\hfil% $
                    \endL\egroup
                  \end{trivlist}%
                \else \@badmath
                \fi}
\renewenvironment{equation}%
    {\@beginparpenalty\predisplaypenalty
     \@endparpenalty\postdisplaypenalty
     \refstepcounter{equation}%
     \trivlist \item[]\leavevmode
       \hb@xt@\linewidth\bgroup\beginL $\m@th% $
         \displaystyle
         \hskip\mathindent}%
        {$\hfil % $
         \displaywidth\linewidth\hbox{\@eqnnum}%
       \endL\egroup
     \endtrivlist}
```

92 File float-xetex-bidi.def

```
\ProvidesFile{float-xetex-bidi.def}[2013/04/04 v0.2 bidi adaptations for float package for
\renewcommand\floatc@plain[2]{\setbox\@tempboxa\hbox{{\@fs@cfont #1:} #2}%
  \ifdim\wd\@tempboxa>\hsize {\@fs@cfont #1:} #2\par
    \else\hbox to\hsize{\if@RTL\beginR\fi\hfil\box\@tempboxa\hfil\if@RTL\endR\fi}\fi}
\def\float@newx#1[#2]{\@ifundefined{c@#1}{\newcounter{#1}[#2]%
    \expandafter\edef\csname the#1\endcsname{%
      \expandafter\noexpand\csname
        the#2\endcsname\@SepMark\noexpand\arabic{#1}}}%
    {\PackageWarning{float}{Can't redefine counter variable for #1.}}}
```

93 File floatrow-xetex-bidi.def

```
\ProvidesFile{floatrow-xetex-bidi.def}[2025/01/03 v0.2 bidi adaptations for floatrow packag
\RequirePackage{color}
\renewcommand\flnew@within[1]{\@addtoreset{\FB@captype}{#1}%
  \expandafter\edef\csname the\FB@captype\endcsname{%
      \expandafter\noexpand\csname
        the#1\endcsname\@SepMark\noexpand\arabic{\FB@captype}}}
```

94 File flowfram-xetex-bidi.def

```
\ProvidesFile{flowfram-xetex-bidi.def}[2025/01/03 v0.6 bidi adaptations for flowfram packag
```

```
\def\@outputdblcol{%
\@nxtcol=\c@thisframe
\c@curpg=\c@page
\@g@tnextcol{\@nxtcol}%
\if@ff@nwpg % next flow frame starts on new page
  \global\@firstcolumntrue
  \@setcolbox\c@thisframe
  \if@specialpage
    \global\@specialpagefalse
    \@nameuse{ps@\@specialstyle}\relax
  \fi
  \if@twoside
    \ifodd\count\z@
      \let\@thehead\@oddhead
      \let\@thefoot\@oddfoot
    \else
      \let\@thehead\@evenhead
      \let\@thefoot\@evenfoot
    \fi
  \else
    \let\@thehead\@oddhead
    \let\@thefoot\@oddfoot
  \fi
  \@begindvi
  \@dodynamicthehead\@dodynamicthefoot
  \vbadness=\@M
  \setbox\@outputbox\vbox{\hbox to \textwidth{\@ff@do@allframes}}%
  \@combinedblfloats
  \@outputpage
\advance\c@curpg by -\c@page\relax
  \whiledo{\c@curpg>0}{\advance\c@curpg by -1\relax
  \setbox\@outputbox\vbox{\hbox to \textwidth{\@ff@do@allframes}}%
\@outputpage}
  \begingroup
    \@dblfloatplacement
    \@startdblcolumn
    \@whilesw \if@fcolmade \fi
       {\@outputpage \@startdblcolumn }\endgroup
  \@resetst@tics
  \@resetdyn@mics
\else % still on same page, save contents of box255
  \global\@firstcolumnfalse
  \@setcolbox\c@thisframe
\fi
\global\c@thisframe=\@nxtcol
\@setcol{\c@thisframe}\relax
\global\@colht\vsize
}
\def\@outputpage{%
\begingroup
  \let\protect\noexpand
  \@resetactivechars
  \global\let\@@if@newlist\if@newlist
  \global\@newlistfalse\@parboxrestore
```

```
  \global\let\bidi@BeforeOutputPageShipOut\@firstofone
  \bidi@beforeoutputpageshipouthook
  \shipout\vbox{\set@typeset@protect
    \aftergroup
    \endgroup
    \aftergroup
    \set@typeset@protect
    \reset@font\normalsize
    \bidi@font@@outputpage
    \normalsfcodes
    \let\label\@gobble
    \let\index\@gobble
    \let\glossary\@gobble
    \baselineskip\z@skip
    \lineskip\z@skip
    \lineskiplimit\z@
    \vskip\topmargin\moveright\@themargin
    \vbox{%
      \global\let\bidi@BeforeHeader\@firstofone
      \bidi@beforeheaderhook
      \vskip\headheight
      \vskip\headsep
      \global\let\bidi@BeforeOutputBoxOutputPage\@firstofone
      \bidi@beforeoutputboxoutputpagehook
      \box\@outputbox
      \global\let\bidi@AfterOutputBoxOutputPage\@firstofone
      \bidi@afteroutputboxoutputpagehook
    }}%
  \global\let\bidi@AfterOutputPageShipOut\@firstofone
  \bidi@afteroutputpageshipouthook
  \global\let\if@newlist\@@if@newlist
  \stepcounter{page}%
  \setcounter{displayedframe}{0}%
  \let\firstmark\botmark
  \global\let\bidi@AtEndOutputPage\@firstofone
  \bidi@atendoutputpagehook
  }


\newcommand*\bidi@s@tfftextcol{\ifthenelse{\equal{\ff@txtcol}{}}{}{%
\expandafter\bidicolor\ff@txtcol}}

\newcommand{\bidi@ff@box}[3]{{\@ffbackground{\vbox to#2
{\hb@xt@ #1{\hss{\bidi@s@tfftextcol #3}\hss}\vss\kern\z@}}}}


\renewcommand*{\@docolbox}[1]{%
\edef\ff@frametype{%
\csname @ff@frametype@\romannumeral#1\endcsname}%
\edef\ff@col{\csname @ff@col@\romannumeral#1\endcsname}%
\edef\ff@txtcol{\csname @ff@txtcol@\romannumeral#1\endcsname}%
\edef\ff@backcol{\csname @ff@backcol@\romannumeral#1\endcsname}%
\@ff@setoffset{#1}%
\rotateframe{\csname @ff@angle@\romannumeral#1\endcsname}{%
```

```
\ifthenelse{\boolean{columnframe\romannumeral#1}}{%
\@ff@fbox{\csname colwidth\romannumeral#1\endcsname}%
{\csname colheight\romannumeral#1\endcsname}{%
\expandafter\box\csname column\romannumeral#1\endcsname}{%
\csname\ff@frametype\endcsname}%
}{%
\bidi@ff@box{\csname colwidth\romannumeral#1\endcsname}%
{\csname colheight\romannumeral#1\endcsname}{%
\expandafter\box\csname column\romannumeral#1\endcsname}%
}}}
\IfClassLoadedT{book}{%
\renewcommand\theequation
  {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@equation}
\renewcommand \thefigure
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@figure}
\renewcommand \thetable
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@table}
\renewcommand \thechapter {\@arabic\c@chapter}
\renewcommand \thesection {\thechapter\@SepMark\@arabic\c@section}
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}}
\IfClassLoadedT{report}{%
\renewcommand\theequation
  {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@equation}
\renewcommand \thefigure
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@figure}
\renewcommand \thetable
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@table}
\renewcommand \thechapter {\@arabic\c@chapter}
\renewcommand \thesection {\thechapter\@SepMark\@arabic\c@section}
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}}
\renewcommand{\rotateframe}[2]{\if@ttb@rotate
\rotatebox{#1}{\if@RTL\beginL\fi#2\if@RTL\endL\fi}%
\else
#2\relax
\fi}
```

95 File fnpct-xetex-bidi.def

```
\ProvidesFile{fnpct-xetex-bidi.def}[2025/09/12 v0.2 bidi adaptations for fnpct package for
\ExplSyntaxOn
    \@ifclassloaded{beamer}
      {
        \AdaptNote \footnote{d<>o+m} [\beamer@mpfn]
          {
            \IfNoValueTF{#1}
              {\IfNoValueTF{#2}{#NOTE{#3}}{#NOTE[#2]{#3}}}
              {\IfNoValueTF{#2}{#NOTE<#1>{#3}}{#NOTE<#1>[#2]{#3}}}
          }
```

```
        \AdaptNote \RTLfootnote{d<>o+m} [\beamer@mpfn]
          {
            \IfNoValueTF{#1}
              {\IfNoValueTF{#2}{#NOTE{#3}}{#NOTE[#2]{#3}}}
              {\IfNoValueTF{#2}{#NOTE<#1>{#3}}{#NOTE<#1>[#2]{#3}}}
          }
        \AdaptNote \LTRfootnote{d<>o+m} [\beamer@mpfn]
          {
            \IfNoValueTF{#1}
              {\IfNoValueTF{#2}{#NOTE{#3}}{#NOTE[#2]{#3}}}
              {\IfNoValueTF{#2}{#NOTE<#1>{#3}}{#NOTE<#1>[#2]{#3}}}
          }
      }
      {
        \AdaptNote  \RTLfootnote {o+m} [\@mpfn]
          { \IfNoValueTF {#1} {#NOTE{#2}} {#NOTE[#1]{#2}} }
        \AdaptNote  \LTRfootnote {o+m} [\@mpfn]
          { \IfNoValueTF {#1} {#NOTE{#2}} {#NOTE[#1]{#2}} }
      }
\ExplSyntaxOff
```

96 File footnote-xetex-bidi.def

```
\ProvidesFile{footnote-xetex-bidi.def}[2025/09/20 v1.4 bidi footnote macros for XeTeX engin
\if@RTLmain\@RTL@footnotetrue\else\@RTL@footnotefalse\fi
\newif\ifbidi@autofootnoterule
\def\bidi@mpfootnoterule{\footnoterule}
\newcounter{footdir@label}
\renewcommand*{\thefootdir@label}{footdir@\the\value{footdir@label}}
\newcommand*{\footdir@write}{%
  \stepcounter{footdir@label}%
  \zref@labelbyprops{\thefootdir@label}{abspage}%
}
\newcommand*{\debugfootnotedirection}{\footdir@debugtrue}
\newtoks\footdir@toks
\newcommand*{\footdir@debug}[1]{%
  \iffootdir@debug
    \typeout{[footdir] #1}%
  \fi
}
%\@ifpackagelater{zref-abspage}{2012/10/27}{%
%  \newcommand*{\footdir@LeftRightElse}{%
%    \ltx@ifundefined{footdir@\the\value{zabspage}}{%
%      \footdir@debug{abspage \the\value{zabspage}: else}%
%      \ltx@thirdofthree
%    }{%
%      \if\csname footdir@\the\value{zabspage}\endcsname L%
%        \footdir@debug{abspage \the\value{zabspage}: left}%
%        \expandafter\ltx@firstofthree
%      \else
%        \footdir@debug{abspage \the\value{zabspage}: right}%
%        \expandafter\ltx@secondofthree
%      \fi
%    }%
```

```
%  }%
%}{%
  \providecommand*{\c@zabspage}{\c@abspage}%
  \newcommand*{\footdir@LeftRightElse}{%
    \footdir@write
    \zifrefundefined{\thefootdir@label}{%
      \footdir@debug{abspage ??: else}%
      \ltx@thirdofthree
    }{%
      \edef\footdir@abspage{%
        \zref@extractdefault{\thefootdir@label}{abspage}{0}%
      }%
      \ltx@ifundefined{footdir@\footdir@abspage}{%
        \footdir@debug{\footdir@abspage: else}%
        \ltx@thirdofthree
      }{%
        \if\csname footdir@\footdir@abspage\endcsname L%
          \footdir@debug{\footdir@abspage: left}%
          \expandafter\ltx@firstofthree
        \else
          \footdir@debug{\footdir@abspage: right}%
          \expandafter\ltx@secondofthree
        \fi
      }%
    }%
  }%
%}
\newcommand*{\footdir@fntext}[1]{%
  \zifrefundefined{\thefootdir@label}{%
  }{%
    \edef\footdir@name{%
      footdir@\zref@extractdefault{\thefootdir@label}{abspage}{0}%
    }%
    \@ifundefined{\footdir@name}{%
      \expandafter\gdef\csname\footdir@name\endcsname{#1}%
    }{}%
  }%
}

\newcommand*{\footdir@temp}[3]{%
  \@ifdefinable{#1}{%
    \let#1#2%
    \renewcommand{#2}[1]{%
      \footdir@write
      \footdir@fntext{#3}%
      \stepcounter{footdir@label}%
      \footdir@fntext{#3}%
      \footdir@toks{##1}%
      \footdir@toks\expandafter{%
        \the\expandafter\footdir@toks
        \expandafter
        \zref@labelbyprops\expandafter{\thefootdir@label}{abspage}%
      }%
      \expandafter#1\expandafter{\the\footdir@toks}%
```

```
    }%
  }%
}

\def\right@footnoterule{%
  \kern-3\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern2.6\p@}
\def\right@mpfootnoterule{%
  \kern-\baselineskip
  \kern-3\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern2.6\p@}
\def\left@footnoterule{\kern-3\p@
  \hrule \@width .4\columnwidth \kern 2.6\p@}
\def\textwidth@footnoterule{\kern-3\p@
  \hrule \@width \columnwidth \kern 2.6\p@}
\def\leftfootnoterule{%
\bidi@autofootnoterulefalse%
\def\footnoterule{\left@footnoterule}%
\def\bidi@mpfootnoterule{\left@footnoterule}%
}
\let\LRfootnoterule=\leftfootnoterule
\def\rightfootnoterule{%
\bidi@autofootnoterulefalse%
\def\footnoterule{\right@footnoterule}%
\def\bidi@mpfootnoterule{\right@mpfootnoterule}%
}
\def\textwidthfootnoterule{%
\bidi@autofootnoterulefalse%
\def\footnoterule{\textwidth@footnoterule}%
\def\bidi@mpfootnoterule{\textwidth@footnoterule}%
}



\def\auto@footnoterule{%
\footdir@LeftRightElse%
\left@footnoterule%
\right@footnoterule%
\left@footnoterule%
}



\def\autofootnoterule{%
\bidi@autofootnoteruletrue%
\def\footnoterule{\auto@footnoterule}%
}

\newcommand*{\SplitFootnoteRule}{%
  \gdef\split@prev{0}
  \let\pagefootnoterule\footnoterule
  \let\mpfootnoterule\footnoterule
```

```
  \def\splitfootnoterule{\kern-3\p@ \hrule \kern2.6\p@}
  \def\footnoterule{\relax
    \ifx \@listdepth\@mplistdepth
      \mpfootnoterule
    \else
      \ifnum\split@prev=\z@
        \pagefootnoterule
      \else
        \splitfootnoterule
      \fi
      \xdef\split@prev{\the\insertpenalties}%
    \fi
  }%
}



\def\RTLfootnote{\@ifnextchar[\@xRTLfootnote{\stepcounter\@mpfn
     \protected@xdef\@thefnmark{\thempfn}%
     \@footnotemark\@RTLfootnotetext}}
\def\@xRTLfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\@RTLfootnotetext}
\def\LTRfootnote{\@ifnextchar[\@xLTRfootnote{\stepcounter\@mpfn
     \protected@xdef\@thefnmark{\thempfn}%
     \@footnotemark\@LTRfootnotetext}}
\def\@xLTRfootnote[#1]{%
   \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
   \endgroup
   \@footnotemark\@LTRfootnotetext}


\def\setfootnoteRL{\@RTL@footnotetrue}
\def\unsetfootnoteRL{\@RTL@footnotefalse}
\def\setfootnoteLR{\unsetfootnoteRL}

\newcommand*{\bidi@@footnotetext@font}{\footnotesize}
\newcommand*{\bidi@@LTRfootnotetext@font}{\footnotesize}
\newcommand*{\bidi@@RTLfootnotetext@font}{\footnotesize}

\long\def\@footnotetext#1{\insert\footins{%
    \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi%
    \reset@font%
    \bidi@@footnotetext@font% \reset@font\footnotesize
    \interlinepenalty\interfootnotelinepenalty
    \splittopskip\footnotesep
    \splitmaxdepth \dp\strutbox \floatingpenalty \@MM
    \hsize\columnwidth \@parboxrestore
```

```
    \protected@edef\@currentlabel{%
       \csname p@footnote\endcsname\@thefnmark
    }%
    \color@begingroup
      \@makefntext{%
        \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}%
    \color@endgroup}}%


\long\def\@RTLfootnotetext#1{\insert\footins{%
    \@RTLtrue%
    \reset@font%
    \bidi@@RTLfootnotetext@font% \reset@font\footnotesize
    \interlinepenalty\interfootnotelinepenalty
    \splittopskip\footnotesep
    \splitmaxdepth \dp\strutbox \floatingpenalty \@MM
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
       \csname p@footnote\endcsname\@thefnmark
    }%
    \color@begingroup
      \@makefntext{%
        \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}%
    \color@endgroup}}%

\long\def\@LTRfootnotetext#1{\insert\footins{%
    \@RTLfalse%
    \reset@font%
    \bidi@@LTRfootnotetext@font% \reset@font\footnotesize
    \interlinepenalty\interfootnotelinepenalty
    \splittopskip\footnotesep
    \splitmaxdepth \dp\strutbox \floatingpenalty \@MM
    \hsize\columnwidth \@parboxrestore
    \protected@edef\@currentlabel{%
       \csname p@footnote\endcsname\@thefnmark
    }%
    \color@begingroup
      \@makefntext{%
        \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}%
    \color@endgroup}}%

\AtBeginDocument{%
\if@RTL@footnote
  \newcommand*{\bidi@footdir@footnote}{R}
\else
  \newcommand*{\bidi@footdir@footnote}{L}
\fi%
}

\footdir@temp\footdir@ORG@bidi@footnotetext\@footnotetext{\bidi@footdir@footnote}%
\footdir@temp\footdir@ORG@bidi@RTLfootnotetext\@RTLfootnotetext{R}%
\footdir@temp\footdir@ORG@bidi@LTRfootnotetext\@LTRfootnotetext{L}%

\long\def\@mpRTLfootnotetext#1{%
```

```
14563   \ifbidi@autofootnoterule\ifnum\c@mpfootnote=\@ne\global\let\bidi@mpfootnoterule\right@mpf
14564   \global\setbox\@mpfootins\vbox{%
14565     \unvbox\@mpfootins
14566     \@RTLtrue
14567     \reset@font%
14568     \bidi@@RTLfootnotetext@font% \reset@font\footnotesize
14569     \hsize\columnwidth
14570     \@parboxrestore
14571     \protected@edef\@currentlabel
14572          {\csname p@mpfootnote\endcsname\@thefnmark}%
14573     \color@begingroup
14574       \@makefntext{%
14575         \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}%
14576     \color@endgroup}}
14577 \long\def\@mpLTRfootnotetext#1{%
14578  \ifbidi@autofootnoterule\ifnum\c@mpfootnote=\@ne\global\let\bidi@mpfootnoterule\left@footn
14579   \global\setbox\@mpfootins\vbox{%
14580     \unvbox\@mpfootins
14581     \@RTLfalse
14582     \reset@font%
14583     \bidi@@LTRfootnotetext@font% \reset@font\footnotesize
14584     \hsize\columnwidth
14585     \@parboxrestore
14586     \protected@edef\@currentlabel
14587          {\csname p@mpfootnote\endcsname\@thefnmark}%
14588     \color@begingroup
14589       \@makefntext{%
14590         \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}%
14591     \color@endgroup}}
14592 \long\def\@mpfootnotetext#1{%
14593  \ifbidi@autofootnoterule\ifnum\c@mpfootnote=\@ne\if@RTL@footnote\global\let\bidi@mpfootnot
14594   \global\setbox\@mpfootins\vbox{%
14595     \unvbox\@mpfootins
14596     \if@RTL@footnote\@RTLtrue\else\@RTLfalse\fi
14597     \reset@font%
14598     \bidi@@footnotetext@font% \reset@font\footnotesize
14599     \hsize\columnwidth
14600     \@parboxrestore
14601     \protected@edef\@currentlabel
14602          {\csname p@mpfootnote\endcsname\@thefnmark}%
14603     \color@begingroup
14604       \@makefntext{%
14605         \rule\z@\footnotesep\ignorespaces#1\@finalstrut\strutbox}%
14606     \color@endgroup}}
14607 \def\@iiiminipage#1#2[#3]#4{%
14608   \leavevmode
14609   \@pboxswfalse
14610   \if@hboxRconstruct\@bidi@list@minipage@parbox@not@nobtrue\fi
14611   \if@RTL\if#1t\@bidi@list@minipage@parboxtrue\else\if#1b\@bidi@list@minipage@parboxtrue\fi
14612   \setlength\@tempdima{#4}%
14613   \def\@mpargs{{#1}{#2}[#3]{#4}}%
14614   \setbox\@tempboxa\vbox\bgroup
14615     \color@begingroup
14616       \hsize\@tempdima
```

```
      \textwidth\hsize \columnwidth\hsize
      \@parboxrestore
      \def\@mpfn{mpfootnote}\def\thempfn{\thempfootnote}\c@mpfootnote\z@
      \let\@footnotetext\@mpfootnotetext
      \let\@LTRfootnotetext\@mpLTRfootnotetext
      \let\@RTLfootnotetext\@mpRTLfootnotetext
      \let\@listdepth\@mplistdepth \@mplistdepth\z@
      \@minipagerestore
      \@setminipage}
\def\endminipage{%
    \par
    \unskip
    \ifvoid\@mpfootins\else
      \vskip\skip\@mpfootins
      \normalcolor
      \bidi@mpfootnoterule
      \unvbox\@mpfootins
    \fi
    \@minipagefalse   %% added 24 May 89
  \color@endgroup
  \egroup
  \expandafter\@iiiparbox\@mpargs{\unvbox\@tempboxa}}
\def\LTRthanks#1{\footnotemark
    \protected@xdef\@thanks{\@thanks
        \protect\LTRfootnotetext[\the\c@footnote]{#1}}%
}
\def\LTRfootnotetext{%
     \@ifnextchar [\@xLTRfootnotenext
       {\protected@xdef\@thefnmark{\thempfn}%
    \@LTRfootnotetext}}
\def\@xLTRfootnotenext[#1]{%
  \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
  \endgroup
  \@LTRfootnotetext}
\def\RTLthanks#1{\footnotemark
    \protected@xdef\@thanks{\@thanks
        \protect\RTLfootnotetext[\the\c@footnote]{#1}}%
}
\let\@thanks\@empty
\def\RTLfootnotetext{%
     \@ifnextchar [\@xRTLfootnotenext
       {\protected@xdef\@thefnmark{\thempfn}%
    \@RTLfootnotetext}}
\def\@xRTLfootnotenext[#1]{%
  \begingroup
     \csname c@\@mpfn\endcsname #1\relax
     \unrestored@protected@xdef\@thefnmark{\thempfn}%
  \endgroup
  \@RTLfootnotetext}
\leftfootnoterule
```

97 File footnotebackref-xetex-bidi.def

```
\ProvidesFile{footnotebackref-xetex-bidi.def}[2022/02/18 v0.1 bidi adaptations for footnote
\LetLtxMacro{\BHFN@OldLTRFootnote}{\LTRfootnote}
\LetLtxMacro{\BHFN@OldRTLFootnote}{\RTLfootnote}

\renewcommand*\LTRfootnote{%
    \refstepcounter{BackrefHyperFootnoteCounter}%
    \edef\BackrefFootnoteTag{bhfn:\theBackrefHyperFootnoteCounter}%
    \label{\BackrefFootnoteTag}%
    \@ifnextchar[\Backref@OptLTRHyperFootnote\Backref@HyperLTRFootnote}

\renewcommand*\RTLfootnote{%
    \refstepcounter{BackrefHyperFootnoteCounter}%
    \edef\BackrefFootnoteTag{bhfn:\theBackrefHyperFootnoteCounter}%
    \label{\BackrefFootnoteTag}%
    \@ifnextchar[\Backref@OptRTLHyperFootnote\Backref@HyperRTLFootnote}
\newcommand\Backref@HyperLTRFootnote[1]{%
    \BHFN@OldLTRFootnote{\Backref@HyperSymbol#1}}

\newcommand\Backref@HyperRTLFootnote[1]{%
    \BHFN@OldRTLFootnote{\Backref@HyperSymbol#1}}

\newcommand\Backref@OptHyperLTRFootnote[2][\empty]{%
    \BHFN@OldLTRFootnote[#1]{\Backref@HyperSymbol#2}}

\newcommand\Backref@OptHyperRTLFootnote[2][\empty]{%
    \BHFN@OldRTLFootnote[#1]{\Backref@HyperSymbol#2}}

\bidi@AfterFile{extrafootnotefeatures-xetex-bidi.def}{%
\ifFootnoteBackref@numberlinked
\renewcommand{\footfootmark}{%
  \ifdim\footmarkwidth < \z@
    \llap{\hb@xt@ -\footmarkwidth{%
            \hss\normalfont\footscript{\hyperref[\BackrefFootnoteTag]{\@thefnmark}}}%
          \hspace*{-\footmarkwidth}}%
  \else
    \ifdim\footmarkwidth = \z@
      {\normalfont\footscript{\hyperref[\BackrefFootnoteTag]{\@thefnmark}}}%
    \else
      \hb@xt@\footmarkwidth{\hss\normalfont\footscript{\hyperref[\BackrefFootnoteTag]{\@the
    \fi
  \fi}
\renewcommand{\LTRfootfootmark}{%
  \ifdim\footmarkwidth < \z@
    \llap{\hb@xt@ -\footmarkwidth{%
            \hss\normalfont\LTRfootscript{\hyperref[\BackrefFootnoteTag]{\@thefnmark}}}%
          \hspace*{-\footmarkwidth}}%
  \else
    \ifdim\footmarkwidth = \z@
      {\normalfont\LTRfootscript{\hyperref[\BackrefFootnoteTag]{\@thefnmark}}}%
    \else
      \hb@xt@\footmarkwidth{\hss\normalfont\LTRfootscript{\hyperref[\BackrefFootnoteTag]{\@
    \fi
```

```
  \fi}
\renewcommand{\RTLfootfootmark}{%
  \ifdim\footmarkwidth < \z@
    \llap{\hb@xt@ -\footmarkwidth{%
            \hss\normalfont\RTLfootscript{\hyperref[\BackrefFootnoteTag]{\@thefnmark}}}%
          \hspace*{-\footmarkwidth}}%
  \else
    \ifdim\footmarkwidth = \z@
      {\normalfont\RTLfootscript{\hyperref[\BackrefFootnoteTag]{\@thefnmark}}}%
    \else
      \hb@xt@\footmarkwidth{\hss\normalfont\RTLfootscript{\hyperref[\BackrefFootnoteTag]{\@
    \fi
  \fi}
\fi
}
```

98 File framed-xetex-bidi.def

```
\ProvidesFile{framed-xetex-bidi.def}[2012/06/05 v0.3 bidi adaptations for framed package fo
\renewcommand\TitleBarFrame[3][]{\begingroup
  \ifx\delimiter#1\delimiter
    \let\TF@conlab\@empty
  \else
    \def\TF@conlab{% continuation label
     \nointerlineskip
     \smash{\rlap{\kern\wd\@tempboxa\kern\fboxrule\kern\fboxsep #1}}}%
  \fi
  %\let\TF@savecolor\current@color
  \textcolor{TFFrameColor}{%
  \CustomFBox
    {\TF@Title{#2}}{\TF@conlab}%
    \fboxrule\fboxrule\fboxrule\fboxrule
    %{\let\current@color\TF@savecolor\set@color #3}%
    {\normalcolor #3}%
  }\endgroup
}
\renewenvironment{titled-frame}[1]{%
  \def\FrameCommand{\fboxsep8pt\fboxrule2pt
     \TitleBarFrame{\textbf{#1}}}%
  \def\FirstFrameCommand{\fboxsep8pt\fboxrule2pt
     \TitleBarFrame[$\if@RTL\blacktriangleleft\else\blacktriangleright\fi$]{\textbf{#1}}}%
  \def\MidFrameCommand{\fboxsep8pt\fboxrule2pt
     \TitleBarFrame[$\if@RTL\blacktriangleleft\else\blacktriangleright\fi$]{\textbf{#1\ (co
  \def\LastFrameCommand{\fboxsep8pt\fboxrule2pt
     \TitleBarFrame{\textbf{#1\ (cont)}}}%
  \MakeFramed{\advance\hsize-20pt \FrameRestore}}%
%  note: 8 + 2 + 8 + 2 = 20.  Don't use \width because the frame title
%  could interfere with the width measurement.
 {\endMakeFramed}
\chardef\FrameRestore=\catcode`\| % for debug
\catcode`\|=\catcode`\% % (debug: insert space after backslash)
\def\fb@put@frame#1#2{\relax
 \ifdim\pagegoal=\maxdimen \pagegoal\vsize \fi
|   \message{=============== Entering putframe ====================^^J
```

```
14772 |     \pagegoal=\the\pagegoal,  \pagetotal=\the\pagetotal. }%
14773  \ifinner
14774    \fb@putboxa#1%
14775    \fb@afterframe
14776  \else
14777   \dimen@\pagegoal \advance\dimen@-\pagetotal % natural space left on page
14778   \ifdim\dimen@<2\baselineskip % Too little room on page
14779 |   \message{Page has only \the\dimen@\space room left; eject. }%
14780     \eject \fb@adjheight \fb@put@frame#1#2%
14781   \else % there's appreciable room left on the page
14782      \fb@sizeofframe#1%
14783 |    \message{\string\pagetotal=\the\pagetotal,
14784 |        \string\pagegoal=\the\pagegoal,
14785 |        \string\pagestretch=\the\pagestretch,
14786 |        \string\pageshrink=\the\pageshrink,
14787 |        \string\fb@frh=\the\fb@frh. \space}
14788 |    \message{^^JBox of size \the\ht\@tempboxa\space}%
14789      \begingroup % temporarily set \dimen@ to be...
14790      \advance\dimen@.8\pageshrink  % maximum space available on page
14791      \advance\dimen@-\fb@frh\relax % max space available for frame's contents
14792 %%% LOOKS SUBTRACTED AND ADDED, SO DOUBLE ACCOUNTING!
14793      \expandafter\endgroup
14794      % expand \ifdim, then restore \dimen@ to real room left on page
14795      \ifdim\dimen@>\ht\@tempboxa % whole box does fit
14796 |       \message{fits in \the\dimen@. }%
14797         % ToDo: Change this to use vsplit anyway to capture the marks
14798         % MERGE THIS WITH THE else CLAUSE!!!
14799         \fb@putboxa#1%
14800         \fb@afterframe
14801      \else % box must be split
14802 |       \message{must be split to fit in \the\dimen@. }%
14803         % update frame measurement to use \FirstFrameCommand or \MidFrameCommand
14804         \fb@sizeofframe#2%
14805         \setbox\@tempboxa\vbox{% simulate frame and flexiblity of the page:
14806            \vskip \fb@frh \@plus\pagestretch \@minus.8\pageshrink
14807            \kern137sp\kern-137sp\penalty-30
14808            \unvbox\@tempboxa}%
14809         \edef\fb@resto@set{\boxmaxdepth\the\boxmaxdepth
14810                            \splittopskip\the\splittopskip}%
14811         \boxmaxdepth\z@ \splittopskip\z@
14812 |      \message{^^JPadded box of size \the\ht\@tempboxa\space split to \the\dimen@}%
14813         % Split box here
14814         \setbox\tw@\vsplit\@tempboxa to\dimen@
14815 |       \toks99\expandafter{\splitfirstmark}%
14816 |       \toks98\expandafter{\splitbotmark}%
14817 |       \message{Marks are: \the\toks99, \the\toks98. }%
14818         \setbox\tw@\vbox{\unvbox\tw@}% natural-sized
14819 |       \message{Natural height of split box is \the\ht\tw@, leaving
14820 |          \the\ht\@tempboxa\space remainder. }%
14821         % If the split-to size > (\vsize-\topskip), then set box to full size.
14822         \begingroup
14823         \advance\dimen@\topskip
14824         \expandafter\endgroup
14825         \ifdim\dimen@>\pagegoal
```

```
14826 |         \message{Frame is big -- Use up the full column. }%
14827           \dimen@ii\pagegoal
14828           \advance\dimen@ii -\topskip
14829           \advance\dimen@ii \FrameHeightAdjust\relax
14830         \else  % suspect this is implemented incorrectly:
14831           % If the split-to size > feasible room_on_page, rebox it smaller.
14832           \advance\dimen@.8\pageshrink
14833           \ifdim\ht\tw@>\dimen@
14834 |           \message{Box too tall; rebox it to \the\dimen@. }%
14835             \dimen@ii\dimen@
14836           \else % use natural size
14837             \dimen@ii\ht\tw@
14838           \fi
14839         \fi
14840         % Re-box contents to desired size \dimen@ii
14841         \advance\dimen@ii -\fb@frh
14842         \setbox\tw@\vbox to\dimen@ii \bgroup
14843         % remove simulated frame and page flexibility:
14844         \vskip -\fb@frh \@plus-\pagestretch \@minus-.8\pageshrink
14845         \unvbox\tw@ \unpenalty\unpenalty
14846         \ifdim\lastkern=-137sp % whole box went to next page
14847 |          \message{box split at beginning! }%
14848            % need work here???
14849            \egroup \fb@resto@set \eject % (\vskip for frame size was discarded)
14850            \fb@adjheight
14851            \fb@put@frame#1#2% INSERTED ???
14852         \else % Got material split off at the head
14853            \egroup \fb@resto@set
14854            \ifvoid\@tempboxa % it all fit after all
14855 |             \message{box split at end! }%
14856               \setbox\@tempboxa\box\tw@
14857               \fb@putboxa#1%
14858               \fb@afterframe
14859            \else % it really did split
14860 |             \message{box split as expected. Its reboxed height is \the\ht\tw@. }%
14861               \ifdim\wd\tw@>\z@
14862                 \wd\tw@\wd\@tempboxa
14863                 \centerline{#2{\hboxL{\box\tw@}}}%  ??? \centerline bad idea
14864               \else
14865 |               \message{Zero width means likely blank. Don't frame it (guess)}%
14866                 \box\tw@
14867               \fi
14868               \hrule \@height\z@ \@width\hsize
14869               \eject
14870               \fb@adjheight
14871               \fb@put@frame\LastFrameCommand\MidFrameCommand
14872   \fi\fi\fi\fi\fi
14873 }
14874 \def\fb@putboxa#1{%
14875   \ifvoid\@tempboxa
14876     \PackageWarning{framed}{Boxa is void -- discard it. }%
14877   \else
14878 |   \message{Frame and place boxa. }%
14879 |   %{\showoutput\showbox\@tempboxa}%
```

```
    \centerline{#1{\hboxL{\box\@tempboxa}}}%
  \fi
}
\catcode`\|=\FrameRestore
\def\FrameRestore{%
   \let\if@nobreak\iffalse
   \let\if@noskipsec\iffalse
   \let\-\@dischyph
   \let\'\@acci\let\`\@accii\let\=\@acciii
   %  \message{FrameRestore:
   %    \@totalleftmargin=\the \@totalleftmargin,
   %    \rightmargin=\the\rightmargin,
   %    \@listdepth=\the\@listdepth.  }%
   % Test if we are in a list (or list-like paragraph)
   \ifnum \ifdim\@totalleftmargin>\z@ 1\fi
          \ifdim\rightmargin>\z@ 1\fi
          \ifnum\@listdepth>\z@ 1\fi 0>\z@
     %     \message{In a list: \linewidth=\the\linewidth, \@totalleftmargin=\the\@totalleft
     %       \parshape=\the\parshape, \columnwidth=\the\columnwidth, \hsize=\the\hsize,
     %       \labelwidth=\the\labelwidth. }%
     \@setminipage % snug fit around the item
     % Now try to propageate changes of width from \hsize to list parameters.
     % This is deficient, but a more advanced way to indicate modification to text
     % dimensions is not (yet) provided; in particular, no separate left/right
     % adjustment.
     \advance\linewidth-\columnwidth \advance\linewidth\hsize
     \parshape\@ne \@totalleftmargin \linewidth
   \else % Not in list
     \linewidth=\hsize
     %\message{No list, set \string\linewidth=\the\hsize. }%
   \fi
   \sloppy
}
```

99 File ftnright-xetex-bidi.def

```
\ProvidesFile{ftnright-xetex-bidi.def}[2018/09/29 v0.6 bidi adaptations for ftnright packag

\def\prepare@bidi@copyins{%
  \global\bidi@rcol@copyinsskip\skip\@bidi@copyins@
  \global\skip\@bidi@copyins@\z@
  \global\count\@bidi@copyins@\z@
  \global\dimen\@bidi@copyins@\textheight}

\newskip\bidi@rcol@copyinsskip

\def\LTR@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \global\count\footins\@m
    \global\skip\footins\rcol@footinsskip
    \global\count\@bidi@copyins@\@m
    \global\skip\@bidi@copyins@\bidi@rcol@copyinsskip
```

```
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
  \else
   \preparefootins
   \prepare@bidi@copyins
    \global\@firstcolumntrue
    \setbox\@outputbox\vbox{%
     \hb@xt@\textwidth{%
        \hb@xt@\columnwidth{%
        \bidi@firstcolumn@status@write%
        \box\@leftcolumn \hss}%
        \hfil
        {\normalcolor\vrule \@width\columnseprule}%
        \hfil
       \hb@xt@\columnwidth{%
       \bidi@lastcolumn@status@write%
       \box\@outputbox \hss}}}%
  \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi{\@outputpage
     \@startdblcolumn}%
    \endgroup
  \fi}%

\def\RTL@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \global\count\footins\@m
    \global\skip\footins\rcol@footinsskip
    \global\count\@bidi@copyins@\@m
    \global\skip\@bidi@copyins@\bidi@rcol@copyinsskip
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
```

```
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
  \else
   \preparefootins
   \prepare@bidi@copyins
    \global\@firstcolumntrue
    \setbox\@outputbox\vbox{%
     \hb@xt@\textwidth{%
       \hskip \columnwidth
       \hfil
       {\normalcolor\vrule \@width\columnseprule}%
       \hfil
        \hb@xt@\columnwidth{%
        \bidi@firstcolumn@status@write%
        \box\@leftcolumn \hss}%
        \hskip -\textwidth
       \hb@xt@\columnwidth{%
       \bidi@lastcolumn@status@write%
       \box\@outputbox \hss}%
       \hskip \columnsep
      \hskip \columnwidth }}%
  \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi{\@outputpage
     \@startdblcolumn}%
    \endgroup
  \fi}%

\def\@startcolumn{%
 \ifx\@deferlist\@empty
   \global\@fcolmadefalse
   \global\@colroom\@colht
 \else
   \ifvoid\footins\else
     \ftn@amount\ht\footins
     \advance\ftn@amount\dp\footins
     \advance\ftn@amount\skip\footins
   \fi
   \ifvoid\@bidi@copyins@\else
     \bidi@copyins@amount\ht\@bidi@copyins@
     \advance\bidi@copyins@amount\dp\@bidi@copyins@
     \advance\bidi@copyins@amount\skip\@bidi@copyins@
```

```
15039    \fi
15040    \global\advance\@colht-\ftn@amount
15041    \global\advance\@colht-\bidi@copyins@amount
15042    \global\@colroom\@colht
15043    \@xstartcol
15044    \global\advance\@colht\ftn@amount
15045    \global\advance\@colroom\ftn@amount
15046    \global\advance\@colht\bidi@copyins@amount
15047    \global\advance\@colroom\bidi@copyins@amount
15048  \fi
15049  \if@fcolmade
15050   \setbox\@cclv\box\@outputbox
15051   \@makecol
15052  \else
15053    \ifvoid\footins\else
15054      \insert\footins{\unvbox\footins}\fi
15055    \ifvoid\@bidi@copyins@\else
15056      \insert\@bidi@copyins@{\unvbox\@bidi@copyins@}\fi
15057  \fi}
15058
15059 \newdimen\bidi@copyins@amount
15060
15061 \def\@makecol{\if@firstcolumn
15062   \setbox\@outputbox\box\@cclv
15063   \if@twocolumn \else
15064     \ifvoid\footins \else
15065       \@latexerr{ftnright package
15066                  used in one-column mode}%
15067    {The ftnright package was designed to
15068     work with LaTeX's standard^^Jtwocolumn
15069     option. It does *not* work with the
15070     multicol package.^^JSo please specify
15071     `twocolumn' in the
15072     \noexpand\documentclass command.}%
15073       \shipout\box\footins \fi
15074     \ifvoid\@bidi@copyins@ \else
15075       \@latexerr{ftnright package
15076                  used in one-column mode}%
15077    {The ftnright package was designed to
15078     work with LaTeX's standard^^Jtwocolumn
15079     option. It does *not* work with the
15080     multicol package.^^JSo please specify
15081     `twocolumn' in the
15082     \noexpand\documentclass command.}%
15083       \shipout\box\@bidi@copyins@ \fi\fi
15084   \ifnum\insertpenalties>\z@
15085       \@latexerr{ftnright package
15086                  scrambled footnotes}%
15087     {There is too much footnote material in
15088      the first column  and ftnright^^Jis
15089      unable to cope with this.^^JYou need
15090      to reduce the amount to get a properly
15091      formatted page.}%
15092   \fi
```

```
\else
 \ifvoid\footins
   \ifvoid\@bidi@copyins@
     \setbox\@outputbox\box\@cclv
   \else
     \setbox\@outputbox\vbox
       {\ifvoid\@cclv \else
          \unvbox\@cclv
          \vskip \skip\@bidi@copyins@
        \fi
          \color@begingroup
          \normalcolor
          \unvbox \@bidi@copyins@
          \color@endgroup}%
   \fi
 \else
   \setbox\@outputbox\vbox
     {\ifvoid\@cclv \else
       \unvbox\@cclv
       \vskip\skip\footins\fi
       \color@begingroup
       \normalcolor
       \footnoterule\unvbox\footins
       \color@endgroup
       \ifvoid\@bidi@copyins@
       \else
         \vskip \skip\@bidi@copyins@
         \color@begingroup
         \normalcolor
         \unvbox \@bidi@copyins@
         \color@endgroup
       \fi
     }%
 \fi
\fi
 \xdef\@freelist{\@freelist\@midlist}%
 \global \let \@midlist \@empty
 \@combinefloats
 \ifvbox\@kludgeins
   \@makespecialcolbox
 \else
  \setbox\@outputbox\vbox to\@colht
    {\boxmaxdepth\maxdepth
     \@texttop
     \@tempdima\dp\@outputbox
     \unvbox\@outputbox
     \vskip-\@tempdima
     \@textbottom}%
 \fi
 \global\maxdepth\@maxdepth}

\let\leftfootnoterule\@empty
\let\rightfootnoterule\@empty
\let\textwidthfootnoterule\@empty
```

```
\let\autofootnoterule\@empty
\let\footnoterule\@empty
\long\def\@makefntext#1{\parindent 1em
   \noindent\hbox to 2em{}%
   \llap{\@thefnmark\hbox{.}\,\,}#1}

\setlength{\skip\@bidi@copyins@}
          {10pt plus 5pt minus 3pt}
\AtBeginDocument{\prepare@bidi@copyins}
```

100 File graphicx-xetex-bidi.def

```
\ProvidesFile{graphicx-xetex-bidi.def}[2017/06/17 v0.5 bidi adaptations for graphicx packag
\def\Grot@box@std#1#2{\ifmmode\else\if@RTL\beginL\fi\fi%
  \Grot@setangle{#1}%
  \setbox\z@\hbox{{\ifmmode\if@RTL\beginR\fi#2\if@RTL\endR\fi\else\if@RTL\beginR\fi#2\if@RT
  \Grot@x\z@
  \Grot@y\z@
  \Grot@box\ifmmode\else\if@RTL\endL\fi\fi}
\long\def\Grot@box@kv[#1]#2#3{\ifmmode\else\if@RTL\beginL\fi\fi%
  \@begin@tempboxa\hbox{\ifmmode\if@RTL\beginR\fi#3\if@RTL\endR\fi\else\if@RTL\beginR\fi#3\
    \Grot@x\width \divide\Grot@x\tw@
    \Grot@y\height \advance\Grot@y-\depth \divide\Grot@y\tw@
    \setkeys{Grot}{#1}%
    \setbox\z@\box\@tempboxa
    \Grot@setangle{#2}%
    \Grot@box\ifmmode\else\if@RTL\endL\fi\fi
  \@end@tempboxa}
\long\def\Gscale@box#1[#2]#3{\ifmmode\else\if@RTL\beginL\fi\fi%
  \leavevmode
  \def\Gscale@x{#1}\def\Gscale@y{#2}%
  \setbox\z@\hbox{{#3}}%
  \setbox\tw@\hbox{\Gscale@start\rlap{\copy\z@}\Gscale@end}%
  \ifdim#2\p@<\z@
    \ht\tw@-#2\dp\z@
    \dp\tw@-#2\ht\z@
  \else
    \ht\tw@#2\ht\z@
    \dp\tw@#2\dp\z@
  \fi
  \ifdim#1\p@<\z@
    \hb@xt@-#1\wd\z@{\kern-#1\wd\z@\box\tw@\hss}%
  \else
    \wd\tw@#1\wd\z@
    \box\tw@
  \fi\ifmmode\else\if@RTL\endL\fi\fi}
\def\Gin@iii[#1,#2][#3,#4]#5{%
  \begingroup
  \ifmmode\else\if@RTL\beginL\fi\fi
  \Gin@bboxtrue
  \Gin@defaultbp\Gin@llx{#1}%
  \Gin@defaultbp\Gin@lly{#2}%
  \Gin@defaultbp\Gin@urx{#3}%
  \Gin@defaultbp\Gin@ury{#4}%
```

```
15198   \Ginclude@graphics{#5}%
15199   \ifmmode\else\if@RTL\endL\fi\fi
15200   \endgroup}
15201 \def\Gin@ii[#1]#2{%
15202     \def\@tempa{[}\def\@tempb{#2}%
15203     \ifx\@tempa\@tempb
15204       \def\@tempa{\Gin@iii[#1][}%
15205       \expandafter\@tempa
15206     \else
15207      \begingroup
15208       \ifmmode\else\if@RTL\beginL\fi\fi
15209       \@tempswafalse
15210       \toks@{\Ginclude@graphics{#2}}%
15211       \setkeys{Gin}{#1}%
15212       \Gin@esetsize
15213       \the\toks@
15214       \ifmmode\else\if@RTL\endL\fi\fi
15215      \endgroup
15216      \fi}
15217 \def\reflectbox{\bidiGscale@box-1[1]}
15218 \long\def\bidiGscale@box#1[#2]#3{\ifmmode\else\if@RTL\beginL\fi\fi%
15219   \leavevmode
15220   \def\Gscale@x{#1}\def\Gscale@y{#2}%
15221   \setbox\z@\hbox{{\ifmmode\if@RTL\beginR\fi#3\if@RTL\endR\fi\else\if@RTL\beginR\fi#3\if@RT
15222   \setbox\tw@\hbox{\Gscale@start\rlap{\copy\z@}\Gscale@end}%
15223   \ifdim#2\p@<\z@
15224     \ht\tw@-#2\dp\z@
15225     \dp\tw@-#2\ht\z@
15226   \else
15227     \ht\tw@#2\ht\z@
15228     \dp\tw@#2\dp\z@
15229   \fi
15230   \ifdim#1\p@<\z@
15231     \hb@xt@-#1\wd\z@{\kern-#1\wd\z@\box\tw@\hss}%
15232   \else
15233     \wd\tw@#1\wd\z@
15234     \box\tw@
15235   \fi\ifmmode\else\if@RTL\endL\fi\fi}
15236 \def\scalebox#1{%
15237   \@ifnextchar[{\bidiGscale@box{#1}}{\bidiGscale@box{#1}[#1]}}
15238 \def\resizebox{%
15239   \leavevmode
15240   \@ifstar{\bidiGscale@@box\totalheight}{\bidiGscale@@box\height}}
15241 \def\bidiGscale@@box#1#2#3{%
15242   \let\@tempa\Gin@exclamation
15243   \expandafter\def\expandafter\@tempb\expandafter{\string#2}%
15244   \expandafter\def\expandafter\@tempc\expandafter{\string#3}%
15245   \ifx\@tempb\@tempa
15246     \ifx\@tempc\@tempa
15247       \toks@{\mbox}%
15248     \else
15249       \toks@{\bidiGscale@box@dd{#3}#1}%
15250     \fi
15251   \else
```

```
    \ifx\@tempc\@tempa
      \toks@{\bidiGscale@box@dd{#2}\width}%
    \else
      \toks@{\bidiGscale@box@dddd{#2}\width{#3}#1}%
    \fi
  \fi
  \the\toks@}
\long\def\bidiGscale@box@dd#1#2#3{%
  \@begin@tempboxa\hbox{\ifmmode\if@RTL\beginR\fi#3\if@RTL\endR\fi\else\if@RTL\beginR\fi#3\
    \setlength\@tempdima{#1}%
    \setlength\@tempdimb{#2}%
    \Gscale@div\@tempa\@tempdima\@tempdimb
    \Gscale@box\@tempa[\@tempa]{\box\@tempboxa}%
  \@end@tempboxa}
\long\def\bidiGscale@box@dddd#1#2#3#4#5{%
  \@begin@tempboxa\hbox{\ifmmode\if@RTL\beginR\fi#5\if@RTL\endR\fi\else\if@RTL\beginR\fi#5\
    \setlength\@tempdima{#1}%
    \setlength\@tempdimb{#2}%
    \Gscale@div\@tempa\@tempdima\@tempdimb
    \setlength\@tempdima{#3}%
    \setlength\@tempdimb{#4}%
    \Gscale@div\@tempb\@tempdima\@tempdimb
    \ifGin@iso
      \ifdim\@tempa\p@>\@tempb\p@
        \let\@tempa\@tempb
      \else
        \let\@tempb\@tempa
      \fi
    \fi
    \Gscale@box\@tempa[\@tempb]{\box\@tempboxa}%
  \@end@tempboxa}
```

101 File geometry-xetex-bidi.def

```
\ProvidesFile{geometry-xetex-bidi.def}[2017/01/14 v0.2 bidi adaptations for geometry packag
\renewcommand*{\Gm@vrules@mpi}{%
\if@RTLmain%
        \hb@xt@\@tempdima{\hskip-\marginparwidth\hskip-\marginparsep
        \llap{\Gm@vrule}\ignorespaces
        \hskip \marginparwidth\rlap{\Gm@vrule}\hskip \marginparsep
        \llap{\Gm@vrule}\hskip\textwidth\rlap{\Gm@vrule}\hss}%
    \else%
  \hb@xt@\@tempdima{\llap{\Gm@vrule}\ignorespaces
  \hskip \textwidth\Gm@vrule\hskip \marginparsep
  \llap{\Gm@vrule}\hfil\Gm@vrule}\fi}%
\renewcommand*{\Gm@vrules@mpii}{%
\if@RTLmain%
  \hb@xt@\@tempdima{\llap{\Gm@vrule}\ignorespaces
  \hskip \textwidth\Gm@vrule\hskip \marginparsep
  \llap{\Gm@vrule}\hfil\Gm@vrule}%
\else%
  \hb@xt@\@tempdima{\hskip-\marginparwidth\hskip-\marginparsep
  \llap{\Gm@vrule}\ignorespaces
  \hskip \marginparwidth\rlap{\Gm@vrule}\hskip \marginparsep
```

```
  \llap{\Gm@vrule}\hskip\textwidth\rlap{\Gm@vrule}\hss}\fi}%
\bidi@patchcmd{\Gm@pageframes}{%
    \ifodd\count\z@
      \let\@themargin\oddsidemargin
    \else
      \let\@themargin\evensidemargin
    \fi
}{%
    \ifodd\count\z@
      \if@RTLmain
        \let\@themargin\evensidemargin
      \else
        \let\@themargin\oddsidemargin
      \fi
    \else
      \if@RTLmain
        \let\@themargin\oddsidemargin
      \else
        \let\@themargin\evensidemargin
      \fi
    \fi
}{}{}
```

102 File hgeneric-testphase-xetex-bidi.def

```
\ProvidesFile{hgeneric-testphase-xetex-bidi.def}[2025/09/22 v0.2 bidi adaptations for gener
\ExplSyntaxOn
\bidi@undef\hyper@linkstart
\bidi@undef\hyper@linkend
\cs_new_protected:Npn \hyper@linkstart #1 #2 %#1 context, #2=destination name
  {
    \bool_if:NT \l__hyp_annot_GoTo_bool
      {
        \int_gincr:N\g__hyp_linknestlevel_int
        \__hyp_check_link_nesting:TF
          {
            \Hy@VerboseLinkStart{#1}{#2}% only for debug
            \group_begin:
            \tl_set:Nn \l_hyp_current_dest_name_tl {#2}
            \socket_use:nnn{hyp/link/GoTo/Contents}{#2}{}
            \hook_use:n {hyp/link/#1}
            \ifmmode\else\beginL\fi
            \__hyp_link_goto_begin:nw {#2}
          }
          {
            \group_begin:
          }
      }
  }

\cs_new_protected:Npn \hyper@linkend
  {
    \bool_if:NT \l__hyp_annot_GoTo_bool
      {
```

```
15354         \__hyp_check_link_nesting:TF
15355           {
15356             \__hyp_link_goto_end:
15357             \ifmmode\else\endL\fi
15358             \group_end:
15359             \Hy@VerboseLinkStop
15360           }
15361           {
15362             \group_end:
15363           }
15364         \int_gdecr:N\g__hyp_linknestlevel_int
15365       }
15366   }
15367 \AtBeginDocument{%
15368 \bidi@undef\hyper@link
15369 \bidi@undef\hyper@linkfile
15370 \bidi@undef\hyper@linkurl
15371 \bidi@undef\hyper@linknamed
15372 \cs_new_protected:Npn \hyper@link #1 #2 #3 %#1 context, #2=destination name, #3 content
15373   {
15374     \bool_if:NTF \l__hyp_annot_GoTo_bool
15375       {
15376         \int_gincr:N\g__hyp_linknestlevel_int
15377         \__hyp_check_link_nesting:TF
15378           {
15379             \Hy@VerboseLinkStart{#1}{#2}
15380             \group_begin:
15381             \tl_set:Nn \l_hyp_current_dest_name_tl {#2}
15382             \socket_use:nnn{hyp/link/GoTo/Contents}{#2}{#3}
15383             \hook_use:n {hyp/link/#1}
15384             \ifmmode\else\beginL\fi
15385             \__hyp_link_goto_begin:nw {#2}\ifmmode\else\if@RTL\beginR\fi\fi#3\ifmmode\else\
15386             \__hyp_link_goto_end:
15387             \ifmmode\else\endL\fi
15388             \group_end:
15389             \Hy@VerboseLinkStop
15390           }
15391           {
15392             \group_begin: #3\group_end:
15393           }
15394         \int_gdecr:N\g__hyp_linknestlevel_int
15395       }
15396       {{\let\protect\relax#3}}
15397   }
15398 \cs_new_protected:Npn \hyper@linkfile #1 #2 #3 % link text, filename, destname
15399   {
15400    \bool_if:NTF \l__hyp_annot_GoToR_bool
15401      {
15402         \int_gincr:N\g__hyp_linknestlevel_int
15403         \__hyp_check_link_nesting:TF
15404           {
15405             \group_begin:
15406             \tl_set:Ne \l__hyp_filename_tmpa_tl { \text_expand:n { #2 } }
15407             \exp_args:Ne
```

```
15408             \pdf_object_if_exist:nF { __hyp_file_\tl_to_str:N \l__hyp_filename_tmpa_tl }
15409               {
15410                 \pdfdict_put:nne { l_pdffile/Filespec}{Subtype}{\pdf_name_from_unicode_e:
15411                 \pdffile_embed_file:noe
15412                   {}
15413                   {\l__hyp_filename_tmpa_tl }
15414                   {__hyp_file_\tl_to_str:N \l__hyp_filename_tmpa_tl }
15415               }
15416           \pdfdict_put:nne
15417              {l_hyp/annot/A/GoToR}
15418              {F}
15419              {\pdf_object_ref:e {__hyp_file_\tl_to_str:N \l__hyp_filename_tmpa_tl}}
15420           \__hyp_text_pdfstring:nnN
15421             { #3 }
15422             { \l__hyp_text_enc_dest_print_tl }
15423             \l__hyp_dest_name_tmpa_tl
15424           \socket_use:nn{hyp/link/GoToR/Contents}{#2}
15425           \tl_if_blank:eTF {#3}
15426             {
15427               \pdfdict_put:nne {l_hyp/annot/A/GoToR}{D}
15428                 {
15429                  [
15430                    \int_eval:n
15431                     { \int_max:nn {0}{ 0\l__hyp_href_pdf_page_tl - 1 }}
15432                    /\l__hyp_dest_pdfremotestartview_tl
15433                  ]
15434                 }
15435             }
15436             {
15437               \pdfdict_put:nno {l_hyp/annot/A/GoToR}{D}{\l__hyp_dest_name_tmpa_tl}
15438             }
15439           \mode_leave_vertical:
15440           \pdf_object_unnamed_write:ne{dict}{\pdfdict_use:n {l_hyp/annot/A/GoToR}}
15441           \pdfannot_dict_put:nne {link/GoToR}{A}{\pdf_object_ref_last:}
15442           \ifmmode\else\beginL\fi
15443           \pdfannot_link:nnn %expansion??
15444             { GoToR }
15445             {
15446             }
15447             {
15448              \let\protect\relax
15449               \ifmmode\else\if@RTL\beginR\fi\fi#1\ifmmode\else\if@RTL\endR\fi\fi\Hy@xspac
15450               \Hy@VerboseLinkStop %where is the start??
15451             }
15452           \ifmmode\else\endL\fi
15453           \group_end:
15454         }
15455         {
15456           \group_begin: #1 \group_end:
15457         }
15458       \int_gdecr:N\g__hyp_linknestlevel_int
15459   }
15460   {{\let\protect\relax#1}}
15461 }
```

```
\cs_new_protected:Npn \hyper@linkurl #1 #2  %#1:link text #2: URI,
  {
    \bool_if:NTF \l__hyp_annot_URI_bool
      {
        \int_gincr:N\g__hyp_linknestlevel_int
        \__hyp_check_link_nesting:TF
          {
           \group_begin:
           \__hyp_text_pdfstring:eoN
             { #2}
             { \l__hyp_text_enc_uri_print_tl }
             \l__hyp_uri_tmpa_tl
           \pdfdict_put:nno{l_hyp/annot/A/URI}{URI}{\l__hyp_uri_tmpa_tl}
           \bool_if:NT \l__hyp_href_url_ismap_bool
             {
              \pdfdict_put:nnn{l_hyp/annot/A/URI}{IsMap}{true}
             }
           \socket_use:nn{hyp/link/URI/Contents}{#2}
           \cs_set_eq:NN \# \c_hash_str
           \cs_set_eq:NN \% \c_percent_str
           \Hy@safe@activestrue
           \mode_leave_vertical:
           \pdfannot_dict_put:nne {link/URI}{A}{<<\pdfdict_use:n {l_hyp/annot/A/URI}>>}
           \ifmmode\else\beginL\fi
           \pdfannot_link:nen { URI }
             {
             }
             {
               \let\protect\relax
               \ifmmode\else\if@RTL\beginR\fi\fi#1\ifmmode\else\if@RTL\endR\fi\fi
               \Hy@xspace@end
               \Hy@VerboseLinkStop %where is the start??
             }
           \ifmmode\else\endL\fi
           \group_end:
          }
          {
            \group_begin: #1 \group_end:
          }
        \int_gdecr:N\g__hyp_linknestlevel_int
      }
      {{\let\protect\relax#1}}
  }
\RenewDocumentCommand \Acrobatmenu { m m }
  {
    \hyper@linknamed {#1} {#2}
  }
\cs_new_protected:Npn \hyper@linknamed #1 #2 %#1 action, #2 link text
  {
    \bool_if:NTF \l__hyp_annot_Named_bool
      {
         \int_gincr:N\g__hyp_linknestlevel_int
         \__hyp_check_link_nesting:TF
          {
```

```
            \group_begin:
            \pdfmeta_standard_verify:nnTF {named_actions}{#1}
              {
                \mode_leave_vertical:
                \pdfdict_put:nne {l_hyp/annot/A/Named}{N}
                  {\pdf_name_from_unicode_e:n{#1}}
                \pdfannot_dict_put:nne {link/Named}{A}{<<\pdfdict_use:n {l_hyp/annot/A/Name
                \ifmmode\else\beginL\fi
                \pdfannot_link:nnn { Named }
                 {
  %                 /A
  %                   <<
  %                     \pdfdict_use:n { l_hyp/annot/A/Named }
  %                   >>
                 }
                 {
                   \ifmmode\else\if@RTL\beginR\fi\fi#2\ifmmode\else\if@RTL\endR\fi
                   \Hy@xspace@end
                   \Hy@VerboseLinkStop
                 }
                 \ifmmode\else\endL\fi
              }
              {
                \msg_warning:nnn { hyp } { pdfa-no-named-action }{#1}
                #2
              }
           \group_end:
          }
          { \group_begin: #2 \group_end: }
        \int_gdecr:N\g__hyp_linknestlevel_int
      }
      {{\let\protect\relax#2}}
  }
}
\ExplSyntaxOff
```

103 File hvfloat-xetex-bidi.def

```
\ProvidesFile{hvfloat-xetex-bidi.def}[2012/04/18 v0.2 bidi adaptations for hvfloat package
\def\do@@hvFloat[#1]#2#3{%
 \def\hv@shortCap{#1}
 \def\hv@longCap{#2}
 \def\hv@label{#3}
%\newcommand*{\hvFloat}[5][]{%
% [#1]: keyvalues
% #2: type  figure | table | ...
% #3: float contents
% [#4]: short caption
% #5: caption
% #6: label
% \setDefaults%
% \def\@tempa{#1}%
% \ifx\@tempa\empty\else\setkeys{hvSet}{#1}\fi% set options, only when not empty
  \def\@tempa{90}%
```

```
  \ifx\hvSet@rotAngle\@tempa \setlength{\hvMaxCapWidth}{\textheight}
  \else                      \setlength{\hvMaxCapWidth}{\linewidth}
  \fi
%
% First we save the object in \hvObjectBox
%
  \ifx\hvSet@objectAngle\hv@Zero % rotate the object?
    \savebox{\hvObjectBox}{\ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}
  \else
    \savebox{\hvObjectBox}{%
    \rotatebox{\hvSet@objectAngle}{%
    \ifhv@useOBox\usebox{\hvOBox}\else\hv@floatObject\fi}}
  \fi
  \setlength{\hvObjectWidth}{\wd\hvObjectBox}
%
% Now we save the caption with its defined \hvCapWidth
%
  \ifx\hvSet@capWidth\hv@Width\setlength{\hvCapWidth}{\hvObjectWidth}
  \else
    \ifx\hvSet@capWidth\hv@Height\setlength{\hvCapWidth}{\ht\hvObjectBox}
    \else
      \setlength{\hvCapWidth}{\hvObjectWidth}
      \ifx\hvSet@capPos\hv@Left\addtolength{\hvMaxCapWidth}{-\hvObjectWidth}\fi
      \ifx\hvSet@capPos\hv@Right\addtolength{\hvMaxCapWidth}{-\hvObjectWidth}\fi
      \ifdim\hvSet@capWidth\columnwidth<\hvMaxCapWidth
\setlength{\hvCapWidth}{\hvSet@capWidth\columnwidth}
      \else
\setlength{\hvCapWidth}{\hvMaxCapWidth}
      \fi
    \fi
  \fi
%
% now we have the object and the caption with the right
% rotated angles saved in boxes
%
  \def\fps@figure{\hvSet@floatPos}
  \ifhv@nonFloat\begingroup% Start the nonfloat part
  \else         \begin{\hv@floatType}%  Start the floating environment
  \fi%
  \saveCaptionSkip% we put this space ourselve
  \ifx\hvSet@capAngle\hv@Width % need rotation?
    \sbox{\hvCaptionBox}{%
      \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation
        \ifhv@nonFloat%
   \ifhv@onlyText#2%
     \else%
     \ifx\hv@floatType\hv@figure
       \ifx\relax#1\relax \figcaption{#2}\else\figcaption[#1]{#2}\fi
     \else
       \ifx\relax#1\relax \tabcaption{#2}\else\tabcaption[#1]{#2}\fi%
     \fi
   \fi
\else\ifx\relax\hv@shortCap\relax\caption{#2}\else\caption[#1]{#2}\fi%
\fi%
```

```
\label{#3}%
      \end{minipage}%
    }%
  \else%
    \sbox{\hvCaptionBox}{%
      \rotatebox{\hvSet@capAngle}{%
      \begin{minipage}[b]{\hvCapWidth}% minipage, to get hyphenation
\ifhv@nonFloat%
    \ifhv@onlyText#2%
    \else%
    \ifx\hv@floatType\hv@figure
      \ifx\relax#1\relax \figcaption{#2}\else\figcaption[#1]{#2}\fi
    \else
      \ifx\relax#1\relax \tabcaption{#2}\else\tabcaption[#1]{#2}\fi%
    \fi
  \fi
\else\ifx\relax\hv@shortCap\relax\caption{#2}\else\caption[#1]{#2}\fi%
       \fi%
       \label{#3}%
     \end{minipage}%
     }%
   }%
  \fi%
%%
  \restoreCaptionSkip% save old values
  \ifx\hvSet@objectPos\hv@Right\bidi@raggedleft%
  \else%
    \ifx\hvSet@objectPos\hv@Center
      \ifhv@nonFloat\hspace*{\fill}\else\centering\fi%
    \fi%
  \fi%
%
% to rotate object and caption together, we save all in another box
% the caption comes first, if its on the left or the top
%
  \savebox{\@tempboxa}{%
  \ifx\hvSet@capPos\hv@Left  %  caption on left side
\if@RTL%
\ifx\hvSet@capVPos\hv@Center%
       \ifhv@fbox
        \fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}
       \else
        \parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}
       \fi%
       \hspace{\hvSet@floatCapSep pt}%
       \ifhv@fbox
        \fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
       \else
        \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}
       \fi%
      \else%
       \ifx\hvSet@capVPos\hv@Top
        \ifhv@fbox
         \fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
```

```
15675         \else
15676          \raisebox{-\height}{\usebox{\hvObjectBox}}%
15677         \fi%
15678         \hspace{\hvSet@floatCapSep pt}%
15679         \ifhv@fbox
15680          \fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
15681         \else
15682          \raisebox{-\height}{\usebox{\hvCaptionBox}}%
15683         \fi
15684        \else
15685         \ifhv@fbox
15686          \fbox{\usebox{\hvObjectBox}}%
15687         \else
15688          \usebox{\hvObjectBox}%
15689         \fi
15690         \hspace{\hvSet@floatCapSep pt}%
15691         \ifhv@fbox
15692          \fbox{\usebox{\hvCaptionBox}}%
15693         \else
15694          \usebox{\hvCaptionBox}%
15695         \fi%
15696        \fi%
15697 \fi%
15698 \else% not RTL
15699     \ifx\hvSet@capVPos\hv@Center%
15700       \ifhv@fbox\fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
15701       \else     \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}%
15702       \fi%
15703     \hspace{\hvSet@floatCapSep pt}% capfloatsep
15704     \ifhv@fbox\fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}
15705     \else     \parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}
15706     \fi%
15707   \else%
15708     \ifx\hvSet@capVPos\hv@Top % caption at top
15709       \ifhv@fbox\fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
15710       \else     \raisebox{-\height}{\usebox{\hvCaptionBox}}%
15711       \fi
15712       \hspace{\hvSet@floatCapSep pt}% capfloatsep
15713       \ifhv@fbox\fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
15714       \else     \raisebox{-\height}{\usebox{\hvObjectBox}}%
15715       \fi%
15716     \else% caption on bottom
15717       \ifhv@fbox\fbox{\usebox{\hvCaptionBox}}
15718                 \else\usebox{\hvCaptionBox}
15719       \fi%
15720       \hspace{\hvSet@floatCapSep pt}%
15721       \ifhv@fbox\fbox{\usebox{\hvObjectBox}}
15722       \else     \usebox{\hvObjectBox}
15723       \fi%
15724     \fi%
15725 \fi% end of RTL
15726   \fi%
15727   \else
15728     \ifx\hvSet@capPos\hv@Top
```

```
15729      \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
15730       \begin{minipage}{\wd\hvCaptionBox}
15731      \else
15732       \begin{minipage}{\wd\hvObjectBox}
15733      \fi
15734      \centering
15735      \ifhv@fbox
15736       \fbox{\usebox{\hvCaptionBox}}\\[\hvBelowCaptionSkip]
15737       \fbox{\usebox{\hvObjectBox}}
15738      \else
15739       \usebox{\hvCaptionBox}\\[\hvBelowCaptionSkip]
15740       \usebox{\hvObjectBox}
15741      \fi%
15742      \end{minipage}
15743     \else
15744      \ifx\hvSet@capPos\hv@Bottom
15745       \ifdim\wd\hvCaptionBox>\wd\hvObjectBox
15746        \begin{minipage}{\wd\hvCaptionBox}
15747       \else
15748        \begin{minipage}{\wd\hvObjectBox}
15749       \fi
15750       \centering
15751       \ifhv@fbox
15752        \fbox{\usebox{\hvObjectBox}}\\[\hvAboveCaptionSkip]
15753        \fbox{\usebox{\hvCaptionBox}}
15754       \else
15755        \usebox{\hvObjectBox}\\[\hvAboveCaptionSkip]
15756        \usebox{\hvCaptionBox}
15757       \fi%
15758       \end{minipage}
15759      \else% the last option: put the caption on the right
15760 \if@RTL%
15761     \ifx\hvSet@capVPos\hv@Center%
15762       \ifhv@fbox\fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
15763       \else      \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}%
15764       \fi%
15765     \hspace{\hvSet@floatCapSep pt}% capfloatsep
15766     \ifhv@fbox\fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}
15767     \else      \parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}
15768     \fi%
15769   \else%
15770     \ifx\hvSet@capVPos\hv@Top % caption at top
15771       \ifhv@fbox\fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
15772       \else      \raisebox{-\height}{\usebox{\hvCaptionBox}}%
15773       \fi
15774       \hspace{\hvSet@floatCapSep pt}% capfloatsep
15775       \ifhv@fbox\fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
15776       \else      \raisebox{-\height}{\usebox{\hvObjectBox}}%
15777       \fi%
15778     \else% caption on bottom
15779       \ifhv@fbox\fbox{\usebox{\hvCaptionBox}}
15780                 \else\usebox{\hvCaptionBox}
15781       \fi%
15782       \hspace{\hvSet@floatCapSep pt}%
```

```
      \ifhv@fbox\fbox{\usebox{\hvObjectBox}}
      \else     \usebox{\hvObjectBox}
      \fi%
    \fi%
  \fi%
\else% not RTL
      \ifx\hvSet@capVPos\hv@Center%
       \ifhv@fbox
        \fbox{\parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}}
       \else
        \parbox{\wd\hvObjectBox}{\usebox{\hvObjectBox}}
       \fi%
       \hspace{\hvSet@floatCapSep pt}%
       \ifhv@fbox
        \fbox{\parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}}%
       \else
        \parbox{\wd\hvCaptionBox}{\usebox{\hvCaptionBox}}
       \fi%
      \else%
       \ifx\hvSet@capVPos\hv@Top
        \ifhv@fbox
         \fbox{\raisebox{-\height}{\usebox{\hvObjectBox}}}%
        \else
         \raisebox{-\height}{\usebox{\hvObjectBox}}%
        \fi%
        \hspace{\hvSet@floatCapSep pt}%
        \ifhv@fbox
         \fbox{\raisebox{-\height}{\usebox{\hvCaptionBox}}}%
        \else
         \raisebox{-\height}{\usebox{\hvCaptionBox}}%
        \fi
       \else
        \ifhv@fbox
         \fbox{\usebox{\hvObjectBox}}%
        \else
         \usebox{\hvObjectBox}%
        \fi
        \hspace{\hvSet@floatCapSep pt}%
        \ifhv@fbox
         \fbox{\usebox{\hvCaptionBox}}%
        \else
         \usebox{\hvCaptionBox}%
        \fi%
       \fi%
      \fi
\fi% end of RTL
     \fi
    \fi
   \fi
  }% End savebox Object and caption
%
% now we rotate the object and caption, if needed
%
  \ifx\hvSet@rotAngle\hv@Zero
```

```
    \usebox{\@tempboxa}
   \else
    \rotatebox{\hvSet@rotAngle}{\usebox{\@tempboxa}}
   \fi
  \ifhv@nonFloat
   \ifx\hvSet@objectPos\hv@Center
    \ifhv@nonFloat
     \hspace{\fill}
    \fi
   \fi
   \endgroup% End the nonfloat part
  \else
   \end{\hv@floatType}% End the floating environment
  \fi
}
```

104 File hyperref-xetex-bidi.def

```
\ProvidesFile{hyperref-xetex-bidi.def}[2025/01/05 v1.4 bidi adaptations for hyperref packag
\AtBeginDocument{%
\def\contentsline#1#2#3#4{%
  \ifx\\#4\\%
    \csname l@#1\endcsname{#2}{#3}%
  \else
    \ifcase\Hy@linktoc % none
      \csname l@#1\endcsname{#2}{#3}%
    \or % section
      \csname l@#1\endcsname{%
        \hyper@linkstart{link}{#4}{\if@RTL\beginR\fi#2\if@RTL\endR\fi}\hyper@linkend
      }{#3}%
    \or % page
      \csname l@#1\endcsname{{#2}}{%
        \hyper@linkstart{link}{#4}{#3}\hyper@linkend
      }%
    \else % all
      \csname l@#1\endcsname{%
        \hyper@linkstart{link}{#4}{\if@RTL\beginR\fi#2\if@RTL\endR\fi}\hyper@linkend
      }{%
        \hyper@linkstart{link}{#4}{#3}\hyper@linkend
      }%
    \fi
  \fi
}
\ifHy@hyperfootnotes
   \let\H@@footnotetext\@footnotetext
   \let\HRTL@@RTLfootnotetext\@RTLfootnotetext
   \let\HLTR@@LTRfootnotetext\@LTRfootnotetext
    \def\@xfootnotenext[#1]{%
    \begingroup
      \csname c@\@mpfn\endcsname #1\relax
      \unrestored@protected@xdef\@thefnmark{\thempfn}%
    \endgroup
    \ifx\@footnotetext\@mpfootnotetext
      \expandafter\H@@mpfootnotetext
```

```
    \else
      \expandafter\H@@footnotetext
    \fi
  }%
    \def\@xRTLfootnotenext[#1]{%
    \begingroup
      \csname c@\@mpfn\endcsname #1\relax
      \unrestored@protected@xdef\@thefnmark{\thempfn}%
    \endgroup
    \ifx\@RTLfootnotetext\@mpRTLfootnotetext
      \expandafter\HRTL@@mpRTLfootnotetext
    \else
      \expandafter\HRTL@@RTLfootnotetext
    \fi
  }%
    \def\@xLTRfootnotenext[#1]{%
    \begingroup
      \csname c@\@mpfn\endcsname #1\relax
      \unrestored@protected@xdef\@thefnmark{\thempfn}%
    \endgroup
    \ifx\@LTRfootnotetext\@mpLTRfootnotetext
      \expandafter\HLTR@@mpLTRfootnotetext
    \else
      \expandafter\HLTR@@LTRfootnotetext
    \fi
  }%
    \def\@xfootnotemark[#1]{%
    \begingroup
      \c@footnote #1\relax
      \unrestored@protected@xdef\@thefnmark{\thefootnote}%
    \endgroup
    \H@@footnotemark
  }%
  \let\H@@mpfootnotetext\@mpfootnotetext
  \let\HRTL@@mpRTLfootnotetext\@mpRTLfootnotetext
  \let\HLTR@@mpLTRfootnotetext\@mpLTRfootnotetext
    \long\def\@mpfootnotetext#1{%
    \H@@mpfootnotetext{%
      \ifHy@nesting
        \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
      \else
        \Hy@raisedlink{%
          \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
        }#1%
      \fi
    }%
  }%
  \long\def\@mpRTLfootnotetext#1{%
    \HRTL@@mpRTLfootnotetext{%
      \ifHy@nesting
        \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
      \else
        \Hy@raisedlink{%
          \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
```

```
      }#1%
    \fi
  }%
}%
  \long\def\@mpLTRfootnotetext#1{%
  \HLTR@@mpLTRfootnotetext{%
    \ifHy@nesting
      \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
    \else
      \Hy@raisedlink{%
        \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
      }#1%
    \fi
  }%
}%
  \long\def\@footnotetext#1{%
  \H@@footnotetext{%
    \ifHy@nesting
      \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
    \else
      \Hy@raisedlink{%
        \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
      }%
      \let\@currentHlabel\Hy@footnote@currentHlabel
      \let\@currentHref\Hy@footnote@currentHref
      \let\@currentlabelname\@empty
      #1%
    \fi
  }%
}%
  \long\def\@RTLfootnotetext#1{%
  \HRTL@@RTLfootnotetext{%
    \ifHy@nesting
      \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
    \else
      \Hy@raisedlink{%
        \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
      }%
      \let\@currentHlabel\Hy@footnote@currentHlabel
      \let\@currentHref\Hy@footnote@currentHref
      \let\@currentlabelname\@empty
      #1%
    \fi
  }%
}%
  \long\def\@LTRfootnotetext#1{%
  \HLTR@@LTRfootnotetext{%
    \ifHy@nesting
      \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
    \else
      \Hy@raisedlink{%
        \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
      }%
      \let\@currentHlabel\Hy@footnote@currentHlabel
```

```
      \let\@currentHref\Hy@footnote@currentHref
      \let\@currentlabelname\@empty
      #1%
    \fi
  }%
}%
  \ApplyPatchCodeToPackage{tabularx}{%
  \let\HyOrg@TX@endtabularx\TX@endtabularx
  \def\Hy@tabularx@hook{%
    \let\@footnotetext\H@@footnotetext
    \let\@LTRfootnotetext\HLTR@@LTRfootnotetext
    \let\@RTLfootnotetext\HRTL@@RTLfootnotetext
    \let\@footnotemark\H@@footnotemark
    \let\@mpfootnotetext\H@@mpfootnotetext
    \let\@mpLTRfootnotetext\HLTR@@mpLTRfootnotetext
    \let\@mpRTLfootnotetext\HRTL@@mpRTLfootnotetext
  }%
  \begingroup
    \toks@\expandafter{\TX@endtabularx}%
    \xdef\Hy@gtemp{%
      \noexpand\Hy@tabularx@hook
      \the\toks@
    }%
  \endgroup
  \let\TX@endtabularx\Hy@gtemp
}%
  \ApplyPatchCodeToPackage{longtable}{%
  \CheckCommand{\LT@p@LTRftntext}[1]{%
    \edef\@tempa{%
      \the\LT@p@ftn
      \noexpand\LTRfootnotetext[\the\c@footnote]%
    }%
    \global\LT@p@ftn\expandafter{\@tempa{#1}}%
  }%
  \long\def\LT@p@LTRftntext#1{%
    \edef\@tempa{%
      \the\LT@p@ftn
      \begingroup
        \noexpand\c@footnote=\the\c@footnote\relax
        \noexpand\protected@xdef\noexpand\@thefnmark{%
          \noexpand\thempfn
        }%
        \noexpand\Hy@LT@LTRfootnotetext{%
          \Hy@footnote@currentHref
        }%
    }%
    \global\LT@p@ftn\expandafter{%
        \@tempa{#1}%
      \endgroup
    }%
  }%
  \long\def\Hy@LT@LTRfootnotetext#1#2{%
   \HLTR@@LTRfootnotetext{%
      \ifHy@nesting
```

```
16050         \hyper@@anchor{#1}{#2}%
16051       \else
16052         \Hy@raisedlink{%
16053           \hyper@@anchor{#1}{\relax}%
16054         }%
16055         \def\@currentHref{#1}%
16056         \let\@currentlabelname\@empty
16057         #2%
16058       \fi
16059     }%
16060   }%
16061   \CheckCommand{\LT@p@RTLftntext}[1]{%
16062     \edef\@tempa{%
16063       \the\LT@p@ftn
16064       \noexpand\RTLfootnotetext[\the\c@footnote]%
16065     }%
16066     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
16067   }%
16068   \long\def\LT@p@RTLftntext#1{%
16069     \edef\@tempa{%
16070       \the\LT@p@ftn
16071       \begingroup
16072         \noexpand\c@footnote=\the\c@footnote\relax
16073         \noexpand\protected@xdef\noexpand\@thefnmark{%
16074           \noexpand\thempfn
16075         }%
16076         \noexpand\Hy@LT@RTLfootnotetext{%
16077           \Hy@footnote@currentHref
16078         }%
16079     }%
16080     \global\LT@p@ftn\expandafter{%
16081         \@tempa{#1}%
16082       \endgroup
16083     }%
16084   }%
16085   \long\def\Hy@LT@RTLfootnotetext#1#2{%
16086    \HRTL@@RTLfootnotetext{%
16087       \ifHy@nesting
16088         \hyper@@anchor{#1}{#2}%
16089       \else
16090         \Hy@raisedlink{%
16091           \hyper@@anchor{#1}{\relax}%
16092         }%
16093         \def\@currentHref{#1}%
16094         \let\@currentlabelname\@empty
16095         #2%
16096       \fi
16097     }%
16098   }%
16099 }%
16100   \ApplyPatchCodeToPackage{bidipoem}{%
16101   \long\def\bidipoem@p@ftntext#1{%
16102     \edef\@tempx{%
16103       \the\bidipoem@p@ftn
```

```
16104         \begingroup
16105           \noexpand\csname c@\@mpfn\endcsname=\the\csname c@\@mpfn\endcsname\relax
16106           \noexpand\protected@xdef\noexpand\@thefnmark{%
16107             \noexpand\thempfn
16108           }%
16109           \noexpand\Hy@bidipoem@footnotetext{%
16110             \Hy@footnote@currentHref
16111           }%
16112       }%
16113       \global\bidipoem@p@ftn\expandafter{%
16114           \@tempx{#1}%
16115         \endgroup
16116       }%
16117     }%
16118     \long\def\Hy@bidipoem@footnotetext#1#2{%
16119       \H@@footnotetext{%
16120         \ifHy@nesting
16121           \hyper@@anchor{#1}{#2}%
16122         \else
16123           \Hy@raisedlink{%
16124             \hyper@@anchor{#1}{\relax}%
16125           }%
16126           \def\@currentHref{#1}%
16127           \let\@currentlabelname\@empty
16128           #2%
16129         \fi
16130       }%
16131     }%
16132         \long\def\bidipoem@p@LTRftntext#1{%
16133       \edef\@tempxi{%
16134         \the\bidipoem@p@ftn
16135         \begingroup
16136           \noexpand\csname c@\@mpfn\endcsname=\the\csname c@\@mpfn\endcsname\relax
16137           \noexpand\protected@xdef\noexpand\@thefnmark{%
16138             \noexpand\thempfn
16139           }%
16140           \noexpand\Hy@bidipoem@LTRfootnotetext{%
16141             \Hy@footnote@currentHref
16142           }%
16143       }%
16144       \global\bidipoem@p@ftn\expandafter{%
16145           \@tempxi{#1}%
16146         \endgroup
16147       }%
16148     }%
16149     \long\def\Hy@bidipoem@LTRfootnotetext#1#2{%
16150       \HLTR@@LTRfootnotetext{%
16151         \ifHy@nesting
16152           \hyper@@anchor{#1}{#2}%
16153         \else
16154           \Hy@raisedlink{%
16155             \hyper@@anchor{#1}{\relax}%
16156           }%
16157           \def\@currentHref{#1}%
```

```
16158           \let\@currentlabelname\@empty
16159           #2%
16160         \fi
16161       }%
16162     }%
16163         \long\def\bidipoem@p@RTLftntext#1{%
16164       \edef\@tempxii{%
16165         \the\bidipoem@p@ftn
16166         \begingroup
16167           \noexpand\csname c@\@mpfn\endcsname=\the\csname c@\@mpfn\endcsname\relax
16168           \noexpand\protected@xdef\noexpand\@thefnmark{%
16169             \noexpand\thempfn
16170           }%
16171           \noexpand\Hy@bidipoem@RTLfootnotetext{%
16172             \Hy@footnote@currentHref
16173           }%
16174       }%
16175       \global\bidipoem@p@ftn\expandafter{%
16176           \@tempxii{#1}%
16177         \endgroup
16178       }%
16179     }%
16180     \long\def\Hy@bidipoem@RTLfootnotetext#1#2{%
16181       \HRTL@@RTLfootnotetext{%
16182         \ifHy@nesting
16183           \hyper@@anchor{#1}{#2}%
16184         \else
16185           \Hy@raisedlink{%
16186             \hyper@@anchor{#1}{\relax}%
16187           }%
16188           \def\@currentHref{#1}%
16189           \let\@currentlabelname\@empty
16190           #2%
16191         \fi
16192       }%
16193     }%
16194   }%
16195   \let\HyOrg@maketitle\maketitle
16196   \def\maketitle{%
16197     \let\Hy@saved@footnotemark\@footnotemark
16198     \let\Hy@saved@footnotetext\@footnotetext
16199     \let\HyRTL@saved@RTLfootnotetext\@RTLfootnotetext
16200     \let\HyLTR@saved@LTRfootnotetext\@LTRfootnotetext
16201     \let\@footnotemark\H@@footnotemark
16202     \let\@footnotetext\H@@footnotetext
16203     \let\@RTLfootnotetext\HRTL@@RTLfootnotetext
16204     \let\@LTRfootnotetext\HLTR@@LTRfootnotetext
16205     \@ifnextchar[\Hy@maketitle@optarg{% ]
16206       \HyOrg@maketitle
16207       \Hy@maketitle@end
16208     }%
16209   }%
16210   \def\Hy@maketitle@optarg[#1]{%
16211     \HyOrg@maketitle[{#1}]%
```

```
16212     \Hy@maketitle@end
16213   }%
16214   \def\Hy@maketitle@end{%
16215     \ifx\@footnotemark\H@@footnotemark
16216       \let\@footnotemark\Hy@saved@footnotemark
16217     \fi
16218     \ifx\@footnotetext\H@@footnotetext
16219       \let\@footnotetext\Hy@saved@footnotetext
16220     \fi
16221     \ifx\@RTLfootnotetext\HRTL@@RTLfootnotetext
16222       \let\@RTLfootnotetext\HyRTL@saved@RTLfootnotetext
16223     \fi
16224     \ifx\@LTRfootnotetext\HLTR@@LTRfootnotetext
16225       \let\@LTRfootnotetext\HyLTR@saved@LTRfootnotetext
16226     \fi
16227   }%
16228   \def\realfootnote{%
16229     \@ifnextchar[\@xfootnote{%
16230       \stepcounter{\@mpfn}%
16231       \protected@xdef\@thefnmark{\thempfn}%
16232       \H@@footnotemark\H@@footnotetext
16233     }%
16234   }%
16235 \fi
16236 \def\Hy@BeginAnnot#1{%
16237   \ifmmode\else\beginL\fi%
16238   \global\advance\c@Hy@AnnotLevel\@ne
16239   \ifnum\c@Hy@AnnotLevel=\@ne
16240     #1%
16241   \fi
16242 }
16243 \def\Hy@EndAnnot{%
16244   \ifnum\c@Hy@AnnotLevel=\@ne
16245     \Hy@endcolorlink
16246     \@pdfm@mark{eann}%
16247   \fi
16248   \global\advance\c@Hy@AnnotLevel\m@ne
16249   \ifmmode\else\endL\fi%
16250 }
16251 \def\hyper@link#1#2#3{%
16252   \hyper@linkstart{#1}{#2}\ifmmode\else\if@RTL\beginR\fi\fi#3\ifmmode\else\if@RTL\endR\fi\f
16253 }
16254 \def\hyper@linkfile#1#2#3{%
16255   \leavevmode
16256   \Hy@BeginAnnot{%
16257     \def\Hy@pstringF{#2}%
16258     \Hy@CleanupFile\Hy@pstringF
16259     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
16260     \Hy@pstringdef\Hy@pstringD{#3}%
16261     \Hy@MakeRemoteAction
16262     \@pdfm@mark{%
16263       bann<<%
16264         /Type/Annot%
16265         /Subtype/Link%
```

```
16266         \ifHy@pdfa /F 4\fi
16267         \Hy@setpdfborder
16268         \ifx\@filebordercolor\relax
16269         \else
16270           /C[\@filebordercolor]%
16271         \fi
16272         /A<<%
16273           /S/GoToR%
16274           /F(\Hy@pstringF)%
16275           /D%
16276           \ifx\\#3\\%
16277             [\Hy@href@page\@pdfremotestartview]%
16278           \else
16279             (\Hy@pstringD)%
16280           \fi
16281           \Hy@SetNewWindow
16282           \Hy@href@nextactionraw
16283         >>%
16284       >>%
16285     }%
16286     \Hy@colorlink\@filecolor
16287   }%
16288   \ifmmode\else\if@RTL\beginR\fi\fi#1\ifmmode\else\if@RTL\endR\fi\fi\Hy@xspace@end
16289   \Hy@EndAnnot
16290 }
16291 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text linkname
16292   \leavevmode
16293   \Hy@BeginAnnot{%
16294     \Hy@pstringdef\Hy@pstringF{#1}%
16295     \Hy@pstringdef\Hy@pstringP{#3}%
16296     \@pdfm@mark{%
16297       bann<<%
16298         /Type/Annot%
16299         /Subtype/Link%
16300         \ifHy@pdfa /F 4\fi
16301         \Hy@setpdfborder
16302         \ifx\@runbordercolor\relax
16303         \else
16304           /C[\@runbordercolor]%
16305         \fi
16306         /A<<%
16307           /F(\Hy@pstringF)%
16308           /S/Launch%
16309           \Hy@SetNewWindow
16310           \ifx\\#3\\%
16311           \else
16312             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
16313           \fi
16314           \Hy@href@nextactionraw
16315         >>%
16316       >>%
16317     }%
16318     \Hy@colorlink\@runcolor
16319   }%
```

```
16320   \ifmmode\else\if@RTL\beginR\fi\fi#2\ifmmode\else\if@RTL\endR\fi\fi\Hy@xspace@end
16321   \Hy@EndAnnot
16322 }
16323 \def\hyper@linkurl#1#2{%
16324   \leavevmode
16325   \Hy@BeginAnnot{%
16326     \Hy@pstringdef\Hy@pstringURI{#2}%
16327     \@pdfm@mark{%
16328       bann<<%
16329         /Type/Annot%
16330         /Subtype/Link%
16331         \ifHy@pdfa /F 4\fi
16332         \Hy@setpdfborder
16333         \ifx\@urlbordercolor\relax
16334         \else
16335           /C[\@urlbordercolor]%
16336         \fi
16337         /A<<%
16338           /S/URI%
16339           /URI(\Hy@pstringURI)%
16340           \ifHy@href@ismap
16341             /IsMap true%
16342           \fi
16343           \Hy@href@nextactionraw
16344         >>%
16345       >>%
16346     }%
16347     \Hy@colorlink\@urlcolor
16348   }%
16349   \ifmmode\else\if@RTL\beginR\fi\fi#1\ifmmode\else\if@RTL\endR\fi\fi\Hy@xspace@end
16350   \Hy@EndAnnot
16351 }
16352 \def\Acrobatmenu#1#2{%
16353   \Hy@Acrobatmenu{#1}{#2}{%
16354     \Hy@BeginAnnot{%
16355       \EdefEscapeName\Hy@temp@menu{#1}%
16356       \@pdfm@mark{%
16357         bann<<%
16358           /Type/Annot%
16359           /Subtype/Link%
16360           \ifHy@pdfa /F 4\fi
16361           \Hy@setpdfborder
16362           \ifx\@menubordercolor\relax
16363           \else
16364             /C[\@menubordercolor]%
16365           \fi
16366           /A<<%
16367             /S/Named%
16368             /N/\Hy@temp@menu
16369             \Hy@href@nextactionraw
16370           >>%
16371         >>%
16372       }%
16373       \Hy@colorlink\@menucolor
```

```
16374     }%
16375     \ifmmode\else\if@RTL\beginR\fi\fi#2\ifmmode\else\if@RTL\endR\fi\fi\Hy@xspace@end
16376     \Hy@EndAnnot
16377   }%
16378 }
16379 \def\hyper@natlinkstart#1{%
16380   \Hy@backout{#1}%
16381   \hyper@linkstart{cite}{cite.#1}\if@RTL\beginR\fi%
16382   \def\hyper@nat@current{#1}%
16383 }
16384 \def\hyper@natlinkend{%
16385   \if@RTL\endR\fi\hyper@linkend
16386 }
16387 \def\hyper@natlinkbreak#1#2{%
16388   \if@RTL\endR\fi\hyper@linkend#1\hyper@linkstart{cite}{cite.#2}\if@RTL\beginR\fi%
16389 }%
16390 }
16391 \pdfstringdefDisableCommands{%
16392 \let\LRE\@firstofone
16393 \let\LR\@firstofone
16394 \let\RLE\@firstofone
16395 \let\RL\@firstofone
16396 \def\XeTeX{Xe\TeX}%
16397 \def\XeLaTeX{Xe\LaTeX}%
16398 }
16399 \bidi@patchcmd\@TextField{%
16400   \@pdfm@mark
16401 }{%
16402   \if@RTL
16403     \hskip\Fld@width
16404   \fi
16405   \@pdfm@mark
16406 }{}{}
16407 \bidi@patchcmd\@TextField{%
16408   \unhbox
16409 }{%
16410   \if@RTL
16411     \hskip-\Fld@width
16412   \fi
16413   \unhbox
16414 }{}{}
16415 \bidi@patchcmd\@@Radio{%
16416   \@pdfm@mark
16417 }{%
16418   \if@RTL
16419     \hskip\Fld@width
16420   \fi
16421   \@pdfm@mark
16422 }{}{}
16423 \bidi@patchcmd\@@Radio{%
16424   \unhcopy
16425 }{%
16426   \if@RTL
16427     \hskip-\Fld@width
```

```
  \fi
  \unhcopy
}{}{}
\bidi@patchcmd\@Submit{%
  \@pdfm@mark
}{%
  \if@RTL
    \null
    \hskip\wd\pdfm@box
  \fi
  \@pdfm@mark
}{}{}
\bidi@patchcmd\@Submit{%
  \unhbox
}{%
  \if@RTL
    \hskip-\wd\pdfm@box
  \fi
  \unhbox
}{}{}
\bidi@patchcmd\@Reset{%
  \@pdfm@mark
}{%
  \if@RTL
    \null
    \hskip\wd\pdfm@box
  \fi
  \@pdfm@mark
}{}{}
\bidi@patchcmd\@Reset{%
  \unhbox
}{%
  \if@RTL
    \hskip-\wd\pdfm@box
  \fi
  \unhbox
}{}{}
```

105 File imsproc-xetex-bidi.def

```
\ProvidesFile{imsproc-xetex-bidi.def}[2017/06/09 v0.1 bidi adaptations for imsproc class fo
\newenvironment{thebibliography}[1]{%
  \@bibtitlestyle
  \normalfont\bibliofont\labelsep .5em\relax
  \renewcommand\theenumiv{\arabic{enumiv}}\let\p@enumiv\@empty
  \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
  \bidi@@thebibliography@font@hook
  \list{\@biblabel{\theenumiv}}{\settowidth\labelwidth{\@biblabel{#1}}%
    \leftmargin\labelwidth \advance\leftmargin\labelsep
    \usecounter{enumiv}}%
  \sloppy \clubpenalty\@M \widowpenalty\clubpenalty
  \sfcode`\.=\@m
}{%
  \def\@noitemerr{\@latex@warning{Empty `thebibliography' environment}}%
```

```
  \endlist
}

\def\theindex{\@restonecoltrue\if@twocolumn\@restonecolfalse\fi
  \columnseprule\z@ \columnsep 35\p@
  \@indextitlestyle
  \thispagestyle{plain}%
  \let\item\@idxitem
  \parindent\z@  \parskip\z@\@plus.3\p@\relax
  \if@RTL\raggedleft\else\raggedright\fi
  \hyphenpenalty\@M
  \footnotesize}
\def\@idxitem{\par\hangindent \if@RTL-\fi2em}
\def\subitem{\par\hangindent \if@RTL-\fi2em\hspace*{1em}}
\def\subsubitem{\par\hangindent \if@RTL-\fi3em\hspace*{2em}}

\def\right@footnoterule{%
  \kern-.4\p@
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-5pc\relax \hrulefill }
  \kern11\p@\kern-\footnotesep}
\def\left@footnoterule{\kern-.4\p@
        \hrule\@width 5pc\kern11\p@\kern-\footnotesep}
\def\@makefnmark{%
  \leavevmode
  \raise.9ex\hbox{\fontsize\sf@size\z@\normalfont\@thefnmark}%
}

\def\part{\@startsection{part}{0}%
  \z@{\linespacing\@plus\linespacing}{.5\linespacing}%
  {\normalfont\bfseries\if@RTL\raggedleft\else\raggedright\fi}}
\def\@tocline#1#2#3#4#5#6#7{\relax
  \ifnum #1>\c@tocdepth % then omit
  \else
    \par \addpenalty\@secpenalty\addvspace{#2}%
    \begingroup \hyphenpenalty\@M
    \@ifempty{#4}{%
      \@tempdima\csname r@tocindent\number#1\endcsname\relax
    }{%
      \@tempdima#4\relax
    }%
    \parindent\z@ \if@RTL\rightskip\else\leftskip\fi#3\relax \advance\if@RTL\rightskip\else
    \if@RTL\leftskip\else\rightskip\fi\@pnumwidth plus4em \parfillskip-\@pnumwidth
    #5\leavevmode\hskip-\@tempdima #6\nobreak\relax
    \hfil\hbox to\@pnumwidth{\@tocpagenum{#7}}\par
    \nobreak
    \endgroup
  \fi}
\renewcommand\thesubsection    {\thesection\@SepMark\arabic{subsection}}
\renewcommand\thesubsubsection {\thesubsection \@SepMark\arabic{subsubsection}}
\renewcommand\theparagraph     {\thesubsubsection\@SepMark\arabic{paragraph}}
\renewcommand\thesubparagraph  {\theparagraph\@SepMark\arabic{subparagraph}}
\def\maketitle{\par
  \@topnum\z@ % this prevents figures from falling at the top of page 1
  \@setcopyright
```

```
  \thispagestyle{firstpage}% this sets first page specifications
  \uppercasenonmath\shorttitle
  \ifx\@empty\shortauthors \let\shortauthors\shorttitle
  \else \andify\shortauthors
  \fi
  \@maketitle@hook
  \begingroup
  \@maketitle
  \toks@\@xp{\shortauthors}\@temptokena\@xp{\shorttitle}%
  \toks4{\def\\{ \ignorespaces}}% defend against questionable usage
  \edef\@tempa{%
    \@nx\markboth{\the\toks4
      \@nx\MakeUppercase{\the\toks@}}{\the\@temptokena}}%
  \@tempa
  \endgroup
  \c@footnote\z@
  \@cleartopmattertags
}
```

106 File leqno-xetex-bidi.def

```
\ProvidesFile{leqno-xetex-bidi.def}[2018/01/07 v0.2 bidi adaptations for leqno tag for XeTe
\renewcommand\@eqnnum{\hb@xt@.01\p@{}%
                      \rlap{\hskip -\displaywidth
                        {\normalfont\normalcolor\if@RTL\beginR\fi(\theequation)\if@RTL\endR
```

107 File letter-xetex-bidi.def

```
\ProvidesFile{letter-xetex-bidi.def}[2015/11/14 v0.3 bidi adaptations for standard letter c
\renewcommand*{\opening}[1]{\ifx\@empty\fromaddress
  \thispagestyle{firstpage}%
    {\if@RTL\raggedright\else\raggedleft\fi\@date\par}%
  \else  % home address
    \thispagestyle{empty}%
    {\if@RTL\raggedright\else\raggedleft\fi\if@RTL\begin{tabular}{r@{}}\else\begin{tabular}
      \fromaddress \\*[2\parskip]%
      \@date \end{tabular}\par}%
  \fi
  \vspace{2\parskip}%
  {\if@RTL\raggedleft\else\raggedright\fi \toname \\ \toaddress \par}%
  \vspace{2\parskip}%
  #1\par\nobreak}
\renewcommand\left@footnoterule{%
  \kern-\p@
  \hrule \@width .4\columnwidth
  \kern .6\p@}
\renewcommand\right@footnoterule{%
  \kern-\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern .6\p@}
```

108 File lettrine-xetex-bidi.def

```
\ProvidesFile{lettrine-xetex-bidi.def}[2024/12/08 v0.9 bidi adaptations for lettrine packag
```

```
\RemoveFromHook{begindocument}[lettrine]
\AtBeginDocument[lettrine]{%
  \if\DefaultOptionsFile\relax
  \else
    \InputIfFileExists{\DefaultOptionsFile}%
      {}%
      {\PackageWarning{lettrine.sty}%
         {File \DefaultOptionsFile\space not found}%
      }%
  \fi
  \let\ifL@RTL\if@RTL
}
```

109 File lineno-xetex-bidi.def

```
\ProvidesFile{lineno-xetex-bidi.def}[2024/12/07 v0.3 bidi adaptations for lineno package fo
\bidi@patchcmd{\MakeLineNo}{%
  \hb@xt@\z@{\makeLineNumber}%
}{%
  \hboxL to \z@{\makeLineNumber}%
}{}{}

\bidi@patchcmd{\makeLineNumberLeft}{\LineNumber}{%
  \if@RTL
    \hb@xt@\linenumberwidth{\LineNumber\hss}%
  \else
    \LineNumber
  \fi
}{}{}

\bidi@patchcmd{\makeLineNumberRight}{%
  \hb@xt@\linenumberwidth{\hss\LineNumber}%
}{%
  \if@RTL
    \LineNumber
  \else
    \hb@xt@\linenumberwidth{\hss\LineNumber}%
  \fi
}{}{}

\bidi@AfterPreamble{%
  \if@RTLmain
    \rightlinenumbers*
  \else
    \leftlinenumbers*
  \fi
  \@ifpackagewith{lineno}{left}{%
    \leftlinenumbers*
  }{}
  \@ifpackagewith{lineno}{right}{%
    \rightlinenumbers*
  }{}
  \@ifpackagewith{lineno}{switch}{%
    \if@RTLmain
```

```
      \switchlinenumbers*%
    \else
      \switchlinenumbers
    \fi
  }{}
  \@ifpackagewith{lineno}{switch*}{%
    \if@RTLmain
      \switchlinenumbers
    \else
      \switchlinenumbers*%
    \fi
  }{}
}

```

110 File listings-xetex-bidi.def

```
\ProvidesFile{listings-xetex-bidi.def}[2025/01/03 v1.6 bidi adaptations for listings packag
\lst@Key{captiondirection}{textdirection}{%
    \lstKV@SwitchCases{#1}%
    {textdirection:\\%
     RTL:\chardef\bidi@lst@caption@direction\@ne\\%
     LTR:\chardef\bidi@lst@caption@direction\z@%
    }{\PackageError{Listings}{direction #1 unknown}\@ehc}}

\lst@Key{captionscript}{textscript}{%
    \lstKV@SwitchCases{#1}%
    {textscript:\\%
     latin:\chardef\bidi@lst@caption@script\@ne\\%
     nonlatin:\chardef\bidi@lst@caption@script\z@%
    }{\PackageError{Listings}{direction #1 unknown}\@ehc}}

\newcommand*{\bidi@lst@ensure@caption@direction}[2]{%
   \@ifundefined{bidi@lst@caption@direction}{}{%
    \ifnum\bidi@lst@caption@direction=\z@%
        #1%
    \else%
         \ifnum\bidi@lst@caption@direction=\@ne%
             #2%
         \fi%
     \fi%
}}

\newcommand*{\bidi@lst@ensure@caption@script}[2]{%
   \@ifundefined{bidi@lst@caption@script}{}{%
    \ifnum\bidi@lst@caption@script=\z@%
        #1%
    \else%
         \ifnum\bidi@lst@caption@script=\@ne%
             #2%
         \fi%
     \fi%
}}

```

```
\long\def\@bidi@lst@makecaption#1#2{%
   \bidi@lst@ensure@caption@script{\@nonlatintrue}{\@nonlatinfalse}%
   \vskip\abovecaptionskip
   \bidi@lst@ensure@caption@direction{\@RTLfalse}{\@RTLtrue}%
   \sbox\@tempboxa{%
   \bidi@lst@ensure@caption@direction{\beginL}{\beginR}%
   #1: #2%
   \bidi@lst@ensure@caption@direction{\endL}{\endR}%
   }%
   \ifdim \wd\@tempboxa >\hsize
     #1: #2\par
   \else
     \global \@minipagefalse
     \hb@xt@\hsize{\hfil\box\@tempboxa\hfil}%
   \fi
   \vskip\belowcaptionskip}%
\def\lst@makecaption{\@bidi@lst@makecaption}
\def\lst@maketitle{\@bidi@lst@makecaption\lst@title@dropdelim}
\bidi@AtEndPreamble{%
\bidi@patchcmd{\lst@MakeCaption}{%
    \ifx #1t%
        \ifx\lst@@caption\@empty\expandafter\lst@HRefStepCounter \else
                                  \expandafter\refstepcounter
        \fi {lstlisting}%
}{%
    \ifx #1t%
       \bidi@lst@ensure@caption@direction{\@RTLfalse}{\@RTLtrue}%
        \ifx\lst@@caption\@empty\expandafter\lst@HRefStepCounter \else
                                  \expandafter\refstepcounter
        \fi {lstlisting}%
        \bidi@lst@ensure@caption@direction{\@RTLfalse}{\@RTLfalse}%
}{}{}%
\bidi@patchcmd{\lst@MakeCaption}{%
                \addcontentsline{lol}{lstlisting}%
                    {\protect\numberline{\thelstlisting}\lst@@caption}%
}{%
\begingroup%
               \bidi@lst@ensure@caption@direction{\@RTLfalse}{\@RTLtrue}%
                \addcontentsline{lol}{lstlisting}%
                    {\protect\numberline{\thelstlisting}\lst@@caption}%
\endgroup%
}{}{}%
}
\ApplyPatchIfPackageLoaded{caption}{%
  \AtBeginCaption{%
  \bidi@lst@ensure@caption@script{\@nonlatintrue}{\@nonlatinfalse}%
  \bidi@lst@ensure@caption@direction{\@RTLfalse}{\@RTLtrue}%
}
  \let\@bidi@lst@makecaption\caption@makecaption%
  \def\lst@makecaption{\caption@starfalse\@bidi@lst@makecaption}%
  \def\lst@maketitle{\caption@startrue\@bidi@lst@makecaption\@empty}%
}{%
\AtBeginDocument{%
\@ifundefined{captionlabelfalse}{}{%
```

```
  \def\lst@maketitle{\captionlabelfalse\@bidi@lst@makecaption\@empty}}%
\@ifundefined{caption@startrue}{}{%
  \def\lst@maketitle{\caption@startrue\@bidi@lst@makecaption\@empty}}%
}%
}
\AtBeginDocument{
  \@ifundefined{thechapter}{\let\lst@ifnumberbychapter\iffalse}{}
  \lst@ifnumberbychapter
      \gdef\thelstlisting%
           {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@lstlisting}
  \else
      \gdef\thelstlisting{\@arabic\c@lstlisting}
  \fi}
```

111 File longtable-xetex-bidi.def

```
\ProvidesFile{longtable-xetex-bidi.def}[2025/01/05 v0.8 bidi adaptations for longtable pack
\ExplSyntaxOn
\def\LT@array[#1]#2{%
  \UseTaggingSocket{tbl/init}
  \tl_if_empty:eTF { \LTcaptype }
    {
      \tl_gset:Ne \@currentHref {LT@tables.\theHLT@tables}
    }
    {
      \@kernel@refstepcounter{\LTcaptype}\stepcounter{LT@tables}
      \tl_gset:Ne \@currentHref {\LTcaptype.\cs_if_exist_use:c {theH\LTcaptype}}
    }
  \tbl_gzero_row_count:
  \UseTaggingSocket{tbl/longtable/init}
  \if l#1%
    \if@RTLtab\LTleft\fill \LTright\z@\else\LTleft\z@ \LTright\fill\fi
  \else\if r#1%
    \if@RTLtab\LTleft\z@ \LTright\fill\else\LTleft\fill \LTright\z@\fi
  \else\if c#1%
    \LTleft\fill \LTright\fill
  \fi\fi\fi
  \let\LT@mcol\multicolumn
  \let\LT@@tabarray\@tabarray
  \let\LT@@hl\hline
  \def\@tabarray{%
    \let\hline\LT@@hl
    \LT@@tabarray}%
  \let\\\LT@tabularcr
  \let\tabularnewline\\%
  \def\newpage{\noalign{\break}}%
  \def\pagebreak{\noalign{\ifnum`}=0\fi\@testopt{\LT@no@pgbk-}4}%
  \def\nopagebreak{\noalign{\ifnum`}=0\fi\@testopt\LT@no@pgbk4}%
  \let\hline\LT@hline \let\kill\LT@kill\let\caption\LT@caption
  \@tempdima\ht\strutbox
  \let\@endpbox\LT@endpbox
  \ifx\extrarowheight\@undefined
    \let\@acol\@tabacol
    \let\@classz\@tabclassz \let\@classiv\@tabclassiv
```

```
16785    \def\@startpbox{\vtop\LT@startpbox}%
16786    \let\@@startpbox\@startpbox
16787    \let\@@endpbox\@endpbox
16788    \let\LT@LL@FM@cr\@tabularcr
16789  \else
16790    \advance\@tempdima\extrarowheight
16791    \col@sep\tabcolsep
16792    \let\@startpbox\LT@startpbox\let\LT@LL@FM@cr\@arraycr
16793  \fi
16794  \setbox\@arstrutbox\hbox{\vrule
16795    \@height \arraystretch \@tempdima
16796    \@depth \arraystretch \dp \strutbox
16797    \@width \z@}%
16798  \let\@sharp##\let\protect\relax
16799   \begingroup
16800    \@mkpream{#2}%
16801    \tbl_count_table_cols:
16802    \xdef\LT@bchunk{%
16803      \tbl_inbetween_rows:
16804       \global\advance\c@LT@chunks\@ne
16805       \global\LT@rows\z@\setbox\z@\vbox\bgroup
16806       \LT@setprevdepth
16807       \tabskip\LTleft \noexpand\halign to\hsize\bgroup
16808       \tabskip\z@ \@arstrut
16809       \UseTaggingSocket{tbl/row/begin}%
16810       \tbl_init_cell_data_for_row:
16811       \@preamble \tabskip\LTright \cr}%
16812  \endgroup
16813  \expandafter\LT@nofcols\LT@bchunk&\LT@nofcols
16814  \LT@make@row
16815  \m@th\let\par\@empty
16816  \everycr{%
16817    \noalign{%
16818      \__tbl_trace:n {--longtable-->~chunk~row:~ \the\LT@rows \space
16819                  row:~ \the\g__tbl_row_int   \space
16820                  column:~ \the\g__tbl_col_int
16821      }
16822      \tbl_if_row_was_started:T
16823          {
16824            \UseTaggingSocket{tbl/row/end}
16825            \tbl_inbetween_rows:
16826          }
16827      \int_compare:nNnT \LT@rows < \LTchunksize
16828         { \tbl_gincr_row_count: }   % next is row about to start
16829    }%
16830  }%
16831  \lineskip\z@\baselineskip\z@
16832  \LT@bchunk}
16833 \ExplSyntaxOff
16834 \def\LT@makecaption#1#2#3{%
16835  \LT@mcol\LT@cols c{\hbox to\z@{\hss\parbox[t]\LTcapwidth{%
16836    \reset@font
16837    \sbox\@tempboxa{\if@RTL\beginR\fi#1{#2: }#3\if@RTL\endR\fi}%
16838    \ifdim\wd\@tempboxa>\hsize
```

```
16839       #1{#2: }#3%
16840     \else
16841       \hbox to\hsize{\hfil\box\@tempboxa\hfil}%
16842     \fi
16843     \endgraf\vskip\baselineskip}%
16844   \hss}}}
16845 \ApplyPatchCodeToPackage{caption}{%
16846   \renewcommand\LT@makecaption[3]{%
16847     \caption@LT@make{%
16848       \caption@LT@settype\LTcaptype
16849       \caption@LT@setup
16850       \caption@setautoposition{\ifcase\LT@rows t\else b\fi}%
16851       \caption@startrue#1\caption@starfalse
16852       \caption@prepare@stepcounter\LTcaptype
16853       \caption@begin\LTcaptype
16854         \caption@normalsize
16855         \vskip-\ht\strutbox
16856         \caption@ifdefined\FBifcaptop{%
16857           \let\caption@belowskip\@empty}{}%
16858         \caption@make@above
16859         \caption@@make{#2}{#3}\endgraf
16860         \caption@make@below
16861       \caption@end}}%
16862 }
16863 \def\LT@startpbox#1{%
16864   \bgroup
16865     \color@begingroup
16866     \let\@footnotetext\LT@p@ftntext
16867     \let\@LTRfootnotetext\LT@p@LTRftntext
16868     \let\@RTLfootnotetext\LT@p@RTLftntext
16869     \setlength\hsize{#1}%
16870     \@arrayparboxrestore
16871     \everypar{%
16872       \vrule \@height \ht\@arstrutbox \@width \z@
16873       \everypar{}}%
16874     }
16875 \long\def\LT@p@LTRftntext#1{%
16876   \edef\@tempa{\the\LT@p@ftn\noexpand\LTRfootnotetext[\the\c@footnote]}%
16877   \global\LT@p@ftn\expandafter{\@tempa{#1}}}%
16878 \long\def\LT@p@RTLftntext#1{%
16879   \edef\@tempa{\the\LT@p@ftn\noexpand\RTLfootnotetext[\the\c@footnote]}%
16880   \global\LT@p@ftn\expandafter{\@tempa{#1}}}%
16881 \def\LT@output{%
16882   \ifnum\outputpenalty <-\@Mi
16883     \ifnum\outputpenalty > -\LT@end@pen
16884       \LT@err{floats and marginpars not allowed in a longtable}\@ehc
16885     \else
16886       \setbox\z@\vbox{\unvbox\@cclv}%
16887       \ifdim \ht\LT@lastfoot>\ht\LT@foot
16888         \dimen@\pagegoal
16889         \advance\dimen@\ht\LT@foot
16890         \advance\dimen@-\ht\LT@lastfoot
16891         \ifdim\dimen@<\ht\z@
16892           \setbox\@cclv\vbox{\unvbox\z@\copy\LT@foot\vss}%
```

```
          \@makecol
          \@outputpage
          \global\vsize\@colroom
          \setbox\z@\vbox{\box\LT@head}%
        \fi
      \fi
        \if@RTLtab\hbox\bgroup\beginR\vbox\bgroup\fi
          \unvbox\z@\box\ifvoid\LT@lastfoot\LT@foot\else\LT@lastfoot\fi
          \UseTaggingSocket{tbl/longtable/foot}
        \if@RTLtab\egroup\endR\egroup\fi
    \fi
  \else
    \setbox\@cclv\vbox{%
      \if@RTLtab\hbox\bgroup\beginR\vbox\bgroup\fi
        \unvbox\@cclv\copy\LT@foot\vss
      \if@RTLtab\egroup\endR\egroup\fi
    }%
    \UseTaggingSocket{tbl/longtable/foot}
    \@makecol
    \@outputpage
      \global\vsize\@colroom
    \copy\LT@head\nobreak
  \fi}
```

112 File lscape-xetex-bidi.def

```
\ProvidesFile{lscape-xetex-bidi.def}[2025/01/03 v0.3 bidi adaptations for lscape package fo
\RequirePackage{graphicx}
\bidi@patchcmd{\LS@rot}{\rotatebox{90}{\box\@outputbox}}{%
  \if@RTL
    \rotatebox[origin=br]{-90}{\box\@outputbox}%
  \else
    \rotatebox{90}{\box\@outputbox}%
  \fi
}{}{}

\g@addto@macro{\landscape}{%
  \if@bidi@csdef{bidi@columnwidth}{%
    \bidi@columnwidth\columnwidth
  }{}%
  \let\bidi@left@footnoterule\left@footnoterule
  \let\bidi@right@footnoterule\right@footnoterule
  \def\left@footnoterule{%
    \if@RTL
      \bidi@right@footnoterule
    \else
      \bidi@left@footnoterule
    \fi
  }%
  \def\right@footnoterule{%
    \if@RTL
      \bidi@left@footnoterule
    \else
      \bidi@right@footnoterule
```

```
    \fi
  }%
}
```

113 File mathtools-xetex-bidi.def

```
\ProvidesFile{mathtools-xetex-bidi.def}[2025/01/03 v0.2 bidi adaptations for mathtools pack
\RequirePackage{graphicx}
\MHInternalSyntaxOn
\def\MT_define_tagform:nwnn #1[#2]#3#4{
  \@namedef{MT_tagform_#1:n}##1
    {\maketag@@@{\if@nonlatin\beginR\fi#3\kern\z@\ignorespaces#2{##1}\unskip\@@italiccorr#4
}
\renewtagform{default}{(}{)}
\MHInternalSyntaxOff
```

114 File mdframed-xetex-bidi.def

```
\ProvidesFile{mdframed-xetex-bidi.def}[2013/09/22 v0.4 bidi adaptations for mdframed packag
\newif\if@bidi@mdf@RTL
\def\mdf@lrbox#1{%
  \mdf@patchamsthm%patch amsthm
   \if@RTL\@bidi@mdf@RTLtrue\fi%
   \@RTLfalse%
 \setbox#1\vbox\bgroup%
   \color@begingroup%
    \if@bidi@mdf@RTL\@RTLtrue\fi%
     \mdf@horizontalmargin@equation%
     \columnwidth=\hsize%
     \textwidth=\hsize%
     \let\if@nobreak\iffalse%
     \let\if@noskipsec\iffalse%
     \let\par\@@par%
     \let\-\@dischyph%
     \let\'\@acci\let\`\@accii\let\=\@acciii%
     \parindent\z@ \parskip\z@skip%
     \linewidth\hsize%
     \@totalleftmargin\z@%
     \leftskip\z@skip \rightskip\z@skip \@rightskip\z@skip%
     \parfillskip\@flushglue \lineskip\normallineskip%
     \baselineskip\normalbaselineskip%
%%   \sloppy%
     \let\\\@normalcr%
     \mdf@par@local%New feature to restore parskip/parindent local in save box
     \ifbool{mdf@suppressfirstparskip}{\vspace*{-\parskip}}{}%
     \@afterindentfalse%
    %\@afterheading%
}
\renewrobustcmd\mdfframedtitleenv[1]{%
    \mdf@lrbox{\mdf@frametitlebox}%
     \mdf@frametitlealignment%
       \leavevmode{\color{\mdf@frametitlefontcolor}%
           \normalfont\mdf@frametitlefont{#1}
       \ifbool{mdf@ignorelastdescenders}%
```

```
          {%
           \par\strut\par
           \unskip\unskip\setbox0=\lastbox
           \vspace*{\dimexpr\ht\strutbox-\baselineskip\relax}%
          }{}%
     \par\unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%%
     \endmdf@lrbox\relax%
    \mdf@ignorevbadness%
    \setbox\mdf@frametitlebox=\vbox{\unvbox\mdf@frametitlebox}%
    \mdfframetitleboxwidth=\wd\mdf@frametitlebox\relax%
    \mdfframetitleboxheight=\ht\mdf@frametitlebox\relax%
    \mdfframetitleboxdepth=\dp\mdf@frametitlebox\relax%
    \mdfframetitleboxtotalheight=\dimexpr
                                    \ht\mdf@frametitlebox
                                    +\dp\mdf@frametitlebox%
                                    +\mdf@frametitleaboveskip@length
                                    +\mdf@frametitlebelowskip@length
                                  \relax%
}

\renewrobustcmd*\mdf@footnoteoutput{%
      \ifvoid\@mpfootins\else%
           \nobreak%
           \vskip\mdf@footenotedistance@length%
           \normalcolor%
           \bidi@mpfootnoterule%
           \unvbox\@mpfootins%
      \fi%
}


\renewrobustcmd*\mdf@footnoteinput{%
    \def\@mpfn{mpfootnote}%
    \def\thempfn{\thempfootnote}%
    \c@mpfootnote\z@%
    \let\@footnotetext\@mpfootnotetext%
     \let\@LTRfootnotetext\@mpLTRfootnotetext%
     \let\@RTLfootnotetext\@mpRTLfootnotetext%
}
```

115 File media9-xetex-bidi.def

```
\ProvidesFile{media9-xetex-bidi.def}[2025/01/03 v0.1 bidi adaptations for media9 package fo
\RequirePackage{bidi-media9}
```

116 File bidi-media9.sty

```
\ProvidesExplPackage{bidi-media9}{2022/02/18}{0.4}
{bidi fixes for media9 package for the XeTeX engine}

\keys_define:nn{media9/mbtn}{
  draft .code:n = {},
  final .code:n = {},

```

```
tooltip .tl_gset_x:N = \g_mix_tooltip_tl,
tooltip .value_required:n = {true},

overface .code:n = {
  \sbox\l_mix_poster_box{
    \bool_if:NTF\g_pbs_lscape_bool{\rotatebox{90}{#1}}{\if@RTL\beginR\fi#1\if@RTL\endR\fi
  \mix_pdfxform:n{\l_mix_poster_box}
  \tl_gset:Nx\g_mix_overbtn_tl{\mix_pdflastxform:}
},
overface .value_required:n = {true},

downface .code:n = {
  \sbox\l_mix_poster_box{
    \bool_if:NTF\g_pbs_lscape_bool{\rotatebox{90}{#1}}{\if@RTL\beginR\fi#1\if@RTL\endR\fi
  \mix_pdfxform:n{\l_mix_poster_box}
  \tl_gset:Nx\g_mix_downbtn_tl{\mix_pdflastxform:}
},
downface .value_required:n = {true},

3Dgotoview .code:n = {
  \tl_set:Nx\l_tmpa_tl{#1}              %extract ref
  \regex_replace_once:nnN{([^:]+):??.*}{\1}\l_tmpa_tl
  \tl_trim_spaces:N\l_tmpa_tl
  \tl_if_exist:cTF{ann@\l_tmpa_tl}{
    \str_if_eq:eeF{\tl_use:c{ann@\l_tmpa_tl}}{draft}{
      \tl_set:Nx\l_tmpb_tl{#1}          %extract idx
      \regex_replace_once:nnN{[^:]+:?}{}\l_tmpb_tl
      \tl_trim_spaces:N\l_tmpb_tl
      \tl_if_blank:VF\l_tmpb_tl{
        \regex_match:nVTF{^[DFLNP]$}\l_tmpb_tl{
          \tl_set:Nx\l_mix_vidx_tl{/\l_tmpb_tl}
        }{
          \regex_match:nVTF{^\d+$}\l_tmpb_tl{
            \tl_set:Nx\l_mix_vidx_tl{~\l_tmpb_tl}
          }{
            \regex_replace_once:nnN{^\(\s*}{}\l_tmpb_tl
            \regex_replace_once:nnN{\s*\)$}{}\l_tmpb_tl
            \tl_set:Nx\l_mix_vidx_tl{~(\l_tmpb_tl)}
          }
        }
      }
      \mix_pdfobj:nnn{}{dict}{
        /S/JavaScript/JS~(
          if(typeof(annotRM)=='undefined'){annotRM=new~Array();}
          if(typeof(annotRM['\l_tmpa_tl'])=='undefined'){
            annotRM['\l_tmpa_tl']=
              this.getAnnotRichMedia(\tl_use:c{page@\l_tmpa_tl},'\l_tmpa_tl');
          }
          annotRM['\l_tmpa_tl'].activated=true;
        )
        \tl_if_blank:VF\l_tmpb_tl{
          /Next~<<
            /S/GoTo3DView
            /TA~\tl_use:c{ann@\l_tmpa_tl}
```

```
17094               /V\l_mix_vidx_tl
17095             >>
17096           }
17097         }
17098         \tl_gput_right:Nx\g_mix_btnactions_tl{~\mix_pdflastobj:}
17099       }
17100     }{
17101       \msg_warning:nnx{media9}{undefined~reference}{\l_tmpa_tl}
17102       \cs_if_exist:NF\g_mix_refundefwarned_tl{
17103         \tl_new:N\g_mix_refundefwarned_tl
17104         \AtEndDocument{\msg_warning:nn{media9}{undefined~references}}
17105       }
17106     }
17107   },
17108   3Dgotoview .value_required:n = {true},
17109
17110   mediacommand .code:n = {
17111     \tl_set:Nx\l_tmpa_tl{#1}
17112     \regex_replace_once:nnN{([^:]+):??.*}{\1}\l_tmpa_tl %extract ref
17113     \tl_trim_spaces:N\l_tmpa_tl
17114     \tl_if_exist:cTF{ann@\l_tmpa_tl}{
17115       \str_if_eq:eeF{\tl_use:c{ann@\l_tmpa_tl}}{draft}{
17116         \tl_set:Nx\l_tmpb_tl{#1}
17117         \regex_replace_once:nnN{[^:]+\:?}{}\l_tmpb_tl
17118         \tl_trim_spaces:N\l_tmpb_tl
17119         \regex_replace_all:nnN{^\{|\}$}{}\l_tmpb_tl
17120         \tl_set:Nx\l_mix_cmd_tl{
17121           \exp_after:wN\mix_separate_cmd_from_actn:w\l_tmpb_tl[]\q_stop}
17122         \tl_trim_spaces:N\l_mix_cmd_tl
17123         \tl_set:Nx\l_mix_arg_tl{
17124           \exp_after:wN\mix_separate_arg_from_actn:w\l_tmpb_tl[]\q_stop}
17125         \tl_trim_spaces:N\l_mix_arg_tl
17126         \mix_pdfobj:nnn{}{dict}{
17127           /S/JavaScript/JS~(
17128             if(typeof(annotRM)=='undefined'){annotRM=new~Array();}
17129             if(typeof(annotRM['\l_tmpa_tl'])=='undefined'){
17130               annotRM['\l_tmpa_tl']=
17131                 this.getAnnotRichMedia(\tl_use:c{page@\l_tmpa_tl},'\l_tmpa_tl');
17132             }
17133             annotRM['\l_tmpa_tl'].activated=true;
17134           )
17135           \tl_if_blank:VF\l_mix_cmd_tl{
17136             /Next~<<
17137               /S/RichMediaExecute
17138               /TA~\tl_use:c{ann@\l_tmpa_tl}
17139               /TI~\tl_use:c{main@\l_tmpa_tl}
17140               /CMD~<<
17141                 /C~(\l_mix_cmd_tl)
17142                 \tl_if_blank:VF\l_mix_arg_tl{
17143                   /A~[\l_mix_arg_tl]
17144                 }
17145               >>
17146             >>
17147         }
```

```
17148         }
17149         \tl_gput_right:Nx\g_mix_btnactions_tl{~\mix_pdflastobj:}
17150       }
17151     }{
17152       \msg_warning:nnx{media9}{undefined~reference}{\l_tmpa_tl}
17153       \cs_if_exist:NF\g_mix_refundefwarned_tl{
17154         \tl_new:N\g_mix_refundefwarned_tl
17155         \AtEndDocument{\msg_warning:nn{media9}{undefined~references}}
17156       }
17157     }
17158   },
17159   mediacommand .value_required:n = {true},
17160
17161   jsaction .code:n = {
17162     \tl_set:Nx\l_tmpa_tl{#1}
17163     \regex_match:nVTF{^[^\{:]+:.*$}\l_tmpa_tl{
17164       \regex_replace_once:nnN{([^:]+):??.*}{\1}\l_tmpa_tl %extract ref
17165       \tl_trim_spaces:N\l_tmpa_tl
17166     }{\tl_clear:N\l_tmpa_tl}
17167     \tl_set:Nx\l_tmpb_tl{#1}
17168     \tl_if_blank:VF\l_tmpa_tl{
17169       \tl_if_exist:cF{ann@\l_tmpa_tl}{
17170         \msg_warning:nnx{media9}{undefined~reference}{\l_tmpa_tl}
17171         \cs_if_exist:NF\g_mix_refundefwarned_tl{
17172           \tl_new:N\g_mix_refundefwarned_tl
17173           \AtEndDocument{\msg_warning:nn{media9}{undefined~references}}
17174         }
17175       }
17176       \regex_replace_once:nnN{[^:]+\:}{}\l_tmpb_tl
17177     }
17178     \tl_set:Nx\l_tmpb_tl{\exp_after:wN\use:n\l_tmpb_tl}
17179     \tl_trim_spaces:N\l_tmpb_tl
17180     \tl_if_blank:VF\l_tmpb_tl{
17181     \mix_pdfobj:nnn{}{dict}{
17182       /S/JavaScript/JS~(
17183         try{\l_tmpb_tl}catch(e){console.show();console.println(e)})}}
17184     \bool_lazy_and:nnT{
17185       \tl_if_exist_p:c{ann@\l_tmpa_tl}
17186     }{
17187       !\str_if_eq_p:ee{\tl_use:c{ann@\l_tmpa_tl}}{draft}
17188     }{
17189       \mix_pdfobj:nnn{}{dict}{
17190         /S/JavaScript/JS~(
17191           if(typeof(annotRM)=='undefined'){annotRM=new~Array();}
17192           if(typeof(annotRM['\l_tmpa_tl'])=='undefined'){
17193             annotRM['\l_tmpa_tl']=
17194               this.getAnnotRichMedia(\tl_use:c{page@\l_tmpa_tl},'\l_tmpa_tl');
17195           }
17196           annotRM['\l_tmpa_tl'].activated=true;
17197         )
17198         \tl_if_blank:VF\l_tmpb_tl{/Next~\mix_pdflastobj:}
17199       }
17200     }
17201     \bool_if:nT{
```

```
      \bool_lazy_and_p:nn{
        \tl_if_exist_p:c{ann@\l_tmpa_tl}
      }{
        !\str_if_eq_p:ee{\tl_use:c{ann@\l_tmpa_tl}}{draft}
      }
      || !\tl_if_blank_p:V\l_tmpb_tl
    }{
      \tl_gput_right:Nx\g_mix_btnactions_tl{~\mix_pdflastobj:}
    }
  },
  jsaction .value_required:n = {true},

  unknown .code:n = {
    \msg_error:nnx{media9}{unknown~option}{\l_keys_key_tl}
  }
}

\RenewDocumentCommand\includemedia{O{}mm}{%#1 options, #2 text/image #3 media file
  \mix_uriend:
  \group_begin:
  \mix_beginLTR:
  \mode_leave_vertical:
  %empty stream as appearance dummy
  \cs_if_exist:NF\g_mix_appearance_tl{
    \hbox_set:Nn\l_mix_poster_box{\phantom{\rule{1pt}{1pt}}}
    \mix_pdfxform:n{\l_mix_poster_box}
    \tl_gset:Nx\g_mix_appearance_tl{\mix_pdflastxform:}
  }
  \mix_reset:
  \mix_uribegin: %treat URI characters correctly
  \keys_set:nn{media9/user}{#1}
  \mix_uriend:
  \tl_greplace_all:Nnn\g_mix_flashvars_tl{~&}{&}
  \tl_greplace_all:Nnn\g_mix_flashvars_tl{&~}{&}
  \tl_greplace_all:Nnn\g_mix_flashvars_tl{~=}{=}
  \tl_greplace_all:Nnn\g_mix_flashvars_tl{=~}{=}
  \tl_gtrim_spaces:N\g_mix_flashvars_tl

  \cs_if_exist:NT\Ginput@path{\cs_set_eq:NN\input@path\Ginput@path}

  %\hbox_set:Nn\l_mix_poster_box{\group_begin:#2\group_end:}
  %\hbox_set:Nn\l_mix_poster_box{#2}
  \sbox\l_mix_poster_box{\if@RTL\beginR\fi#2\if@RTL\endR\fi}
  \mix_scale:n{\l_mix_poster_box}
  \bool_if:nT{
    \dim_compare_p:n{\g_mix_tt_tl=\c_zero_dim}||
    \dim_compare_p:n{\g_mix_wd_tl=\c_zero_dim}
  }{
    \tl_gset:Nn\g_mix_usrpbtn_tl{none}
  }
  \bool_if:NTF\g_mix_usrdraft_bool{
    \tl_if_empty:NF\g_mix_usrlabel_tl{
      \mix_keytoaux_now:nn{ann@\g_mix_usrlabel_tl}{draft}
    }
```

```
    \tl_if_blank:oTF{#2}{
      \mix_uribegin: %treat URI characters correctly
      \mix_draftbox:n{\tl_to_str:n{#3}}
      \mix_uriend:
    }{
      \hbox_to_wd:nn{\g_mix_wd_tl}{
        \vrule~width~\c_zero_dim~height~\g_mix_ht_tl~depth~\g_mix_dp_tl
        \box_use:N\l_mix_poster_box\hss
      }
    }
  }{
    \bool_if:nF{\str_if_eq_p:Vn\g_mix_usrpbtn_tl{none}}{
      %attach script that switches off play button overlay upon activation
      \mix_pdfobj:nnn{}{stream}{
        {}{
          var~ocgs=host.getOCGs(host.pageNum);
          for(var~i=0;i<ocgs.length;i++){
            if(ocgs[i].name=='MediaPlayButton\int_use:N\g_mix_rmcnt_int'){
              ocgs[i].state=false;
            }
          }
        }
      }
      \mix_pdfobj:nnn{}{dict}{
        /Type/Filespec/EF~<</F~\mix_pdflastobj:>>/F~(btnoff)%/UF~(btnoff)
      }
      \tl_gset:Nx\g_mix_assets_tl{(btnoff)~\mix_pdflastobj:}
      \tl_set:Nx\l_mix_scripts_tl{~\mix_pdflastobj:~}
      %enforce plain playbutton overlay for XeTeX
      \sys_if_engine_xetex:T{\tl_gset:Nn\g_mix_usrpbtn_tl{plain}}
    }
    %embed main asset
    \mix_uribegin:
    \mix_embedasset:n{#3}
    \bool_if:nTF{
      \str_if_eq_p:Vn\l_mix_ext_tl{prc}||\str_if_eq_p:Vn\l_mix_ext_tl{u3d}
    }{
      \bool_gset_true:N\g_mix_iiid_bool
      \tl_gset:Nn\g_mix_mainassetsub_tl{3D}
    }{
      \str_case_e:nnF{\l_mix_base_tl}{
        {APlayer}{\tl_gset:Nn\g_mix_mainassetsub_tl{Sound}}
        {AudioPlayer}{\tl_gset:Nn\g_mix_mainassetsub_tl{Sound}}
        {VPlayer}{\tl_gset:Nn\g_mix_mainassetsub_tl{Video}}
        {VideoPlayer}{\tl_gset:Nn\g_mix_mainassetsub_tl{Video}}
        {StrobeMediaPlayback}{\tl_gset:Nn\g_mix_mainassetsub_tl{Video}}
      }{\tl_gset:Nn\g_mix_mainassetsub_tl{Flash}}
    }
    \tl_gset:Nx\g_mix_mainasset_tl{~\g_mix_lastasset_tl}
    \mix_uriend:
    %secondary assets (added by addresource)
    \seq_map_function:NN\g_mix_res_seq\mix_embedasset:n
    \seq_map_inline:Nn\g_mix_script_seq{
      \mix_embedasset:n{##1}
```

```
17310     \tl_put_right:Nx\l_mix_scripts_tl{~\g_mix_lastasset_tl}
17311   }
17312   %attach 3D calculation script
17313   \bool_if:nT{\g_mix_iiid_bool && \g_mix_iiidcalc_bool}{
17314     \mix_embedasset:n{3Dmenu.js}
17315     \tl_put_left:Nx\l_mix_scripts_tl{\g_mix_lastasset_tl~}
17316   }
17317   %create 3D views from file (option 3Dviews)
17318   \bool_if:nT{\g_mix_iiid_bool && !(\tl_if_blank_p:V\g_mix_vfile_tl)}{
17319     \tl_set:Nn\l_mix_level_tl{-1}
17320     \int_zero:N\l_mix_viewcnt_int
17321     \int_zero:N\l_mix_lineno_int
17322
17323     \ior_open:Nn\l_mix_vfile_stream{\g_mix_vfile_tl}
17324     \ior_map_inline:Nn\l_mix_vfile_stream{
17325       \int_incr:N\l_mix_lineno_int
17326       \keys_set:nn{media9/views}{##1} %process input line
17327     }
17328     \ior_close:N\l_mix_vfile_stream
17329   }
17330   \bool_if:nT{ %create default 3D view if required
17331     \g_mix_iiid_bool &&
17332     (\g_mix_opt_iiidview_bool || \tl_if_blank_p:V\l_mix_iiidviewarray_tl)
17333   }{
17334     \tl_set_eq:NN\l_mix_bg_tl\g_mix_opt_bg_tl
17335     \tl_set_eq:NN\l_mix_ls_tl\g_mix_opt_ls_tl
17336     \tl_set_eq:NN\l_mix_rm_tl\g_mix_opt_rm_tl
17337     \tl_set_eq:NN\l_mix_psob_tl\g_mix_opt_psob_tl
17338     \tl_set_eq:NN\l_mix_coo_tl\g_mix_opt_coo_tl
17339     \tl_set_eq:NN\l_mix_ctoc_tl\g_mix_opt_ctoc_tl
17340     \tl_set_eq:NN\l_mix_ciiw_tl\g_mix_opt_ciiw_tl
17341
17342     \fp_set_eq:NN\l_mix_roo_fp\g_mix_opt_roo_fp
17343     \fp_set_eq:NN\l_mix_aac_fp\g_mix_opt_aac_fp
17344     \fp_set_eq:NN\l_mix_oscale_fp\g_mix_opt_oscale_fp
17345     \fp_set_eq:NN\l_mix_roll_fp\g_mix_opt_roll_fp
17346
17347     \bool_set_eq:NN\l_mix_ciiw_bool\g_mix_opt_ciiw_bool
17348     \bool_set_eq:NN\l_mix_iiidortho_bool\g_mix_opt_iiidortho_bool
17349     \tl_clear:N\l_mix_naarray_tl
17350
17351     \bool_if:NF\l_mix_ciiw_bool{
17352       \tl_set:Nx\l_mix_args_tl{\l_mix_coo_tl\space\l_mix_ctoc_tl\space}
17353       \exp_after:wN\mix_calc_ciiw:w\l_mix_args_tl\q_stop
17354     }
17355
17356     \tl_clear:N\l_mix_naarray_tl
17357     \tl_clear:N\l_mix_saarray_tl
17358     \tl_set_eq:NN\l_mix_nr_tl\g_mix_nrdflt_tl
17359
17360     \mix_view:n{Default}
17361     \tl_set:Nx\l_mix_dfltview_tl{\mix_pdflastobj:}
17362
17363   }
```

```
\mix_pdfobj:nnn{}{dict}{
  /Type/RichMediaInstance
  /Subtype/\g_mix_mainassetsub_tl
  /Asset~\g_mix_mainasset_tl
  \bool_if:NF\g_mix_iiid_bool{
    /Params~<<
      /Binding\str_if_eq:VnTF\g_mix_transp_tl{true}{
        /Foreground
      }{
        /Background
      }
      \tl_if_blank:VF\g_mix_flashvars_tl{
        /FlashVars~(\g_mix_flashvars_tl)
      }
    >>
  }
}
\tl_if_empty:NF\g_mix_usrlabel_tl{
  \mix_keytoaux_now:nn{main@\g_mix_usrlabel_tl}{\mix_pdflastobj:}
}
\mix_pdfobj:nnn{}{dict}{
  /Type/RichMediaConfiguration
  /Subtype/\g_mix_mainassetsub_tl
  /Instances~[\mix_pdflastobj:]
}
\mix_pdfobj:nnn{}{dict}{
  /Type/RichMediaContent
  /Assets~<</Names~[\g_mix_assets_tl]>>
  /Configurations~[\mix_pdflastobj:]
  \bool_if:nT{
    \g_mix_iiid_bool && !(\tl_if_empty_p:V\l_mix_iiidviewarray_tl)
  }{
    /Views~[\l_mix_iiidviewarray_tl]
  }
}
\tl_set:Nx\l_mix_content_tl{\mix_pdflastobj:}
\bool_if:nT{
  \g_mix_iiid_bool && \str_if_eq_p:Vn\g_mix_playtpe_tl{Oscillating}
}{
  \tl_gset:Nx\g_mix_playcnt_tl{\int_eval:n{\g_mix_playcnt_tl*2}}
}
%determine floating window size
\bool_if:NT\g_mix_opt_windowed_bool{
  \exp_after:wN\mix_parse_winsizearg:w\g_mix_winsize_tl\q_stop
}
\mix_pdfobj:nnn{}{dict}{
  /Activation~<<
    /Condition\g_mix_act_tl
    \bool_if:nT{
      \g_mix_iiid_bool &&
      !(\str_if_eq_p:Vn\g_mix_playtpe_tl{None})
    }{%seems to work only with 3D content
      /Animation~<<
        /Subtype/\g_mix_playtpe_tl
```

```
17418           /PlayCount~\g_mix_playcnt_tl
17419           /Speed~\g_mix_playspd_tl
17420         >>
17421       }
17422       \bool_if:nT{
17423         \g_mix_iiid_bool && (
17424           \g_mix_opt_iiidview_bool || \tl_if_blank_p:V\l_mix_iiidviewarray_tl
17425         )
17426       }{/View~\l_mix_dfltview_tl}
17427       /Presentation~<<
17428         /Transparent~\g_mix_transp_tl
17429         \bool_if:NTF\g_mix_opt_windowed_bool{
17430           /Style/Windowed
17431           /Window~<<
17432             /Width~<</Default~\tl_mix_fltwd>>
17433             /Height~<</Default~\tl_mix_fltht>>
17434             /Position~<<
17435               /HOffset~0/VOffset~0
17436               \str_case_e:nnF{\g_mix_winpos_tl}{
17437                 {tl}{/VAlign/Near/HAlign/Near}
17438                 {cl}{/VAlign/Center/HAlign/Near}
17439                 {bl}{/VAlign/Far/HAlign/Near}
17440                 {bc}{/VAlign/Far/HAlign/Center}
17441                 {br}{/VAlign/Far/HAlign/Far}
17442                 {cr}{/VAlign/Center/HAlign/Far}
17443                 {tr}{/VAlign/Near/HAlign/Far}
17444                 {tc}{/VAlign/Near/HAlign/Center}
17445               }{/HAlign/Center/VAlign/Center}
17446             >>
17447           >>
17448         }{
17449           /Style/Embedded
17450         }
17451         \bool_if:NTF\g_mix_iiid_bool{
17452           /Toolbar~\g_mix_tools_tl
17453           /NavigationPane~\g_mix_nav_tl
17454         }{
17455           /PassContextClick~\g_mix_contextclick_tl
17456         }
17457       >>
17458       \tl_if_blank:VF\l_mix_scripts_tl{/Scripts~[\l_mix_scripts_tl]}
17459     >>
17460     /Deactivation~<</Condition\g_mix_deact_tl>>
17461   }
17462   \tl_set:Nx\l_mix_settings_tl{\mix_pdflastobj:}
17463   \tl_if_empty:NF\g_mix_usrlabel_tl{
17464     \tl_gset_eq:NN\g_mix_label_tl\g_mix_usrlabel_tl
17465   }
17466   % #1:width, #2:height, #3:depth, #4:content (key-value)
17467   \mix_pdfannot:nnnn{\g_mix_wd_tl}{\g_mix_ht_tl}{\g_mix_dp_tl}{
17468     /Subtype/RichMedia
17469     /F~4
17470     /BS~<</W~0/S/S>>
17471     /Contents~(media~embedded~by~media9~[\g_mix_version_tl~(\g_mix_date_tl)])
```

```
17472     /NM~(\g_mix_label_tl)
17473     /AP~<</N~\g_mix_appearance_tl>>
17474     /RichMediaSettings~\l_mix_settings_tl
17475     /RichMediaContent~\l_mix_content_tl
17476   }
17477   \tl_if_empty:NF\g_mix_usrlabel_tl{
17478     \mix_keytoaux_now:nn{ann@\g_mix_usrlabel_tl}{\mix_pdflastann:}
17479     \mix_keytoaux_shipout:nn{page@\g_mix_usrlabel_tl}{
17480       \noexpand\the\g@mix@page@int}
17481   }
17482   \mix_pdfobj:nnn{}{dict}{
17483     /S/JavaScript/JS~(
17484       try{
17485         if(typeof(annotRM)=='undefined'){annotRM=new~Array();}
17486         if(typeof(annotRM['\g_mix_label_tl'])=='undefined'){
17487           annotRM['\g_mix_label_tl']=
17488             this.getAnnotRichMedia(this.pageNum,'\g_mix_label_tl');
17489         }
17490         \str_if_eq:eeF{\g_mix_usrpbtn_tl}{none}{
17491           if(typeof(ocgBtn\int_use:N\g_mix_rmcnt_int)=='undefined'){
17492             var~ocgs=this.getOCGs(this.pageNum);
17493             for(var~i=0;i<ocgs.length;i++){
17494               if(ocgs[i].name=='MediaPlayButton\int_use:N\g_mix_rmcnt_int'){
17495                  var~ocgBtn\int_use:N\g_mix_rmcnt_int=ocgs[i];
17496               }
17497             }
17498           }
17499           if(
17500             !annotRM['\g_mix_label_tl'].activated&&(
17501               app.viewerType=='Reader'||
17502               app.viewerType=='Exchange'||
17503               app.viewerType=='Exchange-Pro'
17504             )&&app.viewerVersion>=9
17505           ){
17506             ocgBtn\int_use:N\g_mix_rmcnt_int.state=true;
17507           }
17508         }
17509       }catch(e){}
17510       this.dirty=false;
17511     )
17512   }
17513   \mix_pdfannot:nnnn{Opt}{Opt}{Opt}{
17514     /Subtype/Widget
17515     /FT/Btn/Ff~65537/F~2
17516     /BS~<</W~0>>
17517     /T~(fd@\g_mix_label_tl)
17518     /AA~<</PO~\mix_pdflastobj:~/PV~\mix_pdflastobj:>>
17519   }
17520   \mix_appendtofields:n{\mix_pdflastann:}
17521   \hbox_overlap_right:n{\box_use:N\l_mix_poster_box}
17522   \str_if_eq:eeTF{\g_mix_usrpbtn_tl}{none}{
17523     \hbox_to_wd:nn{\g_mix_wd_tl}{
17524       \vrule~width~\c_zero_dim~height~\g_mix_ht_tl~depth~\g_mix_dp_tl\hss
17525     }
```

```
    }{%insert play button overlay
      \mix_insert_btnocg: %create OCG
      \cs_gset_eq:Nc\mix_pbtn:NN{g@mix@pbtn@\g_mix_usrpbtn_tl @tl}
      \group_begin:
      \cs_if_exist:NT\textdir{\textdir TLT}
        \sbox\l_mix_pbtn_box{\mix_pbtn:NN\g_mix_wd_tl\g_mix_tt_tl}
        \box_move_down:nn{\g_mix_dp_tl}{
          \hbox_to_wd:nn{\g_mix_wd_tl}{
            \vbox_to_ht:nn{\g_mix_tt_tl}{
              \vss
              \ocgbase_oc_bdc:n{\g_mix_btnocg_tl}
              \box_use:N\l_mix_pbtn_box
              \ocgbase_oc_emc:
            }
          }
        }
      \group_end:
    }
    \int_gincr:N\g_mix_rmcnt_int
  }
  \mix_endLTR:
  \group_end:
}
\tl_set_eq:NN\l_mix_includemedia_tl\includemedia
\tl_set:Nn\includemedia{\mix_uribegin:\l_mix_includemedia_tl}

\RenewDocumentCommand\mediabutton{O{}m}{%#1 options, #2 normal button text
  \mix_uriend:
  \group_begin:
  \mix_beginLTR:
  \mode_leave_vertical:
  %reset various variables
  \tl_gclear:N\g_mix_overbtn_tl
  \tl_gclear:N\g_mix_downbtn_tl
  \tl_gclear:N\g_mix_btnactions_tl
  \tl_gclear:N\g_mix_tooltip_tl
  %process options
  \bool_gset_eq:NN\g_mix_btndraft_bool\g_mix_pkgdraft_bool
  \mix_uribegin: %treat URI characters correctly
  \keys_set:nn{media9/mbtndraft}{#1} %detect draft/final on first pass
  \bool_if:NF\g_mix_btndraft_bool{\keys_set:nn{media9/mbtn}{#1}}
  \mix_uriend:
  %normal button appearance
  %\hbox_set:Nn\l_mix_poster_box{#2}
  \sbox\l_mix_poster_box{\if@RTL\beginR\fi#2\if@RTL\endR\fi}
  \tl_set:Nx\width {\dim_use:N\box_wd:N\l_mix_poster_box}
  \tl_set:Nx\height{\dim_use:N\box_ht:N\l_mix_poster_box}
  \tl_set:Nx\depth {\dim_use:N\box_dp:N\l_mix_poster_box}
  \bool_if:NTF\g_mix_btndraft_bool{\box_use:N\l_mix_poster_box}{
    \sbox\l_mix_poster_box{\bool_if:NTF\g_pbs_lscape_bool{\rotatebox{90}{
      \box_use:N\l_mix_poster_box}}{\box_use:N\l_mix_poster_box}}
    \mix_pdfxform:n{\l_mix_poster_box}
    \tl_set:Nx\g_mix_normalbtn_tl{\mix_pdflastxform:}
    %insert widget annotation
```

```
    \mix_pdfannot:nnnn{\width}{\height}{\depth}{
      /Subtype/Widget
      /T~(mbtn@\int_use:N\g_mix_mbtncnt_int)
      \tl_if_empty:NF\g_mix_tooltip_tl{/TU~(\g_mix_tooltip_tl)}
      /FT/Btn/Ff~65536
      \tl_if_empty:NTF\g_mix_downbtn_tl{/H/I}{/H/P}
      /AP~<<
        /N~\g_mix_normalbtn_tl
        \tl_if_empty:NF\g_mix_overbtn_tl{/R~\g_mix_overbtn_tl}
        \tl_if_empty:NF\g_mix_downbtn_tl{/D~\g_mix_downbtn_tl}
      >>
      /MK~<<
        /TP~1~/IF~<</S/A/FB~true/A~[0.0~0.0]>>
        /I~\g_mix_normalbtn_tl
        \tl_if_empty:NF\g_mix_overbtn_tl{/RI~\g_mix_overbtn_tl}
        \tl_if_empty:NF\g_mix_downbtn_tl{/IX~\g_mix_downbtn_tl}
      >>
      /A~<<
        /S/JavaScript/JS~(app.focusRect=false;)
        %sequence of actions to perform
        \tl_if_empty:NF\g_mix_btnactions_tl{/Next~[\g_mix_btnactions_tl]}
      >>
    }
    \mix_appendtofields:n{\mix_pdflastann:}
    \hbox_to_wd:nn{\width}{
      \vrule~width~\c_zero_dim~height~\height~depth~\depth\hss
    }
    \int_gincr:N\g_mix_mbtncnt_int
  }
  \mix_endLTR:
  \group_end:
}
\tl_set_eq:NN\l_mix_mediabutton_tl\mediabutton
\tl_set:Nn\mediabutton{\mix_uribegin:\l_mix_mediabutton_tl}

```

117 File memoir-xetex-bidi.def

```
\ProvidesFile{memoir-xetex-bidi.def}[2025/01/03 v0.7 bidi adaptations for memoir class for
\renewcommand{\keepthetitle}{%
  \@bsmtitlempty
  \global\let\thanks\relax
  \global\let\LTRthanks\relax
  \global\let\RTLthanks\relax
  \global\let\and\relax
  \global\let\andnext\relax
  \global\let\@thanks\@empty
  \global\let\@title\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty}
\renewcommand{\maketitle}{\par
  \begingroup
    \@bsmarkseries
    \def\@makefnmark{\@textsuperscript{%
```

```
17631       \normalfont\@bsthanksheadpre \tamark \@bsthanksheadpost}}%
17632     \long\def\@makefntext##1{\makethanksmark ##1}
17633     \if@twocolumn
17634       \ifnum \col@number=\@ne
17635         \@maketitle
17636       \else
17637         \twocolumn[\@maketitle]%
17638       \fi
17639     \else
17640       \ifdim\pagetotal>\z@
17641         \newpage
17642       \fi
17643       \global\@topnum\z@
17644       \@maketitle
17645     \fi
17646     \thispagestyle{title}\@thanks
17647   \endgroup
17648   \@bscontmark  %  \setcounter{footnote}{0}%
17649   }
17650 \renewcommand*{\memRTLleftskip}{\if@RTL\rightskip\else\leftskip\fi}
17651 \renewcommand*{\memRTLrightskip}{\if@RTL\leftskip\else\rightskip\fi}
17652 \renewcommand*{\memRTLvleftskip}{\if@RTL\vrightskip\else\vleftskip\fi}
17653 \renewcommand*{\memRTLvrightskip}{\if@RTL\vleftskip\else\vrightskip\fi}
17654 \renewcommand*{\memRTLraggedright}{\if@RTL\raggedleft\else\raggedright\fi}
17655 \renewcommand*{\memRTLraggedleft}{\if@RTL\raggedright\else\raggedleft\fi}
17656 \renewcommand*{\thesection}{\thechapter\@SepMark\@arabic\c@section}
17657 \renewcommand*{\thesubsection}{%
17658               \thesection\@SepMark\@arabic\c@subsection}
17659 \renewcommand*{\thesubsubsection}{%
17660               \thesubsection\@SepMark\@arabic\c@subsubsection}
17661 \renewcommand*{\theparagraph}{%
17662               \thesubsubsection\@SepMark\@arabic\c@paragraph}
17663 \renewcommand*{\thesubparagraph}{%
17664               \theparagraph\@SepMark\@arabic\c@subparagraph}
17665 \renewcommand{\setthesection}{\thechapter\@SepMark\Alph{section}}
17666 \renewcommand{\theequation}{%
17667   \ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@equation}
17668 \renewcommand{\thefigure}{\thechapter\@SepMark\@arabic\c@figure}
17669 \renewcommand{\thetable}{\thechapter\@SepMark\@arabic\c@table}
17670 \ifartopt
17671   \chapterstyle{article}
17672   \counterwithout{figure}{chapter}
17673   \counterwithout{table}{chapter}
17674   \counterwithout{footnote}{chapter}
17675   \counterwithout{equation}{chapter}
17676   \renewcommand{\chaptername}{}
17677   \renewcommand{\maketitlehookb}{%
17678     \vskip -1.5\topsep\vskip -1.5\partopsep}
17679   \renewcommand{\maketitlehookc}{%
17680     \vskip -1.5\topsep\vskip -1.5\partopsep}
17681 \fi
17682 \long\def\@makecaption#1#2{\let\@memtempa\relax
17683   \ifdim\prevdepth>-99\p@ \vskip\abovecaptionskip
17684   \else \def\@memtempa{\vbox to\topskip{}}\fi
```

```
  \let\@contfnote\footnote \renewcommand{\footnote}[2][]{}
  \let\@contfmark\footnotemark \renewcommand{\footnotemark}[1][]{}
  \sbox\@tempboxa{\@contnfont #1\@contdelim \@conttfont #2\@contfinal}
  \let\footnote\@contfnote
  \let\footnotemark\@contfmark
  \ifdim\wd\@tempboxa<\linewidth \centering \fi
  \if@contcw
    \centering
    \parbox{\@contcwidth}{%
    \ifdim\wd\@tempboxa<\@contcwidth \centering \fi
  \fi
  \ifdim\wd\@tempboxa<\linewidth
    \@contpre
    {\@contnfont #1\@contdelim}\@memtempa
    {\@contcshortstyle \@conttfont #2\@contfinal\par}
  \else
    \if@conthang
      \sbox\@tempboxa{\@contnfont #1\@contdelim}
      \@contpre%
      {\@contcstyle\hangindent=\wd\@tempboxa
       \noindent\box\@tempboxa\@memtempa \@conttfont #2\@contfinal\par}
    \else
      \if@contindent
        \@contpre%
        {\@contnfont #1\@contdelim}\@memtempa
        {\@contcstyle\hangindent=\@contindw
                     \hangafter=\@ne\@conttfont #2\@contfinal\par}% <- v1.4
      \else
        \@contpre%
        {\@contnfont #1\@contdelim}\@memtempa
        {\@contcstyle \@conttfont #2\@contfinal\par}
      \fi
    \fi
  \fi
  \@contpost
  \if@contcw
    \par
    }  % end of the \parbox
  \fi
  \vskip\belowcaptionskip}
\ApplyPatchCodeToPackage{caption}{%
\AtBeginPackage{caption}{
\ClassWarningNoLine{memoir}{%
  You are using the caption package with the memoir \MessageBreak
  class. This may cause unexpected or inconsistent \MessageBreak
  results if you use any of memoir's captioning facilities}

\long\def\@makecaption##1##2{%
  \vskip\abovecaptionskip
  \sbox\@tempboxa{\if@RTL\beginR\fi##1: ##2\if@RTL\endR\fi}%
  \ifdim \wd\@tempboxa >\hsize
    \if@RTL\beginR\fi##1: ##2\if@RTL\endR\fi\par
  \else
    \global \@minipagefalse
```

```
    \hb@xt@\hsize{\hfil\box\@tempboxa\hfil}%
  \fi
  \vskip\belowcaptionskip}

\def\caption{%
   \ifx\@captype\@undefined
     \@latex@error{\noexpand\caption outside float}\@ehd
     \expandafter\@gobble
   \else
     \refstepcounter\@captype
     \expandafter\@firstofone
   \fi
   {\@dblarg{\@caption\@captype}}%
}

\long\def\@caption##1[##2]##3{%
  \par
  \addcontentsline{\csname ext@##1\endcsname}{##1}%
    {\protect\numberline{\csname the##1\endcsname}{\ignorespaces ##2}}%
  \begingroup
    \@parboxrestore
    \if@minipage
      \@setminipage
    \fi
    \normalsize
    \@makecaption{\csname fnum@##1\endcsname}{\ignorespaces ##3}\par
  \endgroup}
}}
\renewenvironment{thebibliography}[1]{%
  \bibsection
  \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
  \bidi@@thebibliography@font@hook%
  \begin{bibitemlist}{#1}}{\end{bibitemlist}\postbibhook}
```

118 File midfloat-xetex-bidi.def

```
\ProvidesFile{midfloat-xetex-bidi.def}[2017/05/06 v0.4 bidi adaptations for midfloat packag
\def\RTL@outputdblcol{%
  \if@firstcolumn
    \global \@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
```

```
17790         \let\topmark\@firstcoltopmark}%
17791     \fi
17792     \global\c@colht\@colht\global\c@addvipersep\z@
17793     \ifnum\juo@sk>0
17794         \remove@strip\juo@sar
17795         \global\@colht\the\juo@pr
17796         \ifdim\right@cor>\z@
17797                 \global\advance\@colht by\right@cor
17798         \fi
17799         \global\advance\@colht by\cor@height
17800         \global\cor@height=0pt
17801     \fi
17802     \global \setbox\@rightcolumn \vbox{}%
17803   \else
17804     \ifdim\c@colht>\@colht
17805             \@tempdima\@colht
17806             \ifdim\@colht>\z@
17807             \global\setbox\@rightcolumn \vbox{%
17808                         \unvbox\@rightcolumn
17809                         \vbox to\@tempdima{%
17810                                 \vskip\c@addvipersep\unvbox\@outputbox}%
17811                         \vskip\stripsep
17812                         \vrule height\the\juo@ht width 0pt depth 0pt
17813                         \vskip\stripsep
17814                         }%
17815             \global\c@addvipersep\m@addvipersep
17816             \else
17817             \global\setbox\@rightcolumn \vbox{%
17818                         \unvbox\@rightcolumn
17819                         \vrule height\the\juo@ht width 0pt depth 0pt
17820                         \vskip\stripsep
17821                         }%
17822             \fi
17823             \ifnum\juo@sk>0
17824                 \remove@strip\juo@sar
17825                 \global\@colht\the\juo@pr
17826                 \global\advance\@colht by -\ht\@rightcolumn
17827                 \global\advance\@colht by\cor@height
17828                 \global\cor@height=0pt
17829             \else
17830                 \global\advance\c@colht by-\ht\@rightcolumn
17831                 \global\@colht\c@colht
17832             \fi
17833    \else
17834    \global\@firstcolumntrue
17835     \global\setbox\@outputbox\vbox to\ht\@leftcolumn{%
17836                         \unvbox\@rightcolumn
17837                         \vskip\c@addvipersep
17838                         \unvbox\@outputbox
17839                         }%
17840     \setbox\@outputbox \vbox {%
17841                          \hb@xt@\textwidth {%
17842                           \hskip \columnwidth
17843                           \hfil
```

```
                            \vrule \@width\columnseprule
                            \hfil
                            \hb@xt@\columnwidth {%
                              \bidi@firstcolumn@status@write%
                              \box\@leftcolumn \hss}%
                            \hskip-\textwidth
                            \hb@xt@\columnwidth {%
                              \bidi@lastcolumn@status@write%
                              \box\@outputbox \hss}%
                            \hskip\columnwidth
                            \hskip\columnsep}%
                               }%
    \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi
        {\@outputpage
         \@startdblcolumn}%
    \endgroup
    \global\juo@sk=0\global\juo@sar={}%
    \global\cor@height\z@\global\c@addvipersep\z@
    \fi
  \fi
}


\def\LTR@outputdblcol{%
  \if@firstcolumn
    \global \@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
    \global\c@colht\@colht\global\c@addvipersep\z@
    \ifnum\juo@sk>0
        \remove@strip\juo@sar
        \global\@colht\the\juo@pr
        \ifdim\right@cor>\z@
                \global\advance\@colht by\right@cor
```

```
17898       \fi
17899       \global\advance\@colht by\cor@height
17900       \global\cor@height=0pt
17901   \fi
17902   \global \setbox\@rightcolumn \vbox{}%
17903 \else
17904   \ifdim\c@colht>\@colht
17905           \@tempdima\@colht
17906           \ifdim\@colht>\z@
17907           \global\setbox\@rightcolumn \vbox{%
17908                       \unvbox\@rightcolumn
17909                       \vbox to\@tempdima{%
17910                               \vskip\c@addvipersep\unvbox\@outputbox}%
17911                       \vskip\stripsep
17912                       \vrule height\the\juo@ht width 0pt depth 0pt
17913                       \vskip\stripsep
17914                       }%
17915           \global\c@addvipersep\m@addvipersep
17916           \else
17917           \global\setbox\@rightcolumn \vbox{%
17918                       \unvbox\@rightcolumn
17919                       \vrule height\the\juo@ht width 0pt depth 0pt
17920                       \vskip\stripsep
17921                       }%
17922           \fi
17923           \ifnum\juo@sk>0
17924               \remove@strip\juo@sar
17925               \global\@colht\the\juo@pr
17926               \global\advance\@colht by -\ht\@rightcolumn
17927               \global\advance\@colht by\cor@height
17928               \global\cor@height=0pt
17929           \else
17930               \global\advance\c@colht by-\ht\@rightcolumn
17931               \global\@colht\c@colht
17932           \fi
17933 \else
17934  \global\@firstcolumntrue
17935   \global\setbox\@outputbox\vbox to\ht\@leftcolumn{%
17936                       \unvbox\@rightcolumn
17937                       \vskip\c@addvipersep
17938                       \unvbox\@outputbox
17939                       }%
17940   \setbox\@outputbox \vbox {%
17941                        \hb@xt@\textwidth {%
17942                          \hb@xt@\columnwidth {%
17943                            \bidi@firstcolumn@status@write%
17944                            \box\@leftcolumn \hss}%
17945                          \hfil
17946                          \vrule \@width\columnseprule
17947                          \hfil
17948                          \hb@xt@\columnwidth {%
17949                            \bidi@lastcolumn@status@write%
17950                            \box\@outputbox \hss}%
17951                                        }%
```

```
                                }%
    \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi
        {\@outputpage
         \@startdblcolumn}%
    \endgroup
    \global\juo@sk=0\global\juo@sar={}%
    \global\cor@height\z@\global\c@addvipersep\z@
    \fi
  \fi
}


\def\@strip[#1/#2]{\global\@tempdima=#1\global\@tempdimb=#2%
  \global \setbox\@viper\vbox\bgroup\if@RTLmain\moveleft\dimexpr(\columnwidth+\columnsep)\f
        \hsize\textwidth
        \@parboxrestore
        \col@number \@ne
        \vrule height\topskip width0pt depth0pt
}

\def\endstrip{%
        \egroup\egroup
        \if@firstcolumn
                \ifdim\pagetotal>\z@
                        \vskip\stripsep
                        \global\ht@strip\pagegoal
                        \global\advance\ht@strip by-\pagetotal
                        \global\advance\ht@strip by-\stripsep
                        \global\advance\ht@strip by-\ht\@viper
                        \global\advance\ht@strip by-\stripsep
                        \global\juo@ht=\ht\@viper
                \else
                        \global\ht@strip\z@
                \fi
                \ifdim\ht@strip>\z@
                  \unvbox\@viper
                  \vskip\stripsep
                  \add@strip{\the\pagetotal}{\the\juo@ht}{\the\@tempdima}{\the\@tempdimb}%
                  \global\advance\juo@sk by1
                \else
                  \@latex@error{Strip needs more place!}\@ehc
                  \if@vihproof
                    \framebox[\columnwidth]{??? Strip ???}%
                  \fi
                \fi
        \else
          \@latex@error{Strip is used only on left column!}\@ehc
          \if@vihproof
```

```
            \framebox[\columnwidth]{??? Strip ???}%
          \fi
        \fi
}
```

119 File minitoc-xetex-bidi.def

```
\ProvidesFile{minitoc-xetex-bidi.def}[2010/07/25 v0.1 bidi adaptations for minitoc package
\def\@undottedtocline#1#2#3#4#5{%
  \ifnum #1>\c@tocdepth\relax \else
  \vskip \z@ plus.2\p@
  {\if@RTL\rightskip\else\leftskip\fi #2\relax \if@RTL\leftskip\else\rightskip\fi \@tocrmar
   \parindent #2\relax\@afterindenttrue
   \interlinepenalty\@M
   \leavevmode
   \@tempdima #3\relax \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \hbox{}%
   \hskip -\if@RTL\rightskip\else\leftskip\fi
    #4\nobreak\hfill \nobreak
          \null\par}%
  \fi}
\def\@Undottedtocline#1#2#3#4#5{%
  \ifnum #1>\c@tocdepth\relax \else
    \vskip \z@ \@plus.2\p@
    {\if@RTL\rightskip\else\leftskip\fi #2\relax \if@RTL\leftskip\else\rightskip\fi \@tocrm
     \parindent #2\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima #3\relax
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\coffeefont #4}\nobreak \nobreak\null
    \par}%
  \fi}
\def\@Undottedtoclinep#1#2#3#4#5{%
  \ifnum #1>\c@tocdepth\relax \else
    \vskip \z@ \@plus.2\p@
    {\if@RTL\rightskip\else\leftskip\fi #2\relax \if@RTL\leftskip\else\rightskip\fi \@tocrm
     \parindent #2\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima #3\relax
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {#4}\nobreak \hfill \nobreak\null
     \hb@xt@\@pnumwidth{{\hfil\normalfont \normalcolor #5}}%
    \par}%
  \fi}
```

120 File multicol-xetex-bidi.def

```
\ProvidesFile{multicol-xetex-bidi.def}[2022/07/10 v1.4 bidi adaptations for multicol packag
\def\page@sofar{%
   \process@cols\mult@rightbox
       {\ifvoid\count@
          \setbox\count@\hbox to\hsize{}%
        \else
```

```
          \wd\count@\hsize
        \fi}%
   \count@\col@number \advance\count@\m@ne
   \mult@info\z@
    {Column spec: \the\full@width\space = indent
                  + columns + sep =\MessageBreak
        \the\multicol@leftmargin\space
        + \the\col@number\space
        x \the\hsize\space
        + \the\count@\space
        x \the\columnsep
     }%
\ifvmode\else\errmessage{Multicol Error}\fi
   \nointerlineskip
   \setbox\z@\hbox{p}\global\dimen\tw@\dp\z@
   \moveright\multicol@leftmargin
    \hbox to\full@width{%
       \bidi@multicol@align@columns
       \rlap{\phantom p}%
    }%
 \prevdepth\z@
 \kern-\dimen\tw@
 \ifdim\dimen\tw@ > \mc@gridwarn
   \PackageWarning{multicol}%
     {Very deep columns!\MessageBreak
      Grid alignment might be broken}%
 \fi
}
\def\LTR@column@boxes{%
    \process@cols\mult@firstbox{%
       \ifdim\dp\count@>\dimen\tw@
         \global\dimen\tw@\dp\count@ \fi
       \mc@col@status@write
       \box\count@
       \hss{\columnseprulecolor\vrule
              \@width\columnseprule}\hss}%
     \ifdim\dp\mult@rightbox>\dimen\tw@
       \global\dimen\tw@\dp\mult@rightbox \fi
     \mc@lastcol@status@write
     \box\mult@rightbox
}

\def\RTL@column@boxes{%
     \process@cols\mult@firstbox{%
       \hskip\hsize
       \hss{\columnseprulecolor\vrule
              \@width\columnseprule}\hss
     }%
     \hskip\hsize
     \process@cols\mult@firstbox{%
       \ifdim\dp\count@>\dimen\tw@
         \global\dimen\tw@\dp\count@ \fi
       \hskip-\hsize
       \mc@col@status@write
```

```
18108       \box\count@
18109       \hskip-\hsize
18110       \hskip-\columnsep
18111     }%
18112     \ifdim\dp\mult@rightbox>\dimen\tw@
18113       \global\dimen\tw@\dp\mult@rightbox \fi
18114     \hskip-\hsize
18115     \mc@lastcol@status@write
18116     \box\mult@rightbox
18117     \hskip-\hsize
18118     \hskip\full@width
18119 }
18120
18121 \newcommand\RTLmulticolcolumns
18122     {\let\bidi@multicol@align@columns
18123         \RTL@column@boxes}
18124 \newcommand\LTRmulticolcolumns
18125     {\let\bidi@multicol@align@columns
18126       \LTR@column@boxes}
18127 \newcommand\bidi@multicol@align@columns
18128     {\if@RTLmain\RTL@column@boxes\else\LTR@column@boxes\fi}
18129 \bidi@AtEndPreamble{%
18130   \if@bidi@csdef{footinsv@l}{%
18131     \def\footnoterule{\kern-3\p@
18132       \hrule \@width \textwidth \kern 2.6\p@}%
18133   }{}%
18134 }
18135 \def\multicols#1{\col@number#1\relax
18136   \ifnum\col@number<\tw@
18137     \PackageWarning{multicol}%
18138      {Using `\number\col@number'
18139       columns doesn't seem a good idea.^^J
18140       I therefore use two columns instead}%
18141     \col@number\tw@ \fi
18142   \ifnum\col@number>20
18143     \PackageError{multicol}%
18144      {Too many columns}%
18145      {Current implementation doesn't
18146       support more than 20 columns.%
18147       \MessageBreak
18148       I therefore use 20 columns instead}%
18149     \col@number20 \fi
18150     \ifx\@footnotetext\mult@footnotetext
18151     \else
18152       \let\orig@footnotetext\@footnotetext
18153       \let\@footnotetext\mult@footnotetext
18154     \fi
18155     \ifx\@LTRfootnotetext\mult@LTRfootnotetext
18156     \else
18157       \let\orig@LTRfootnotetext\@LTRfootnotetext
18158       \let\@LTRfootnotetext\mult@LTRfootnotetext
18159     \fi
18160     \ifx\@RTLfootnotetext\mult@RTLfootnotetext
18161     \else
```

```
18162       \let\orig@RTLfootnotetext\@RTLfootnotetext
18163       \let\@RTLfootnotetext\mult@RTLfootnotetext
18164     \fi
18165   \@ifnextchar[\mult@cols{\mult@cols[]}}
18166 \long\def\mult@footnotetext#1{\begingroup
18167          \hsize\textwidth
18168          \columnwidth\textwidth
18169          \orig@footnotetext{#1}\endgroup}
18170 \long\def\mult@LTRfootnotetext#1{\begingroup
18171          \hsize\textwidth
18172          \columnwidth\textwidth
18173          \orig@LTRfootnotetext{#1}\endgroup}
18174 \long\def\mult@RTLfootnotetext#1{\begingroup
18175          \hsize\textwidth
18176          \columnwidth\textwidth
18177          \orig@RTLfootnotetext{#1}\endgroup}
18178 \def\right@footnoterule{%
18179   \kern-3\p@
18180   \hbox to \textwidth{\hskip \dimexpr\textwidth-.4\columnwidth\relax \hrulefill }
18181   \kern2.6\p@}
18182 \def\textwidth@footnoterule{\kern-3\p@
18183   \hrule \@width \textwidth \kern 2.6\p@}
18184 \def\bidi@leave@mult@copyins{%
18185    \advance\dimen@-\skip\@bidi@copyins@
18186    \advance\dimen@-\ht\@bidi@copyins@
18187 }
18188
18189 \bidi@AtEndPreamble{%
18190   \if@bidi@csundef{footinsv@l}{%
18191     \bidi@patchcmd{\multi@column@out}{%
18192       \ifvbox \@kludgeins
18193     }{%
18194       \ifvoid\@bidi@copyins@ \else
18195         \bidi@leave@mult@copyins
18196       \fi
18197       \ifvbox \@kludgeins
18198     }{}{}%
18199   }{}%
18200 }
18201
18202
```

121 File multienum-xetex-bidi.def

```
18203 \ProvidesFile{multienum-xetex-bidi.def}[2011/04/16 v0.1 bidi adaptations for multienum pack
18204 \renewcommand{\itemx}[1]{\parbox[t]%
18205 {\labelwidth}{\hfill{\labelname}}\hskip\labelsep%
18206 \parbox[t]{\remainx}{\bidi@raggedright #1}\par}%\smallskip
18207 \renewcommand{\itemxx}[2]{\parbox[t]%
18208 {\labelwidth}{\hfill{\labelname}}\hskip\labelsep
18209 \parbox[t]{.5\remainxx}{\bidi@raggedright #1}\hfill\parbox[t]%
18210 {\labelwidth}{\hfill{\labelname}}\hskip\labelsep
18211 \parbox[t]{0.5\remainxx}{\bidi@raggedright #2}\smallskip}
18212 \renewcommand{\itemxxx}[3]{\parbox[t]%
```

```
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep%
\parbox[t]{.3333\remainxxx}{\bidi@raggedright #1}\hfill\parbox[t]%
{\labelwidth}{\hfill {\labelname}}\hskip\labelsep%
\parbox[t]{0.3333\remainxxx}{\bidi@raggedright #2}\hfill\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep%
\parbox[t]{0.3333\remainxxx}{\bidi@raggedright #3}\par}%\smallskip
\renewcommand{\itemxxxx}[4]{\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{.25\remainxxxx}{\bidi@raggedright #1}\hfill\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.25\remainxxxx}{\bidi@raggedright #2}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.25\remainxxxx}{\bidi@raggedright #3}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.25\remainxxxx}{\bidi@raggedright #4}\smallskip}
\renewcommand{\itemxxxxx}[5]{\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.2\remainxxxxx}{\bidi@raggedright #1}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.2\remainxxxxx}{\bidi@raggedright #2}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.2\remainxxxxx}{\bidi@raggedright #3}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.2\remainxxxxx}{\bidi@raggedright #4}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.2\remainxxxxx}{\bidi@raggedright #5}\smallskip}
\renewcommand{\itemxox}[2]{\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{\remainxox}{\bidi@raggedright #1}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.3333\remainxxx}{\bidi@raggedright #2}\smallskip}
\renewcommand{\itemxxo}[2]{\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.3333\remainxxx}{\bidi@raggedright #1}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{\remainxox}{\bidi@raggedright #2}\smallskip}
\renewcommand{\itemxoxx}[3]{\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{\remainxoxx}{\bidi@raggedright #1}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.25\remainxxxx}{\bidi@raggedright #2}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.25\remainxxxx}{\bidi@raggedright #3}\smallskip}
\renewcommand{\itemxxox}[3]{\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{.25\remainxxxx}{\bidi@raggedright #1}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{\remainxoxx}{\bidi@raggedright #2}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{0.25\remainxxxx}{\bidi@raggedright #3}\smallskip}
\renewcommand{\itemxxxo}[3]{\parbox[t]%
{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{.25\remainxxxx}{\bidi@raggedright #1}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
```

```
\parbox[t]{.25\remainxxxx}{\bidi@raggedright #2}\hfill%
\parbox[t]{\labelwidth}{\hfill{\labelname}}\hskip\labelsep
\parbox[t]{\remainxoxx}{\bidi@raggedright #3}\smallskip}
```

122 File natbib-xetex-bidi.def

```
\ProvidesFile{natbib-xetex-bidi.def}[2017/06/09 v0.2 bidi adaptations for natbib package fo
\renewenvironment{thebibliography}[1]{%
 \bibsection
 \parindent\z@
 \bibpreamble
 \bibfont
 \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
 \bidi@@thebibliography@font@hook%
 \list{\@biblabel{\the\c@NAT@ctr}}{\@bibsetup{#1}\global\c@NAT@ctr\z@}%
 \ifNAT@openbib
   \renewcommand\newblock{\par}%
 \else
   \renewcommand\newblock{\hskip .11em \@plus.33em \@minus.07em}%
 \fi
 \sloppy\clubpenalty4000\widowpenalty4000
 \sfcode`\.\@m
 \let\NAT@bibitem@first@sw\@firstoftwo
    \let\citeN\cite \let\shortcite\cite
    \let\citeasnoun\cite
}{%
 \bibitem@fin
 \bibpostamble
 \def\@noitemerr{%
  \PackageWarning{natbib}{Empty `thebibliography' environment}%
 }%
 \endlist
 \bibcleanup
}%
```

123 File newfloat-xetex-bidi.def

```
\ProvidesFile{newfloat-xetex-bidi.def}[2013/05/22 v0.1 bidi adaptations for newfloat packag
\renewcommand*\newfloat@setwithin[2]{%
  \ifcsname c@chapter\endcsname
    \@removefromreset{#1}{chapter}%
  \fi
  \@removefromreset{#1}{section}%
  \edef\@tempa{#2}%
  \ifx\@tempa\@empty
    \def\@tempa{none}%
  \fi
  \def\@tempb{none}%
  \ifx\@tempa\@tempb
    \ifcsname c@chapter\endcsname
      \@chapterlistsgap@off{#1}%
    \fi
    \newfloat@@setwithin{#1}{}{}%
  \else
```

```
    \def\@tempb{chapter}%
    \ifx\@tempa\@tempb
      \@addtoreset{#1}{chapter}%
      \@chapterlistsgap@on{#1}%
      \newfloat@@setwithin{#1}{\ifnum\c@chapter>\z@ \thechapter\@SepMark\fi}{\theHchapter\@
    \else
      \def\@tempb{section}%
      \ifx\@tempa\@tempb
        \@addtoreset{#1}{section}%
        \ifcsname c@chapter\endcsname
          \@addtoreset{#1}{chapter}%
          \@chapterlistsgap@on{#1}%
          \newfloat@@setwithin{#1}{\thesection\@SepMark}{\theHsection\@SepMark}%
        \else
          \newfloat@@setwithin{#1}{\ifnum\c@section>\z@ \thesection\@SepMark\fi}{\theHsecti
        \fi
      \else
        \newfloat@Error{Invalid value `#2' for option `within'}%
      \fi
    \fi
  \fi}
```

124 File nicematrix-xetex-bidi.def

```
\ProvidesFile{nicematrix-xetex-bidi.def}[2024/12/15 v0.3 bidi adaptations for nicematrix pa
\ExplSyntaxOn
\bidi@patchcmd{\__nicematrix_array:n}{\@tabarray}{%
  \bool_if:NF \l__nicematrix_tabular_bool \@RTLtabfalse
  \@tabarray
}{}{}
\ExplSyntaxOff

```

125 File ntheorem-xetex-bidi.def

```
\ProvidesFile{ntheorem-xetex-bidi.def}[2012/05/01 v0.1 bidi adaptations for ntheorem packag
\gdef\@thm#1#2#3{%
   \if@thmmarks
     \stepcounter{end\InTheoType ctr}%
   \fi
   \renewcommand{\InTheoType}{#1}%
   \if@thmmarks
     \stepcounter{curr#1ctr}%
     \setcounter{end#1ctr}{0}%
   \fi
   \refstepcounter{#2}%
   \theorem@prework
   \thm@topsepadd \theorempostskipamount   % cf. latex.ltx: \@trivlist
   \ifvmode \advance\thm@topsepadd\partopsep\fi
   \trivlist
   \@topsep \theorempreskipamount
   \@topsepadd \thm@topsepadd        % used by \@endparenv
   \advance\linewidth -\theorem@indent
   \advance\@totalleftmargin \theorem@indent
```

```
  \if@RTL\parshape \@ne 0pt \linewidth\else  \parshape \@ne \@totalleftmargin \linewidth\fi
  \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}}
```

126 File ntheorem-hyper-xetex-bidi.def

```
\ProvidesFile{ntheorem-hyper-xetex-bidi.def}[2012/05/01 v0.1 bidi adaptations for ntheorem-
\gdef\@thm#1#2#3{%
  \if@thmmarks
    \stepcounter{end\InTheoType ctr}%
  \fi
  \renewcommand{\InTheoType}{#1}%
  \if@thmmarks
    \stepcounter{curr#1ctr}%
    \setcounter{end#1ctr}{0}%
  \fi
  \refstepcounter{#2}%
  \thm@topsepadd \theorempostskipamount   % cf. latex.ltx: \@trivlist
  \ifvmode \advance\thm@topsepadd\partopsep\fi
  \trivlist
  \@topsep \theorempreskipamount
  \@topsepadd \thm@topsepadd        % used by \@endparenv
  \advance\linewidth -\theorem@indent
  \advance\@totalleftmargin \theorem@indent
  \if@RTL\parshape \@ne 0pt \linewidth\else  \parshape \@ne \@totalleftmargin \linewidth\f
  \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}}
```

127 File overpic-xetex-bidi.def

```
\ProvidesFile{overpic-xetex-bidi.def}[2015/12/07 v0.1 bidi adaptations for overpic package
\renewenvironment{overpic}[2][]{%
  \sbox{\z@}{\includegraphics[#1]{#2}}%
  \settodepth{\@tempcnta}{\usebox{\z@}}%
  \settoheight{\@tempcntb}{\usebox{\z@}}%
  \advance\@tempcntb\@tempcnta%
  \settowidth{\@tempcnta}{\usebox{\z@}}%
  \setlength{\@tempdima}{\unitlength}%
  \count@=\z@\Gin@gridfalse\setkeys{Gin}{#1}%
%
  \OVP@calc%
%
  \begin{picture}(\@tempcnta,\@tempcntb)%
    \if@RTL\else\put(0,0){\makebox(0,0)[bl]{\usebox{\z@}}}%
    \ifGin@grid%
      \put(0,0){\normalfont\fontsize\@viipt\@viiipt\selectfont%
        \grid(\@tempcnta,\@tempcntb)(\count@,\count@)[0,0]}%
    \fi\fi%
    % reset the graphics parameter
    \let\Gin@outer@scalex\relax
    \let\Gin@outer@scaley\relax
    \let\Gin@angle\relax
    \let\Gin@ewidth\Gin@exclamation
    \let\Gin@eheight\Gin@ewidth
    \def\Gin@scalex{1}
    \let\Gin@scaley\Gin@exclamation
```

```
}{%
    \if@RTL\ifGin@grid%
      \put(0,0){\normalfont\fontsize\@viipt\@viiipt\selectfont%
        \grid(\@tempcnta,\@tempcntb)(\count@,\count@)[0,0]}%
    \fi%
    \put(0,0){\makebox(0,0)[bl]{\usebox{\z@}}}\fi%
  \end{picture}%
}%
```

128 File pdfbase-xetex-bidi.def

```
\ProvidesFile{pdfbase-xetex-bidi.def}[2022/02/18 v0.4 bidi adaptations for pdfbase package
\ExplSyntaxOn
\cs_set_eq:NN\pbs_outputpage_orig:\@outputpage
\cs_set_nopar:Npn\@outputpage{
  \int_gincr:N\g_pbs_page_int
  \box_if_vertical:cTF{@outputbox}{
    \bool_set_true:N\l_pbs_is_vertical_bool
  }{
    \bool_set_false:N\l_pbs_is_vertical_bool
  }
  \hbox_set:Nn\@outputbox{
    %begin of page
    \hbox_overlap_right:n{\seq_map_inline:Nn\g_pbs_bop_seq{##1}}
    \box_use_drop:N\@outputbox
    %end of page
    \hbox_overlap_right:n{\seq_map_inline:Nn\g_pbs_eop_seq{##1}}
  }
  \bool_if:NT\l_pbs_is_vertical_bool{
    \vbox_set:Nn\@outputbox{\box_use_drop:N\@outputbox}
  }
  \pbs_outputpage_orig:
}
\ExplSyntaxOff
```

129 File pdflscape-xetex-bidi.def

```
\ProvidesFile{pdflscape-xetex-bidi.def}[2022/02/18 v0.1 bidi adaptations for pdflscape pack
\bidi@patchcmd{\landscape}{\PLS@Rotate{90}}{%
  \if@RTL
    \PLS@Rotate{-90}%
  \else
    \PLS@Rotate{90}%
  \fi
}{}{}
```

130 File pgfcorescopes.code-xetex-bidi.def

```
\ProvidesFile{pgfcorescopes.code-xetex-bidi.def}[2015/11/14 v0.1 bidi adaptations for pgf p
\def\pgfpicture{%
  \begingroup%
   \ifmmode\else\@RTLfalse\beginL\fi%
    \pgfpicturetrue%
    \global\advance\pgf@picture@serial@count by1\relax%
```

```
    \edef\pgfpictureid{pgfid\the\pgf@picture@serial@count}%
    \let\pgf@nodecallback=\pgfutil@gobble%
    \pgf@picmaxx=-16000pt\relax%
    \pgf@picminx=16000pt\relax%
    \pgf@picmaxy=-16000pt\relax%
    \pgf@picminy=16000pt\relax%
    \pgf@relevantforpicturesizetrue%
    \pgf@resetpathsizes%
    \pgfutil@ifnextchar\bgroup\pgf@oldpicture\pgf@picture}
\def\endpgfpicture{%
              \ifpgfrememberpicturepositiononpage%
                \hbox to0pt{\pgfsys@markposition{\pgfpictureid}}%
              \fi%
              % ok, now let's position the box
              \ifdim\pgf@picmaxx=-16000pt\relax%
                % empty picture. make size 0.
                \global\pgf@picmaxx=0pt\relax%
                \global\pgf@picminx=0pt\relax%
                \global\pgf@picmaxy=0pt\relax%
                \global\pgf@picminy=0pt\relax%
              \fi%
              % Shift baseline outside:
              \pgf@relevantforpicturesizefalse%
              \pgf@process{\pgf@baseline}%
              \xdef\pgf@shift@baseline{\the\pgf@y}%
              %
              \pgf@process{\pgf@trimleft}%
              \global\advance\pgf@x by-\pgf@picminx
              % prepare \hskip\pgf@trimleft@final.
              % note that \pgf@trimleft@final is also queried
              % by the pgf image externalization.
              \xdef\pgf@trimleft@final{-\the\pgf@x}%
              %
              \pgf@process{\pgf@trimright}%
              \global\advance\pgf@x by-\pgf@picmaxx
              % prepare \hskip\pgf@trimright@final.
              % note that \pgf@trimright@final is also queried
              % by the pgf image externalization.
              \xdef\pgf@trimright@final{\the\pgf@x}%
        %
        \pgf@remember@layerlist@globally
            \endgroup%
            \hss%
          \egroup%
      \pgf@restore@layerlist@from@global
          \pgf@insertlayers%
        \endgroup%
        \pgfsys@discardpath%
        \endgroup%
      \pgfsys@endscope%
    \pgfsys@endpicture%
    \endgroup%
    \hss
  \egroup%
```

```
  \pgfsys@typesetpicturebox\pgfpic%
  \ifmmode\else\endL\fi%
  \endgroup%
}
```

131 File pgfsys-xetex-bidi.def

```
\ProvidesFile{pgfsys-xetex-bidi.def}[2025/01/05 v0.1 bidi adaptations for pgfsys package fo
\def\pgfsys@shadingoutsidepgfpicture#1{%
  \beginL#1\endL%
}
```

132 File picinpar-xetex-bidi.def

```
\ProvidesFile{picinpar-xetex-bidi.def}[2013/04/08 v0.2 bidi adaptations for picinpar packag
\long\def\@makewincaption#1#2{%
   \setbox\@tempboxa\hbox{\footnotesize{\bf #1:\enspace}{#2}}%
   \ifdim\wd\@tempboxa>\picwd
      {\footnotesize{\bf #1:\enspace}{#2\par}}
   \else
      \hbox to\picwd{\if@RTL\beginR\fi\hfil\box\@tempboxa\hfil\if@RTL\endR\fi}
   \fi}
\def\endwindow{%
    \global\tcd=\tcdsav
    \egroup\vskip\parskip\parshape=0 % reset parshape; end \box\rawtext
    \vbadness=10000
    \splittopskip=0pt
%
% Typeset the lines above the window
%
\ifnum\tcd>0\setbox\holder=\vsplit\rawtext to \tcd\baselineskip
\tcn=\tcd
\loop\advance\tcn -1
\setbox\fslice=\vsplit\holder to\baselineskip
\prune\fslice\linewidth
\topheight=0pt
\ifnum\dp\fslice>\dp\wstrutbox
       \advance\topheight-\dp\fslice
       \advance\topheight\dp\wstrutbox
       \advance\topheight\ilg\fi
\hbox to\linewidth{\box\fslice}
\vskip-\topheight
\ifdim\ht\holder>0pt\repeat
\fi
%
% Now we build the boxes beside the window
%
\global\topheight=\tcl\baselineskip
\ifnum\cumpartcl>0\global\tcl=\cumtcl
      \global\topheight=\vpic
\fi
\ifnum\bl>0 \ifnum\br>0 \multiply\topheight by 2\fi\fi
```

```
\ifnum\bl>0\setbox\holder=\vsplit\rawtext to\topheight
\else\ifnum\br>0\setbox\holder=\vsplit\rawtext to\topheight\fi\fi
\tcn=\tcl \na=0 \nb=0
\ifnum\bl>0 \ifnum\br>0 \multiply\tcn by 2\fi\fi
\ifnum\bl>0\na=\tcn\ifnum\br>0\divide\na by 2\fi\fi
\ifnum\br>0\nb=\tcn\ifnum\bl>0\divide\nb by 2\fi\fi
\ifnum\na=0\ifnum\nb=0
      \setbox\waslice=\vbox to\vpic{\vss}
      \setbox\wbslice=\vbox to\vpic{\vss}
      \bl=1\br=1
      \vskip\ilg
\fi\fi
%
% both sides
%
\ifnum\na>0 \ifnum\nb>0
\loop\advance\nb -1
\advance\na -1
\if@RTL%
\setbox\bslice=\vsplit\holder to\baselineskip
\prune\bslice\rtside
\setbox\wbslice=\vbox{\unvbox\wbslice\hbox
to\rtside{\box\bslice\hfil}}
\setbox\aslice=\vsplit\holder to\baselineskip
\prune\aslice\lftside
\setbox\waslice=\vbox{\unvbox\waslice\hbox
to\lftside{\box\aslice\hfil}}
\else%
\setbox\aslice=\vsplit\holder to\baselineskip
\prune\aslice\lftside
\setbox\waslice=\vbox{\unvbox\waslice\hbox
to\lftside{\box\aslice\hfil}}
\setbox\bslice=\vsplit\holder to\baselineskip
\prune\bslice\rtside
\setbox\wbslice=\vbox{\unvbox\wbslice\hbox
to\rtside{\box\bslice\hfil}}
\fi%
\ifnum\nb>0\repeat
\fi\fi
%
% only text on the left side
%
\ifnum\na>0
    \loop\advance\na -1
    \setbox\aslice=\vsplit\holder to\baselineskip
    \prune\aslice\lftside
    \setbox\waslice=\vbox{\unvbox\waslice\hbox
    to\lftside{\box\aslice\hfil}}
    \ifdim\ht\holder>0pt\repeat
\fi
%
% only text on the right side
%
\ifnum\nb>0
```

```
    \loop\advance\nb -1
    \setbox\bslice=\vsplit\holder to\baselineskip
    \prune\bslice\rtside
    \setbox\wbslice=\vbox{\unvbox\wbslice\hbox
    to\rtside{\box\bslice\hfil}}
    \ifdim\ht\holder>0pt\repeat
\fi
%
% fixing the dimensions of the window part
%
\ifnum\bl=0\topheight=\ht\wbslice
\else\ifnum\br=0\topheight=\ht\waslice
      \else\ifdim\ht\waslice>\ht\wbslice\topheight=\ht\waslice
            \else\topheight=\ht\wbslice\fi\fi\fi
%
% ship out the window material to the main vertical list
%
\ifnum\bl>0 \ifnum\br>0 \ifdim\ht\wbslice<\topheight
\setbox\wbslice=\vbox to\topheight{\box\wbslice\vfill}
\fi\fi\fi
\setbox\windowbox=\vbox{\hbox to\linewidth{%
\ifnum\bl>0\box\waslice\hfill\fi%
\vbox to\topheight{\hrule width\picwd height0pt depth0pt\vskip0pt%
\vfill\unvbox\picbox%
\ifnum\picwd>0\vfill\fi%
\vss}\ifnum\br>0\hfill\vbox{\box\wbslice}\fi}}%
\unvbox\windowbox%
\loop
 \setbox\bslice=\vsplit\rawtext to\baselineskip
 \prune\bslice\linewidth
 \setbox\wbslice=\vbox{\hbox to\linewidth{\box\bslice\hfil}}
 \unvbox\wbslice
 \ifdim\ht\rawtext>0pt
\repeat
}% FINITO
```

133 File plain-xetex-bidi.def

```
\def\TeXXeTOn{\TeXXeTstate=1 }
\def\TeXXeTOff{\TeXXeTstate=0 }
\TeXXeTOn
\def\usebox#1{\leavevmode\copy #1\relax}
\def\bidi@RTL@everypar{{\setbox\z@\lastbox\if@RTL\beginR\else\beginL\fi\ifvoid\z@\else\useb
   \let\bidi@o@everypar=\everypar
   \newtoks\bidi@n@everypar
   \bidi@n@everypar\expandafter{\the\bidi@o@everypar}
   \bidi@o@everypar{\bidi@RTL@everypar\the\bidi@n@everypar}
   \let\everypar=\bidi@n@everypar
\def\moreLRE{\bracetext \aftergroup\endL \beginL\@RTLfalse}
\def\moreRLE{\bracetext \aftergroup\endR \beginR\@RTLtrue}
\protected\def\hboxR{\hbox\bgroup
 \everyhbox{%
  \aftergroup\egroup
  \everyhbox{}%
```

```
  \beginR
  \@hboxRconstructtrue
  \bgroup
  \aftergroup\endR
  \aftergroup\egroup
 }\hbox}
\protected\def\hboxL{\hbox\bgroup
 \everyhbox{%
  \aftergroup\egroup
  \everyhbox{}%
  \beginL
  \@hboxRconstructfalse
  \bgroup
  \aftergroup\endL
  \aftergroup\egroup
 }\hbox}
\protected\def\vboxR{\vbox\bgroup
 \everyvbox{%
  \aftergroup\egroup
  \everyvbox{}%
  \@RTLtrue
  \bgroup
  \aftergroup\egroup
 }\vbox}
\protected\def\vboxL{\vbox\bgroup
 \everyvbox{%
  \aftergroup\egroup
  \everyvbox{}%
  \@RTLfalse
  \bgroup
  \aftergroup\egroup
 }\vbox}
\def\LTR{\par\@RTLfalse\@RTL@footnotefalse\hsize\linewidth\parshape\z@}
\def\endLTR{\par}
\def\RTL{\par\@RTLtrue\@RTL@footnotetrue\hsize\linewidth\parshape\z@}
\def\endRTL{\par}
\def\setRTL{\@RTLtrue\@RTL@footnotetrue}
\def\setLTR{\@RTLfalse\@RTL@footnotefalse}
\let\unsetRTL=\setLTR
\let\unsetLTR=\setRTL
\let\LR=\LRE
\let\RL=\RLE
\def\@ensure@RTL#1{\if@RTL#1\else\RLE{#1}\fi}
\def\@ensure@LTR#1{\if@RTL\LRE{#1}\else#1\fi}
\let\@ensure@RL=\@ensure@RTL
\let\@ensure@LR=\@ensure@LTR
\def\@ensure@dir#1{\if@RTL\RLE{#1}\else{#1}\fi}
\let\@ensure@maindir=\@ensure@dir
\def\@@RTL{RTL}
\def\@@LTR{LTR}
\def\save@dir{\if@RTL\gdef\saved@@dir{RTL}\else\gdef\saved@@dir{LTR}\fi}
\def\reset@dir{\ifx\saved@@dir\@@RTL\setRTL\else\ifx\saved@@dir\@@LTR\setLTR\else\relax\fi\
\let\@@TeX\TeX
\def\TeX{\@ensure@LTR{\@@TeX}}
```

```
\def\pagecontents{\ifvoid\topins\else\unvbox\topins\fi
  \dimen@=\dp\@cclv \unvbox\@cclv % open up \box255
  \ifvoid\footins\else % footnote info is present
    \vskip\skip\footins
    \footnoterule
    \unvbox\footins\fi
  \ifr@ggedbottom \kern-\dimen@ \vfil \fi
  \ifvoid\@bidi@copyins@
  \else
    \vskip\skip\@bidi@copyins@
    \unvbox\@bidi@copyins@
  \fi
}
\long\def\bidi@reflect@box#1{%
  \leavevmode
  \setbox\z@\hbox{{#1}}%
  \setbox\tw@\hbox{\special{x:gsave}\special{x:scale -1 1}\rlap{\copy\z@}\special{x:grestor
  \hbox to \wd\z@{\kern\wd\z@\box\tw@\hss}%
}
\def\XeTeX{\LR{\leavevmode$\smash{\hbox{X\lower.5ex
  \hbox{\kern-.125em\bidi@reflect@box{E}}\kern-.1667em \TeX}}$}}
\let\setRL=\setRTL
\let\setLR=\setLTR
\let\unsetRL=\setLTR
\let\bidi@saved@eqno=\eqno
\let\bidi@saved@leqno=\leqno
\def\eqno{\ifnum\predisplaydirection<\z@ \bidi@saved@leqno \else \bidi@saved@eqno \fi}
\def\leqno{\ifnum\predisplaydirection<\z@ \bidi@saved@eqno \else \bidi@saved@leqno \fi}
\def\centerline#1{\line{\hss\if@RTL\beginR\fi#1\if@RTL\endR\fi\hss}}
\def\leftline#1{\line{\if@RTL\beginR\fi#1\if@RTL\endR\fi\hss}}
\def\rightline#1{\line{\hss\if@RTL\beginR\fi#1\if@RTL\endR\fi}}
```

134 File pstricks-xetex-bidi.def

```
\ProvidesFile{pstricks-xetex-bidi.def}[2025/01/08 v0.7 bidi adaptations for pstricks packag
\bidi@patchcmd\pspicture\begingroup{%
  \begingroup
    \ifmmode
    \else
      \@RTLfalse
      \beginL
    \fi
}{}{\bidi@warningnoline{Oops! patching `\string\pspicture' failed}}

\bidi@patchcmd\endpspicture{%
  \endgroup
  \psset[pstricks]{shift=0}% reset value
}{%
  \ifmmode
  \else
    \endL
  \fi
  \endgroup
  \psset[pstricks]{shift=0}% reset value
```

```
}{}{\bidi@warningnoline{Oops! patching `\string\endpspicture' failed}}

\bidi@patchcmd\@@scalebox{%
  \special{x: bscale \pst@tempc \pst@tempd}%
  \hbox to \z@{\box\pst@hbox\hss}%
  \special{x: escale}%
}{%
  \if@RTL
    \special{x: escale}%
  \else
    \special{x: bscale \pst@tempc \pst@tempd}%
  \fi
  \hbox to \z@{\box\pst@hbox\hss}%
  \if@RTL
    \special{x: bscale \pst@tempc \pst@tempd}%
  \else
    \special{x: escale}%
  \fi
}{}{\bidi@warningnoline{Oops! patching `\string\@@scalebox' failed}}
\let\ps@@scalebox\@@scalebox

```

135 File quotchap-xetex-bidi.def

```
\ProvidesFile{quotchap-xetex-bidi.def}[2010/07/25 v0.1 bidi adaptations for quotchap packag
\renewcommand{\qauthor}[1]{%
  \par\smallskip
  {\if@RTL\raggedright\else\raggedleft\fi\upshape #1\qquad\hbox{}\par}\bigskip}
\renewcommand{\@makechapterhead}[1]{\chapterheadstartvskip%
  {\size@chapter{\sectfont\if@RTL\raggedright\else\raggedleft\fi
      {\chapnumfont
        \ifnum \c@secnumdepth >\m@ne%
        \if@mainmatter\thechapter%
        \fi\fi
        \par\nobreak}%
      {\if@RTL\raggedright\else\raggedleft\fi\advance\if@RTL\rightmargin\else\leftmargin\fi
    \nobreak\chapterheadendvskip}}
\renewcommand*{\@iprintcites}{%
  \vbox to\z@{\leavevmode\copy\@quotebox\vss}
  \global\let\@printcites\relax}
```

136 File ragged2e-xetex-bidi.def

```
\ProvidesFile{ragged2e-xetex-bidi.def}[2018/10/17 v0.3 bidi adaptations for ragged2e packag
\renewcommand{\Centering}{%
   \ifx\\\@raggedtwoe@savedcr
      \let\\\@centercr
   \fi
   \let\@gnewline\@raggedtwoe@gnewline
   \if@RTL\rightskip\else\leftskip\fi\CenteringLeftskip
   \@rightskip\CenteringRightskip
   \if@RTL\leftskip\else\rightskip\fi\@rightskip
   \parfillskip\CenteringParfillskip
   \parindent\CenteringParindent
```

```
    \@raggedtwoe@spaceskiptrue
    \@raggedtwoe@everyselectfont
    }
\renewcommand{\RaggedLeft}{%
    \ifx\\\@raggedtwoe@savedcr
       \let\\\@centercr
    \fi
    \let\@gnewline\@raggedtwoe@gnewline
    \if@RTL\rightskip\else\leftskip\fi\RaggedLeftLeftskip
    \@rightskip\RaggedLeftRightskip
    \if@RTL\leftskip\else\rightskip\fi\@rightskip
    \parfillskip\RaggedLeftParfillskip
    \parindent\RaggedLeftParindent
    \@raggedtwoe@spaceskiptrue
    \@raggedtwoe@everyselectfont
    }
\renewcommand{\RaggedRight}{%
    \ifx\\\@raggedtwoe@savedcr
       \let\\\@centercr
    \fi
    \let\@gnewline\@raggedtwoe@gnewline
    \if@RTL\rightskip\else\leftskip\fi\RaggedRightLeftskip
    \@rightskip\RaggedRightRightskip
    \if@RTL\leftskip\else\rightskip\fi\@rightskip
    \parfillskip\RaggedRightParfillskip
    \parindent\RaggedRightParindent
    \@raggedtwoe@spaceskiptrue
    \@raggedtwoe@everyselectfont
    }
\renewcommand{\justifying}{%
    \let\\\@raggedtwoe@savedcr
    \let\@gnewline\@raggedtwoe@saved@gnewline
    \if@RTL\rightskip\else\leftskip\fi\z@
    \@rightskip\z@
    \if@RTL\leftskip\else\rightskip\fi\@rightskip
    \parfillskip\JustifyingParfillskip
    \parindent\JustifyingParindent
    \@raggedtwoe@spaceskipfalse
    \@raggedtwoe@everyselectfont
    }
\def\@raggedtwoe@raggedrightboxes@opt{%
  \renewcommand{\@arrayparboxrestore}{%
    \let\if@nobreak\iffalse
    \let\if@noskipsec\iffalse
    \let\par\@@par
    \let\-\@dischyph
    \let\'\@acci\let\`\@accii\let\=\@acciii
    \parskip\z@skip
    \everypar{}%
    \linewidth\hsize
    \@totalleftmargin\z@
    \if@RTL
      \RaggedLeft
    \else
```

```
      \RaggedRight
    \fi
    \lineskip\normallineskip
    \baselineskip\normalbaselineskip
    \sloppy}%
  \let\@raggedtwoe@raggedrightboxes@opt\relax
  }
\def\@raggedtwoe@document@opt{%
  \AtBeginDocument{\@raggedtwoe@abdhook}%
  \@raggedtwoe@raggedrightboxes@opt
  \@raggedtwoe@footmisctrue
  \let\@raggedtwoe@document@opt\relax
  }
\def\@raggedtwoe@abdhook{%
  \PackageInfo{ragged2e}{ABD: executing `\string\RaggedLeft' for
    right to left documents and `\string\RaggedRight' for left
    to right documents}%
  \if@RTL
    \RaggedLeft
  \else
    \RaggedRight
  \fi
  \@ifundefined{@tocrmarg}{}{\edef\@tocrmarg{\@tocrmarg plus 2em}}%
  \let\@raggedtwoe@abdhook\relax
  }
\@ifpackagewith{ragged2e}{raggedrightboxes}{%
  \@raggedtwoe@raggedrightboxes@opt
}{}
\@ifpackagewith{ragged2e}{document}{%
  \@raggedtwoe@document@opt
}{}
\let\origin@RaggedLeft=\RaggedLeft
\let\origin@RaggedRight=\RaggedRight
\def\RaggedLeft{\if@RTL\origin@RaggedRight\else\origin@RaggedLeft\fi}
\def\RaggedRight{\if@RTL\origin@RaggedLeft\else\origin@RaggedRight\fi}
```

137 File rapport1-xetex-bidi.def

```
\ProvidesFile{rapport1-xetex-bidi.def}[2017/06/09 v0.4 bidi adaptations for rapport1 class
\renewenvironment{theindex}{%
  \if@twocolumn
    \@restonecolfalse
  \else
    \@restonecoltrue
  \fi
  \columnseprule \z@
  \columnsep 35\p@
  \twocolumn[\@makeschapterhead{\indexname}]%
  \@mkboth{\MakeUppercase{\indexname}}{\MakeUppercase{\indexname}}%
  \thispagestyle{plain}\parindent\z@
  \parskip\z@ \@plus .3\p@\relax
  \let\item\@idxitem
  }{%
  \if@restonecol\onecolumn\else\clearpage\fi}
```

```
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
\if@titlepage
  \renewenvironment{abstract}{%
      \titlepage
      \null\vfil
      \section*{\SectFont\abstractname}%
      \noindent\ignorespaces}
     {\par\vfil\null\endtitlepage}
\else
  \renewenvironment{abstract}{%
      \if@twocolumn
        \section*{\abstractname}%
      \else
        \bgroup\if@RTL\leftskip\else\rightskip\fi=\unitindent
        \section*{\small\SectFont\abstractname}%
        \noindent\ignorespaces
      \fi}
      {\if@twocolumn\else\par\egroup\fi}
\fi
\renewcommand*\@regtocline[3]{%
  \ifnum #1>\c@tocdepth
  \else
    \vskip\z@\@plus.2\p@
    {\hangindent\z@ \@afterindenttrue \interlinepenalty\@M
     \if@RTL\rightskip\else\leftskip\fi\unitindent
     \if@RTL\leftskip\else\rightskip\fi\unitindent\@plus 1fil
     \parfillskip\z@
     \@tempdima\unitindent
     \parindent\z@
     \leavevmode
     \hbox{}\hskip -\if@RTL\rightskip\else\leftskip\fi\relax#2\nobreak
     \hskip 1em \nobreak{\slshape #3}\par
     }%
  \fi}
\if@oldtoc
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
        \nobreak
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
  \fi}
\else
```

```
    \renewcommand*\l@part{%
      \ifnum \c@tocdepth >-2\relax
      \addpenalty{-\@highpenalty}%
      \addvspace{2.25em \@plus \p@}%
      \@regtocline{0}%
    \fi}
\fi
\if@oldtoc
\renewcommand*\l@chapter[2]{%
     \addpenalty{-\@highpenalty}%
     \vskip 1.0em \@plus\p@
     \setlength\@tempdima{1.5em}%
     \begingroup
     \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
     \parfillskip -\@pnumwidth
     \leavevmode \bfseries
     \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
     \hskip -\if@RTL\rightskip\else\leftskip\fi
     #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
     \penalty\@highpenalty
    \endgroup}
\else
   \renewcommand*\l@chapter{\@regtocline{0}}
\fi
\renewcommand*\left@footnoterule{%
   \kern-3\p@
   \kern.5\baselineskip
   \hrule\@width\unitindent
   \kern.4\baselineskip
}
\renewcommand*\right@footnoterule{%
   \kern-3\p@
   \kern.5\baselineskip
   \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\unitindent\relax \hrulefill }
   \kern.4\baselineskip}
\renewenvironment{thebibliography}[1]
      {\chapter*{\bibname}%
        \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}%
       \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
       \bidi@@thebibliography@font@hook%
       \list{\@biblabel{\@arabic\c@enumiv}}%
            {\settowidth\labelwidth{\@biblabel{#1}}%
             \leftmargin\labelwidth
             \advance\leftmargin\labelsep
             \@openbib@code
             \usecounter{enumiv}%
             \let\p@enumiv\@empty
             \renewcommand*\theenumiv{\@arabic\c@enumiv}}%
       \sloppy\clubpenalty4000\widowpenalty4000%
       \sfcode`\.\@m}
      {\def\@noitemerr
        {\@latex@warning{Empty `thebibliography' environment}}%
       \endlist}
\renewcommand*\thesection{\thechapter\@SepMark\@arabic\c@section}
```

```
\renewcommand*\thesubsection{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand*\theparagraph{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*\thesubparagraph{\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewcommand*\theequation{%
  \ifnum \c@chapter>\z@ \thechapter\@SepMark\fi\@arabic\c@equation}
\renewcommand*\thefigure{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@figure}
\renewcommand*\thetable{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@table}
\if@titlepage
\renewcommand*\TitleFont{\rmfamily}
\renewcommand*\maketitle{%
  \begin{titlepage}%
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let \footnote \thanks
    \long\def\@makefntext##1{\parindent\z@
         \def\labelitemi{\textendash}\@revlabeltrue
         \leavevmode\@textsuperscript{\@thefnmark}\kern1em\relax ##1}
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \if@compatibility\setcounter{page}{0}\fi
    \null\vfil
    \vskip 60\p@
    \begin{center}%
      \TitleFont
      {\LARGE \def\\{\penalty -\@M}
        \if@allcaps
          \expandafter\uc@nothanks\@title\thanks\relax
        \else
          \@title
        \fi\par}%
      \vskip 3em%
      {\large
        \lineskip .75em \parindent\z@
        \begin{tabular}[t]{c}%
          \if@allcaps
            \expandafter\uc@authornothanks\@author\and\relax
          \else
            \@author
          \fi
        \end{tabular}\par}%
      \vskip 1.5em%
      {\large
        \if@allcaps
          \uppercase\expandafter{\@date}%
        \else
          \@date
        \fi\par}%
      \end{center}\par
    \@thanks
    \vfil\null
```

```
  \end{titlepage}%
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\uc@nothanks#1\thanks{\uppercase{#1}\futurelet\@tempa\uc@tx}
\def\uc@authornothanks#1\and{\uc@nothanks#1\thanks\relax
    \futurelet\@tempa\uc@ax}
\def\uc@ax{%
  \ifx\@tempa\relax
  \else
    \\ \andname \\ \expandafter\uc@authornothanks
  \fi}
\def\uc@tx{\ifx\@tempa\relax
    \else \expandafter\uc@ty \fi}
\def\uc@ty#1{\thanks{#1}\uc@nothanks}
\else
\renewcommand*\maketitle{\par
  \begingroup
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{%
      \@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext{\@xmakefntext{%
      \@textsuperscript{\normalfont\@thefnmark}}}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@title\@empty
  \global\let\@date\@empty
  \global\let\title\relax
```

```
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
  }
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
    \let \footnote \thanks
    {\LARGE \TitleFont \@title \par}%
    \vskip 1.5em%
    {\large \TitleFont
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \TitleFont \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi
```

138 File rapport3-xetex-bidi.def

```
\ProvidesFile{rapport3-xetex-bidi.def}[2017/06/09 v0.6 bidi adaptations for rapport3 class
\renewenvironment{theindex}{%
  \if@twocolumn
    \@restonecolfalse
  \else
    \@restonecoltrue
  \fi
  \columnseprule \z@
  \columnsep 35\p@
  \twocolumn[\@makeschapterhead{\indexname}]%
  \@mkboth{\MakeUppercase{\indexname}}{\MakeUppercase{\indexname}}%
  \thispagestyle{plain}\parindent\z@
  \parskip\z@ \@plus .3\p@\relax
  \let\item\@idxitem
  }{%
  \if@restonecol\onecolumn\else\clearpage\fi}
\if@titlepage
\renewcommand*\TitleFont{\rmfamily}
\renewcommand*\maketitle{%
  \begin{titlepage}%
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let \footnote \thanks
    \let \LTRfootnote \LTRthanks
    \let \RTLfootnote \RTLthanks
    \long\def\@makefntext##1{\parindent\z@
```

```
19188         \def\labelitemi{\textendash}\@revlabeltrue
19189         \leavevmode\@textsuperscript{\@thefnmark}\kern1em\relax ##1}
19190     \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
19191     \if@compatibility\setcounter{page}{0}\fi
19192     \null\vfil
19193     \vskip 60\p@
19194     \begin{center}%
19195       \TitleFont
19196       {\LARGE \def\\{\penalty -\@M}
19197         \if@allcaps
19198           \expandafter\uc@nothanks\@title\thanks\relax
19199         \else
19200           \@title
19201         \fi\par}%
19202       \vskip 3em%
19203       {\large
19204         \lineskip .75em \parindent\z@
19205         \begin{tabular}[t]{c}%
19206           \if@allcaps
19207             \expandafter\uc@authornothanks\@author\and\relax
19208           \else
19209             \@author
19210           \fi
19211         \end{tabular}\par}%
19212       \vskip 1.5em%
19213       {\large
19214         \if@allcaps
19215           \uppercase\expandafter{\@date}%
19216         \else
19217           \@date
19218         \fi\par}%
19219       \end{center}\par
19220     \@thanks
19221     \vfil\null
19222   \end{titlepage}%
19223   \setcounter{footnote}{0}%
19224   \global\let\thanks\relax
19225   \global\let\LTRthanks\relax
19226   \global\let\RTLthanks\relax
19227   \global\let\maketitle\relax
19228   \global\let\@thanks\@empty
19229   \global\let\@author\@empty
19230   \global\let\@title\@empty
19231   \global\let\@date\@empty
19232   \global\let\title\relax
19233   \global\let\author\relax
19234   \global\let\date\relax
19235   \global\let\and\relax
19236 }
19237 \def\uc@nothanks#1\thanks{\uppercase{#1}\futurelet\@tempa\uc@tx}
19238 \def\uc@authornothanks#1\and{\uc@nothanks#1\thanks\relax
19239     \futurelet\@tempa\uc@ax}
19240 \def\uc@ax{%
19241   \ifx\@tempa\relax
```

```
19242   \else
19243     \\ \andname \\ \expandafter\uc@authornothanks
19244   \fi}
19245 \def\uc@tx{\ifx\@tempa\relax
19246     \else \expandafter\uc@ty \fi}
19247 \def\uc@ty#1{\thanks{#1}\uc@nothanks}
19248 \else
19249 \renewcommand*\maketitle{\par
19250   \begingroup
19251     \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
19252     \def\@makefnmark{\rlap{%
19253       \@textsuperscript{\normalfont\@thefnmark}}}%
19254     \long\def\@makefntext{\@xmakefntext{%
19255       \@textsuperscript{\normalfont\@thefnmark}}}%
19256     \if@twocolumn
19257       \ifnum \col@number=\@ne
19258         \@maketitle
19259       \else
19260         \twocolumn[\@maketitle]%
19261       \fi
19262     \else
19263       \newpage
19264       \global\@topnum\z@
19265       \@maketitle
19266     \fi
19267     \thispagestyle{plain}\@thanks
19268   \endgroup
19269   \setcounter{footnote}{0}%
19270   \global\let\thanks\relax
19271   \global\let\LTRthanks\relax
19272   \global\let\RTLthanks\relax
19273   \global\let\maketitle\relax
19274   \global\let\@maketitle\relax
19275   \global\let\@thanks\@empty
19276   \global\let\@author\@empty
19277   \global\let\@title\@empty
19278   \global\let\@date\@empty
19279   \global\let\title\relax
19280   \global\let\author\relax
19281   \global\let\date\relax
19282   \global\let\and\relax
19283   }
19284 \def\@maketitle{%
19285   \newpage
19286   \null
19287   \vskip 2em%
19288 \if@titlecentered
19289   \begin{center}%
19290     \let \footnote \thanks
19291     \let \LTRfootnote \LTRthanks
19292     \let \RTLfootnote \RTLthanks
19293     {\LARGE \TitleFont \@title \par}%
19294     \vskip 1.5em%
19295     {\large \TitleFont
```

```
      \lineskip .5em%
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \TitleFont \@date}%
  \end{center}%
 \else
     {\LARGE \TitleFont \head@style \@title \par} \vskip 1.5em
     {\large \TitleFont \lineskip .5em \tabcolsep\z@
             \def\and{%%% \begin{tabular} has already started
                      \end{tabular}\hskip 1em plus .17fil
                      \if@RTL\begin{tabular}[t]{r}\else\begin{tabular}[t]{l}\fi}%% \end{tab
             \if@RTL\begin{tabular}[t]{r}\else\begin{tabular}[t]{l}\fi\@author\end{tabular}
     \vskip 1em {\large \TitleFont \@date}
 \fi
  \par
  \vskip 1.5em}
\fi
\renewcommand*\@regtocline[3]{%
  \ifnum #1>\c@tocdepth
  \else
    \vskip\z@\@plus.2\p@
    {\hangindent\z@ \@afterindenttrue \interlinepenalty\@M
     \if@RTL\rightskip\else\leftskip\fi\unitindent
     \if@RTL\leftskip\else\rightskip\fi\unitindent\@plus 1fil
     \parfillskip\z@
     \@tempdima\unitindent
     \parindent\z@
     \leavevmode
     \hbox{}\hskip -\if@RTL\rightskip\else\leftskip\fi\relax#2\nobreak
     \hskip 1em \nobreak{\slshape #3}\par
     }%
  \fi}
\if@oldtoc
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \setlength\@tempdima{3em}%
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
        \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
        \nobreak
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
  \fi}
\else
   \renewcommand*\l@part{%
     \ifnum \c@tocdepth >-2\relax
     \addpenalty{-\@highpenalty}%
```

```
      \addvspace{2.25em \@plus \p@}%
      \@regtocline{0}%
    \fi}
\fi
\if@oldtoc
\renewcommand*\l@chapter[2]{%
    \addpenalty{-\@highpenalty}%
    \vskip 1.0em \@plus\p@
    \setlength\@tempdima{1.5em}%
    \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode \bfseries
    \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
    \hskip -\if@RTL\rightskip\else\leftskip\fi
    #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
    \penalty\@highpenalty
   \endgroup}
\else
  \renewcommand*\l@chapter{\@regtocline{0}}
\fi
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
\if@titlepage
  \renewenvironment{abstract}{%
      \titlepage
      \null\vfil
      \section*{\SectFont\abstractname}%
      \noindent\ignorespaces}
     {\par\vfil\null\endtitlepage}
\else
  \renewenvironment{abstract}{%
      \if@twocolumn
        \section*{\abstractname}%
      \else
        \bgroup\if@RTL\leftskip\else\rightskip\fi=\unitindent
        \section*{\small\SectFont\abstractname}%
        \noindent\ignorespaces
      \fi}
      {\if@twocolumn\else\par\egroup\fi}
\fi
\renewcommand*\thesection{\thechapter\@SepMark\@arabic\c@section}
\renewcommand*\thesubsection{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*\thesubsubsection{\thesubsection\@SepMark\@arabic\c@subsubsection}
\renewcommand*\theparagraph{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*\thesubparagraph{\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewcommand*\thefigure{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@figure}
\renewcommand*\thetable{%
  \ifnum\c@chapter>\z@\thechapter\@SepMark\fi\@arabic\c@table}
\renewcommand*\theequation{%
  \ifnum \c@chapter>\z@ \thechapter\@SepMark\fi\@arabic\c@equation}
```

```
\renewenvironment{thebibliography}[1]
     {\chapter*{\bibname}%
       \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand*\theenumiv{\@arabic\c@enumiv}}%
      \sloppy\clubpenalty4000\widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
\renewcommand*\left@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hrule\@width\unitindent
  \kern.4\baselineskip
}
\renewcommand*\right@footnoterule{%
  \kern-3\p@
  \kern.5\baselineskip
  \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\unitindent\relax \hrulefill }
  \kern.4\baselineskip}
\renewcommand*\head@style{%
    \interlinepenalty \@M
    \hyphenpenalty=\@M \exhyphenpenalty=\@M
    \if@RTL\leftskip\else\rightskip\fi=0cm plus .7\hsize\relax}
```

139 File refrep-xetex-bidi.def

```
\ProvidesFile{refrep-xetex-bidi.def}[2017/06/09 v0.5 bidi adaptations for refrep class for
\if@titlepage
  \renewcommand\maketitle{\begin{titlepage}%
  \let\footnotesize\small
  \let\right@footnoterule\relax
  \let\left@footnoterule\relax
  \let\textwidth@footnoterule\relax
  \let\footnote\thanks
  \let\LTRfootnote\LTRthanks
  \let\RTLfootnote\RTLthanks
  \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
  \def\@makefnmark%
      {\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
  \long\def\@makefntext##1{%
       \@setpar{\@@par
          \@tempdima = \hsize
          \advance\@tempdima -1em
          \parshape \@ne 1em \@tempdima}%
```

```
19455       \par\parindent 1em \noindent
19456       \hb@xt@\z@{\hss\@textsuperscript{\normalfont\@thefnmark}\,}##1}
19457   \null\vfil
19458   \vskip 60\p@
19459   \begin{center}%
19460     {\LARGE \@title \par}%
19461     \vskip 3em%
19462     {\large
19463      \lineskip .75em%
19464       \begin{tabular}[t]{c}%
19465         \@author
19466       \end{tabular}\par}%
19467       \vskip 1.5em%
19468     {\large \@date \par}%       % Set date in \large size.
19469   \end{center}\par
19470   \@thanks
19471   \vfil\null
19472   \end{titlepage}%
19473   \setcounter{footnote}{0}%
19474   \global\let\thanks\relax
19475   \global\let\LTRthanks\relax
19476   \global\let\RTLthanks\relax
19477   \global\let\maketitle\relax
19478   \global\let\@thanks\@empty
19479   \global\let\@author\@empty
19480   \global\let\@date\@empty
19481   \global\let\@title\@empty
19482   \global\let\title\relax
19483   \global\let\author\relax
19484   \global\let\date\relax
19485   \global\let\and\relax
19486   }
19487 \else
19488   \renewcommand\maketitle{\par
19489     \begingroup
19490       \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
19491       \def\@makefnmark%
19492           {\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
19493       \long\def\@makefntext##1{%
19494          \@setpar{\@@par
19495             \@tempdima = \hsize
19496             \advance\@tempdima -1em
19497             \parshape \@ne 1em \@tempdima}%
19498          \par\parindent 1em \noindent
19499          \hb@xt@\z@{\hss\@textsuperscript{\normalfont\@thefnmark}\,}##1}
19500       \if@twocolumn
19501         \ifnum \col@number=\@ne
19502           \@maketitle
19503         \else
19504           \twocolumn[\@maketitle]%
19505         \fi
19506       \else
19507         \newpage
19508         \global\@topnum\z@   % Prevents figures from going at top of page.
```

```
        \@maketitle
      \fi
      \thispagestyle{empty}\@thanks
    \endgroup
    \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\LTRthanks\relax
  \global\let\RTLthanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
  \def\@maketitle{%
    \newpage
    \null
    \longthickrule\vskip1.5em%
    \let \footnote \thanks
    \let \LTRfootnote \LTRthanks
    \let \RTLfootnote \RTLthanks
    {\secshape \parskip\z@ \parindent\z@
    \Large\bfseries \@title \par}%
    \vskip1.5em\longthickrule\vskip1.5em%
    {\normalsize
      \lineskip .5em%
      \begin{flushright}%
        {\slshape\@author\par}
        \vskip 1em%
        {\@date}%
      \end{flushright}\par}%
    \vskip 1.5em}
\fi
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
       \large \bfseries #1\hfil \hbox to\@pnumwidth{\hss #2}}\par
       \nobreak
         \global\@nobreaktrue
         \everypar{\global\@nobreakfalse\everypar{}}%
      \endgroup
  \fi}
\renewcommand*\l@chapter[2]{%
  \ifnum \c@tocdepth >\m@ne
```

```
    \addpenalty{-\@highpenalty}%
    \vskip 1.0em \@plus\p@
    \setlength\@tempdima{1.5em}%
    \begingroup
    \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
    \parfillskip -\@pnumwidth
    \leavevmode \bfseries
    \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
    \hskip -\if@RTL\rightskip\else\leftskip\fi
    #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
    \penalty\@highpenalty
   \endgroup
  \fi}
\renewcommand\secshape{\if@RTL\rightskip\else\leftskip\fi=-\leftmarginwidth%
                       \if@RTL\leftskip\else\rightskip\fi=\@flushglue%
                       \hyphenpenalty=2000}
\renewcommand\left@footnoterule{%
  \kern-3\p@
  \hrule\@width.4\columnwidth
  \kern 2.6\p@}
\renewcommand\right@footnoterule{%
  \kern-3\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern2.6\p@}
\renewcommand\theequation
{\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@equation}
\renewcommand\thefigure
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@figure}
\renewcommand\thetable%
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@table}
\renewcommand\thesection       {\thechapter\@SepMark\@arabic\c@section}
\renewcommand\thesubsection    {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection {\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph     {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph  {\theparagraph\@SepMark\@arabic\c@subparagraph}
\renewenvironment{thebibliography}[1]
     {\chapter*{\bibname
         \@mkboth{\bibname}{\bibname}}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand\theenumiv{\@arabic\c@enumiv}}%
            \sloppy
            \clubpenalty4000
            \@clubpenalty \clubpenalty
            \widowpenalty4000%
      \sfcode`\.=\@m}
     {\def\@noitemerr
```

```
19617       {\@latex@warning{Empty `thebibliography' environment}}%
19618      \endlist}
```

140 File report-xetex-bidi.def

```
19619 \ProvidesFile{report-xetex-bidi.def}[2025/09/04 v1.0 bidi adaptations for standard report c
19620 \renewenvironment{theindex}
19621                {\if@twocolumn
19622                   \@restonecolfalse
19623                 \else
19624                   \@restonecoltrue
19625                 \fi
19626                 \columnseprule \z@
19627                 \columnsep 35\p@
19628                 \twocolumn[\@makeschapterhead{\indexname}]%
19629                 \@mkboth{\MakeUppercase\indexname}%
19630                         {\MakeUppercase\indexname}%
19631                 \thispagestyle{plain}\parindent\z@
19632                 \parskip\z@ \@plus .3\p@\relax
19633                 \let\item\@idxitem}
19634                {\if@restonecol\onecolumn\else\clearpage\fi}
19635  \if@titlepage
19636  \renewcommand\maketitle{\begin{titlepage}%
19637  \let\footnotesize\small
19638  \let\right@footnoterule\relax
19639  \let\left@footnoterule\relax
19640  \let\textwidth@footnoterule\relax
19641  \let \footnote \thanks
19642  \let \LTRfootnote \LTRthanks
19643  \let \RTLfootnote \RTLthanks
19644  \null\vfil
19645  \vskip 60\p@
19646  \begin{center}%
19647    {\LARGE \@title \par}%
19648    \vskip 3em%
19649    {\large
19650     \lineskip .75em%
19651      \begin{tabular}[t]{c}%
19652        \@author
19653      \end{tabular}\par}%
19654      \vskip 1.5em%
19655    {\large \@date \par}%       % Set date in \large size.
19656  \end{center}\par
19657  \@thanks
19658  \vfil\null
19659  \end{titlepage}%
19660  \setcounter{footnote}{0}%
19661  \global\let\thanks\relax
19662  \global\let\LTRthanks\relax
19663  \global\let\RTLthanks\relax
19664  \global\let\maketitle\relax
19665  \global\let\@thanks\@empty
19666  \global\let\@author\@empty
19667  \global\let\@date\@empty
```

```
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\else
\renewcommand\maketitle{\par
  \begingroup
    \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
    \def\@makefnmark{\rlap{\@textsuperscript{\normalfont\@thefnmark}}}%
    \long\def\@makefntext##1{\parindent 1em\noindent
            \hb@xt@1.8em{%
                \hss\@textsuperscript{\normalfont\@thefnmark}}##1}%
    \if@twocolumn
      \ifnum \col@number=\@ne
        \@maketitle
      \else
        \twocolumn[\@maketitle]%
      \fi
    \else
      \newpage
      \global\@topnum\z@   % Prevents figures from going at top of page.
      \@maketitle
    \fi
    \thispagestyle{plain}\@thanks
  \endgroup
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\LTRthanks\relax
  \global\let\RTLthanks\relax
  \global\let\maketitle\relax
  \global\let\@maketitle\relax
  \global\let\@thanks\@empty
  \global\let\@author\@empty
  \global\let\@date\@empty
  \global\let\@title\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
}
\def\@maketitle{%
  \newpage
  \null
  \vskip 2em%
  \begin{center}%
  \let \footnote \thanks
  \let \LTRfootnote \LTRthanks
  \let \RTLfootnote \RTLthanks
    {\LARGE \@title \par}%
    \vskip 1.5em%
    {\large
      \lineskip .5em%
```

```
      \begin{tabular}[t]{c}%
        \@author
      \end{tabular}\par}%
    \vskip 1em%
    {\large \@date}%
  \end{center}%
  \par
  \vskip 1.5em}
\fi
\IfPackageLoadedF{tocloft}{%
\renewcommand*\l@part[2]{%
  \ifnum \c@tocdepth >-2\relax
    \addpenalty{-\@highpenalty}%
    \addvspace{2.25em \@plus\p@}%
    \setlength\@tempdima{3em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      {\leavevmode
       \large \bfseries #1\hfil \hb@xt@\@pnumwidth{\hss #2}}\par
       \nobreak
         \global\@nobreaktrue
         \everypar{\global\@nobreakfalse\everypar{}}%
    \endgroup
  \fi}
\renewcommand*\l@chapter[2]{%
  \ifnum \c@tocdepth >\m@ne
    \addpenalty{-\@highpenalty}%
    \vskip 1.0em \@plus\p@
    \setlength\@tempdima{1.5em}%
    \begingroup
      \parindent \z@ \if@RTL\leftskip\else\rightskip\fi \@pnumwidth
      \parfillskip -\@pnumwidth
      \leavevmode \bfseries
      \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima
      \hskip -\if@RTL\rightskip\else\leftskip\fi
      #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
      \penalty\@highpenalty
    \endgroup
  \fi}
}
\renewcommand\left@footnoterule{%
  \kern-3\p@
  \hrule\@width.4\columnwidth
  \kern2.6\p@}
\renewcommand\right@footnoterule{%
  \kern-3\p@
  \hbox to \columnwidth{\hskip .6\columnwidth \hrulefill }
  \kern2.6\p@}
\renewcommand\theequation
  {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@equation}
\renewcommand \thefigure
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@figure}
\renewcommand \thetable
```

```
     {\ifnum \c@chapter>\z@ \thechapter\@SepMark\fi \@arabic\c@table}
\renewcommand \thechapter {\@arabic\c@chapter}
\renewcommand \thesection {\thechapter\@SepMark\@arabic\c@section}
\renewcommand\thesubsection   {\thesection\@SepMark\@arabic\c@subsection}
\renewcommand\thesubsubsection{\thesubsection \@SepMark\@arabic\c@subsubsection}
\renewcommand\theparagraph    {\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand\thesubparagraph {\theparagraph\@SepMark\@arabic\c@subparagraph}
\def\@makechapterhead#1{%
  \vspace*{50\p@}%
  {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi \normalfont
    \ifnum \c@secnumdepth >\m@ne
        \huge\bfseries \@chapapp\space \thechapter
        \par\nobreak
        \vskip 20\p@
    \fi
    \interlinepenalty\@M
    \Huge \bfseries #1\par\nobreak
    \vskip 40\p@
  }}
\def\@makeschapterhead#1{%
  \vspace*{50\p@}%
  {\parindent \z@ \if@RTL\raggedleft\else\raggedright\fi
    \normalfont
    \interlinepenalty\@M
    \Huge \bfseries  #1\par\nobreak
    \vskip 40\p@
  }}
\IfPackageLoadedF{natbib}{%
\renewenvironment{thebibliography}[1]
     {\chapter*{\bibname}%
      \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}%
      \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
      \bidi@@thebibliography@font@hook%
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand\theenumiv{\@arabic\c@enumiv}}%
      \sloppy
      \clubpenalty4000
      \@clubpenalty \clubpenalty
      \widowpenalty4000%
      \sfcode`\.\@m}
     {\def\@noitemerr
       {\@latex@warning{Empty `thebibliography' environment}}%
      \endlist}
}
```

141 File rotating-xetex-bidi.def

```
\ProvidesFile{rotating-xetex-bidi.def}[2013/05/22 v0.2 bidi adaptations for rotating packag
```

```
\def\end@rotfloat{%
  \end{minipage}\end{lrbox}%
  \stepcounter{r@tfl@t}%
  \rot@label{RF\ther@tfl@t}%
  \rot@pageref{RF\ther@tfl@t}{\R@@page}%
  \edef\@tempa{Adding sideways \@captype\space on page \R@@page\space}
  \rot@mess@toks\expandafter{\@tempa}
  \wd\rot@float@box\z@
  \ht\rot@float@box\z@
  \dp\rot@float@box\z@
  \vboxL to \textheight{%
   \setkeys{Grot}{units=360}%
   \if@rot@twoside
   \else
     \let\R@@page\rot@LR
   \fi
   \ifthenelse{\isodd{\R@@page}}{%
     \if@rot@twoside
       \rot@mess@toks\expandafter{\the\rot@mess@toks (right hand page)}%
     \fi
     \vfill
     \@@line{%
       \hskip\rotFPtop
       \rotatebox{90}{\box\rot@float@box}%
       \hskip\rotFPbot
     }%
   }{%
     \if@rot@twoside
       \rot@mess@toks\expandafter{\the\rot@mess@toks (left hand page)}%
     \fi
     \@@line{%
       \hskip\rotFPbot
       \rotatebox{-90}{\box\rot@float@box}%
       \hskip\rotFPtop
     }%
     \vfill
   }%
   \rot@message{\the\rot@mess@toks}
  }%
  \end@float
}
\let\endsidewaysfigure\end@rotfloat
\let\endsidewaystable\end@rotfloat
\def\end@rotdblfloat{%
  \end{minipage}\end{lrbox}%
  \stepcounter{r@tfl@t}%
  \rot@label{RF\ther@tfl@t}%
  \rot@pageref{RF\ther@tfl@t}{\R@@page}%
  \edef\@tempa{Adding sideways \@captype\space on page \R@@page\space}
  \rot@mess@toks\expandafter{\@tempa}
  \@tempdima\ht\rot@float@box
  \advance\@tempdima by \dp\rot@float@box
  \wd\rot@float@box\z@
  \ht\rot@float@box\z@
```

```
  \dp\rot@float@box\z@
  \vboxL to \textheight{%
    \setkeys{Grot}{units=360}%
    \if@rot@twoside
    \else
      \let\R@@page\rot@LR
    \fi
    \ifthenelse{\isodd{\R@@page}}{%
      \ifrot@messages
        \if@rot@twoside
  \rot@mess@toks\expandafter{\the\rot@mess@toks (right hand page)}%
\fi
      \fi
      \vfill
      \@@line{%
        \hskip\rotFPtop
        \rotatebox{90}{\box\rot@float@box}%
        \hskip\rotFPbot
      }%
    }{%
      \ifrot@messages
        \if@rot@twoside
  \rot@mess@toks\expandafter{\the\rot@mess@toks (left hand page)}%
\fi
      \fi%
      \@@line{%
        \hskip\rotFPbot
        \rotatebox{-90}{\box\rot@float@box}%
        \hskip\rotFPtop
      }%
      \vfill
    }%
    \rot@message{\the\rot@mess@toks}%
  }%
  \end@dblfloat
}
\def\turn#1{%
  \Grot@setangle{#1}%
  \setbox\z@\color@hbox\ifmmode\if@RTL\beginR\fi\else\if@RTL\beginR\fi\fi\ignorespaces}
\def\endturn{%
  \ifmmode\if@RTL\endR\fi\else\if@RTL\endR\fi\fi
  \unskip\color@endbox
  \Grot@x\z@
  \Grot@y\z@
  \ifmmode\else\if@RTL\beginL\fi\fi\Grot@box\ifmmode\else\if@RTL\endL\fi\fi
}
\def\rotate#1{%
  \Grot@setangle{#1}%
  \setbox\z@\color@hbox\ifmmode\if@RTL\beginR\fi\else\if@RTL\beginR\fi\fi\ignorespaces}
\def\endrotate{%
 \ifmmode\if@RTL\endR\fi\else\if@RTL\endR\fi\fi
  \unskip\color@endbox
  \Grot@x\z@
  \Grot@y\z@
```

```
  \wd0\z@\dp0\z@\ht0\z@
  \ifmmode\else\if@RTL\beginL\fi\fi\Grot@box\ifmmode\else\if@RTL\endL\fi\fi
}
\def\turnbox#1#2{%
  \Grot@setangle{#1}%
  \setbox\z@\hbox{{\ifmmode\if@RTL\beginR\fi\else\if@RTL\beginR\fi\fi#2\ifmmode\if@RTL\endR
  \Grot@x\z@\Grot@y\z@
  \wd0\z@\dp0\z@\ht0\z@
  \ifmmode\else\if@RTL\beginL\fi\fi\Grot@box\ifmmode\else\if@RTL\endL\fi\fi
}
\def\sideways{%
  \Grot@setangle{90}%
  \setbox\z@\color@hbox\ifmmode\if@RTL\beginR\fi\else\if@RTL\beginR\fi\fi\ignorespaces}
\def\endsideways{%
 \ifmmode\if@RTL\endR\fi\else\if@RTL\endR\fi\fi
  \unskip\color@endbox
  \Grot@x\z@
  \Grot@y\z@
  \ifmmode\else\if@RTL\beginL\fi\fi\Grot@box\ifmmode\else\if@RTL\endL\fi\fi
}
```

142 File scrartcl-xetex-bidi.def

```
\ProvidesFile{scrartcl-xetex-bidi.def}[2025/09/20 v1.4 bidi adaptations for scrartcl class
\newcommand{\scr@saved@LTRfootnotetext}{}
\newcommand{\scr@saved@RTLfootnotetext}{}
\let\scr@saved@footnotetext\@footnotetext
\let\scr@saved@LTRfootnotetext\@LTRfootnotetext
\let\scr@saved@RTLfootnotetext\@RTLfootnotetext
\renewcommand{\@footnotetext}[1]{%
  \scr@saved@footnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand{\@LTRfootnotetext}[1]{%
  \scr@saved@LTRfootnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand{\@RTLfootnotetext}[1]{%
  \scr@saved@RTLfootnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand\deffootnote[4][]{%
  \expandafter\ifnum\scr@v@is@ge{3.22}\relax
    \long\def\@makefntext##1{%
      \ExecuteDoHook{footnote/text/begin}%
      \raggedfootnote
      \if@RTL
        \rightskip
      \else
        \leftskip
      \fi
      #2
      \l@addto@macro\@trivlist{%
        \ifnum\@listdepth=\@ne
```

```
          \if@RTL
            \advance\rightmargin #2\relax
          \else
            \advance\leftmargin #2\relax
          \fi
        \fi
      }%
      \parindent #3\noindent
      \IfArgIsEmpty{#1}{}{%
        \hskip \dimexpr #1-#2\relax
      }%
      \ftn@font\hbox to \z@{\hss\@@makefnmark}##1%
      \ExecuteDoHook{footnote/text/end}%
    }%
  \else
    \ClassInfo{\KOMAClassName}{%
      Using old \string\@makefntext\space due to compatibility
      level\MessageBreak
      less than 3.22}%
    \long\def\@makefntext##1{%
      \setlength{\@tempdimc}{#3}%
      \def\@tempa{#1}\ifx\@tempa\@empty
        \@setpar{\@@par
          \@tempdima = \hsize
          \addtolength{\@tempdima}{-#2}%
          \if@RTL
            \parshape \@ne \z@ \@tempdima
          \else
            \parshape \@ne #2 \@tempdima
          \fi}%
      \else
        \addtolength{\@tempdimc}{#2}%
        \addtolength{\@tempdimc}{-#1}%
        \@setpar{\@@par
          \@tempdima = \hsize
          \addtolength{\@tempdima}{-#1}%
          \@tempdimb = \hsize
          \addtolength{\@tempdimb}{-#2}%
           \if@RTL
             \parshape \tw@ \z@ \@tempdima \z@ \@tempdimb
           \else
             \parshape \tw@ #1 \@tempdima #2 \@tempdimb
           \fi
        }%
      \fi
      \par
      \parindent\@tempdimc\noindent
      \ftn@font\hbox to \z@{\hss\@@makefnmark}##1%
    }%
  \fi
  \def\@@makefnmark{\hbox{\ftnm@font{#4}}}%
}
\deffootnote[1em]{1.5em}{1em}{\textsuperscript{\thefootnotemark}}
\renewcommand*\left@footnoterule{%
```

```
  \normalsize\ftn@rule@test@values
  \kern-\dimexpr 2.6\p@+\ftn@rule@height\relax
  \ifx\@textbottom\relax\else\vskip \z@ \@plus.05fil\fi
  {\usekomafont{footnoterule}{%
      \hrule \@height\ftn@rule@height \@width\ftn@rule@width}}%
  \kern 2.6\p@}
\renewcommand*\right@footnoterule{%
  \normalsize\ftn@rule@test@values
  \kern-\dimexpr 2.6\p@+\ftn@rule@height\relax
  \ifx\@textbottom\relax\else\vskip \z@ \@plus.05fil\fi
  {\usekomafont{footnoterule}{%
      \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\ftn@rule@width\relax  \leavevmode\
  \kern 2.6\p@}
\renewcommand*\maketitle[1][1]{%
  \expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
  \else
    \def\and{%
      \end{tabular}%
      \hskip 1em \@plus.17fil%
      \begin{tabular}[t]{c}%
    }%
  \fi
  \if@titlepage
    \begin{titlepage}
      \setcounter{page}{%
        #1%
      }%
      \if@titlepageiscoverpage
        \edef\titlepage@restore{%
          \noexpand\endgroup
          \noexpand\global\noexpand\@colht\the\@colht
          \noexpand\global\noexpand\@colroom\the\@colroom
          \noexpand\global\vsize\the\vsize
          \noexpand\global\noexpand\@titlepageiscoverpagefalse
          \noexpand\let\noexpand\titlepage@restore\noexpand\relax
        }%
        \begingroup
        \topmargin=\dimexpr \coverpagetopmargin-1in\relax
        \oddsidemargin=\dimexpr \coverpageleftmargin-1in\relax
        \evensidemargin=\dimexpr \coverpageleftmargin-1in\relax
        \textwidth=\dimexpr
        \paperwidth-\coverpageleftmargin-\coverpagerightmargin\relax
        \textheight=\dimexpr
        \paperheight-\coverpagetopmargin-\coverpagebottommargin\relax
        \headheight=0pt
        \headsep=0pt
        \footskip=\baselineskip
        \@colht=\textheight
        \@colroom=\textheight
        \vsize=\textheight
        \columnwidth=\textwidth
        \hsize=\columnwidth
        \linewidth=\hsize
      \else
```

```
    \let\titlepage@restore\relax
  \fi
  \let\footnotesize\small
  \let\right@footnoterule\relax
  \let\left@footnoterule\relax
  \let\textwidth@footnoterule\relax
  \let\footnote\thanks
  \let\LTRfootnote\LTRthanks
  \let\RTLfootnote\RTLthanks
  \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
  \let\@oldmakefnmark\@makefnmark
  \renewcommand*{\@makefnmark}{\rlap\@oldmakefnmark}%
  \ifx\@extratitle\@empty
    \ifx\@frontispiece\@empty
    \else
      \if@twoside\mbox{}\next@tpage\fi
      \noindent\@frontispiece\next@tdpage
    \fi
  \else
    \noindent\@extratitle
    \ifx\@frontispiece\@empty
    \else
      \next@tpage
      \noindent\@frontispiece
    \fi
    \next@tdpage
  \fi
  \setparsizes{\z@}{\z@}{\z@\@plus 1fil}\par@updaterelative
  \ifx\@titlehead\@empty \else
    \begin{minipage}[t]{\textwidth}%
      \usekomafont{titlehead}{\@titlehead\par}%
    \end{minipage}\par
  \fi
  \null\vfill
  \begin{center}
    \ifx\@subject\@empty \else
      {\usekomafont{subject}{\@subject\par}}%
      \vskip 3em
    \fi
    {\usekomafont{title}{\huge \@title\par}}%
    \vskip 1em
    {\ifx\@subtitle\@empty\else\usekomafont{subtitle}{\@subtitle\par}\fi}%
    \vskip 2em
    {%
      \usekomafont{author}{%
        \lineskip 0.75em
        \begin{tabular}[t]{c}
          \@author
        \end{tabular}\par
      }%
    }%
    \vskip 1.5em
    {\usekomafont{date}{\@date \par}}%
    \vskip \z@ \@plus3fill
```

```
20148         {\usekomafont{publishers}{\@publishers \par}}%
20149         \vskip 3em
20150       \end{center}\par
20151       \@thanks\global\let\@thanks\@empty
20152       \vfill\null
20153       \if@twoside
20154         \@tempswatrue
20155         \expandafter\ifnum \@nameuse{scr@v@3.12}>\scr@compatibility\relax
20156         \else
20157           \ifx\@uppertitleback\@empty\ifx\@lowertitleback\@empty
20158             \@tempswafalse
20159           \fi\fi
20160         \fi
20161         \if@tempswa
20162           \next@tpage
20163           \begin{minipage}[t]{\textwidth}
20164             \@uppertitleback
20165           \end{minipage}\par
20166           \vfill
20167           \begin{minipage}[b]{\textwidth}
20168             \@lowertitleback
20169           \end{minipage}\par
20170           \@thanks\global\let\@thanks\@empty
20171         \fi
20172       \else
20173         \ifx\@uppertitleback\@empty\else
20174           \ClassWarning{\KOMAClassName}{%
20175             non empty \string\uppertitleback\space ignored
20176             by \string\maketitle\MessageBreak
20177             in `twoside=false' mode%
20178           }%
20179         \fi
20180         \ifx\@lowertitleback\@empty\else
20181           \ClassWarning{\KOMAClassName}{%
20182             non empty \string\lowertitleback\space ignored
20183             by \string\maketitle\MessageBreak
20184             in `twoside=false' mode%
20185           }%
20186         \fi
20187       \fi
20188       \ifx\@dedication\@empty
20189       \else
20190         \next@tdpage\null\vfill
20191         {\centering\usekomafont{dedication}{\@dedication \par}}%
20192         \vskip \z@ \@plus3fill
20193         \@thanks\global\let\@thanks\@empty
20194         \cleardoubleemptypage
20195       \fi
20196       \ifx\titlepage@restore\relax\else\clearpage\titlepage@restore\fi
20197     \end{titlepage}
20198   \else
20199     \par
20200     \@tempcnta=%
20201     #1%
```

```
\relax\ifnum\@tempcnta=1\else
  \ClassWarning{\KOMAClassName}{%
    Optional argument of \string\maketitle\space ignored\MessageBreak
    in `titlepage=false' mode%
  }%
\fi
\ifx\@uppertitleback\@empty\else
  \ClassWarning{\KOMAClassName}{%
    non empty \string\uppertitleback\space ignored
    by \string\maketitle\MessageBreak
    in `titlepage=false' mode%
  }%
\fi
\ifx\@lowertitleback\@empty\else
  \ClassWarning{\KOMAClassName}{%
    non empty \string\lowertitleback\space ignored
    by \string\maketitle\MessageBreak
    in `titlepage=false' mode%
  }%
\fi
\begingroup
  \let\titlepage@restore\relax
  \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
  \let\@oldmakefnmark\@makefnmark
  \renewcommand*{\@makefnmark}{\rlap\@oldmakefnmark}%
  \next@tdpage
  \if@twocolumn
    \ifnum \col@number=\@ne
      \ifx\@extratitle\@empty
        \ifx\@frontispiece\@empty\else\if@twoside\mbox{}\fi\fi
      \else
        \@makeextratitle
      \fi
      \ifx\@frontispiece\@empty
        \ifx\@extratitle\@empty\else\next@tdpage\fi
      \else
        \next@tpage
        \@makefrontispiece
        \next@tdpage
      \fi
      \@maketitle
    \else
      \ifx\@extratitle\@empty
        \ifx\@frontispiece\@empty\else\if@twoside\mbox{}\fi\fi
      \else
        \twocolumn[\@makeextratitle]%
      \fi
      \ifx\@frontispiece\@empty
        \ifx\@extratitle\@empty\else\next@tdpage\fi
      \else
        \next@tpage
        \twocolumn[\@makefrontispiece]%
        \next@tdpage
      \fi
```

```
20256           \twocolumn[\@maketitle]%
20257         \fi
20258       \else
20259         \ifx\@extratitle\@empty
20260           \ifx\@frontispiece\@empty\else \mbox{}\fi
20261         \else
20262           \@makeextratitle
20263         \fi
20264         \ifx\@frontispiece\@empty
20265           \ifx\@extratitle\@empty\else\next@tdpage\fi
20266         \else
20267           \next@tpage
20268           \@makefrontispiece
20269           \next@tdpage
20270         \fi
20271         \@maketitle
20272       \fi
20273       \ifx\titlepagestyle\@empty\else\thispagestyle{\titlepagestyle}\fi
20274       \@thanks\global\let\@thanks\@empty
20275     \endgroup
20276   \fi
20277   \setcounter{footnote}{0}%
20278   \expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
20279     \let\thanks\relax
20280     \let\LTRthanks\relax
20281     \let\RTLthanks\relax
20282     \let\maketitle\relax
20283     \let\@maketitle\relax
20284     \global\let\@thanks\@empty
20285     \global\let\@author\@empty
20286     \global\let\@date\@empty
20287     \global\let\@title\@empty
20288     \global\let\@subtitle\@empty
20289     \global\let\@extratitle\@empty
20290     \global\let\@frontispiece\@empty
20291     \global\let\@titlehead\@empty
20292     \global\let\@subject\@empty
20293     \global\let\@publishers\@empty
20294     \global\let\@uppertitleback\@empty
20295     \global\let\@lowertitleback\@empty
20296     \global\let\@dedication\@empty
20297     \global\let\author\relax
20298     \global\let\title\relax
20299     \global\let\extratitle\relax
20300     \global\let\titlehead\relax
20301     \global\let\subject\relax
20302     \global\let\publishers\relax
20303     \global\let\uppertitleback\relax
20304     \global\let\lowertitleback\relax
20305     \global\let\dedication\relax
20306     \global\let\date\relax
20307   \fi
20308   \global\let\and\relax
20309 }%
```

```
\def\raggedsection{\if@RTL\raggedleft\else\raggedright\fi}
\def\raggedpart{\if@RTL\raggedleft\else\raggedright\fi}
\renewcommand*\autodot{\if@altsecnumformat\@SepMark\fi}
\renewcommand*{\thesubsection}{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*{\thesubsubsection}{%
  \thesubsection\@SepMark\@arabic\c@subsubsection
}
\renewcommand*{\theparagraph}{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*{\thesubparagraph}{%
  \theparagraph\@SepMark\@arabic\c@subparagraph
}
\renewenvironment{thebibliography}[1]{%
  \if@bib@break@
    \bib@beginhook
  \else
    \bib@heading
    \ifx\bibpreamble\relax\else\ifx\bibpreamble\@empty\else
        \noindent\bibpreamble\par\nobreak
    \fi\fi
    \bib@beginhook
    \bib@before@hook
  \fi
  \renewcommand{\BreakBibliography}[1]{%
    \@bib@break
    \end{thebibliography}%
    \begingroup ##1\endgroup
    \begin{thebibliography}{#1}
  }%
  \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
  \bidi@@thebibliography@font@hook%
  \list{%
    \@biblabel{\@arabic\c@enumiv}%
  }{%
    \settowidth\labelwidth{\@biblabel{#1}}%
    \leftmargin\labelwidth
    \advance\leftmargin\labelsep
    \@openbib@code
    \if@bib@break@
      \edef\@tempa{%
        \noexpand\usecounter{enumiv}%
        \noexpand\setcounter{enumiv}{\the\c@enumiv}%
      }\@tempa
      \no@bib@break
    \else
      \usecounter{enumiv}%
    \fi
    \let\p@enumiv\@empty
    \renewcommand*\theenumiv{\@arabic\c@enumiv}%
  }%
  \sloppy\clubpenalty4000 \widowpenalty4000
  \sfcode`\.=\@m
}{%
  \if@bib@break@
    \def\@noitemerr{%
```

```
      \@latex@warning{%
        \string\BreakBibliography\space at begin of `thebibliography'
        environment\MessageBreak
        or following \string\BreakBibliography}%
    }%
  \else
    \def\@noitemerr{%
      \@latex@warning{%
        Empty `thebibliography' environment or
        \string\BreakBibliography\MessageBreak
        before end of `thebibliography' environment}%
    }%
  \fi
  \endlist
  \if@bib@break@
  \else
    \bib@after@hook
    \let\bib@before@hook\@empty
    \let\bib@after@hook\@empty
  \fi
  \bib@endhook
}
\renewcommand*{\raggeddictum}{\if@RTL\raggedright\else\raggedleft\fi}
\renewcommand*{\raggeddictumtext}{\if@RTL\raggedleft\else\raggedright\fi}
\renewcommand*{\raggeddictumauthor}{\if@RTL\raggedright\else\raggedleft\fi}
\renewcommand\marginline[1]{%
  \marginpar[\if@RTL\raggedright\else\raggedleft\fi{#1}]{\if@RTL\raggedleft\else\raggedrigh
}
\renewcommand{\@@makecaption}[3]{%
  \cap@margin
  \begingroup
    \ifonelinecaptions
      \def\stepcounter##1{\advance\value{##1}\@ne}%
      \let\refstepcounter\stepcounter
      \let\label\@gobble
      \let\@footnotetext=\@gobble
      \let\@LTRfootnotetext=\@gobble
      \let\@RTLfootnotetext=\@gobble
      \let\hypertarget\@gobbletwo
      \edef\@xnewline{%
        \unexpanded{\ClassInfo{\KOMAClassName}{%
            Workaround for not recommended usage of \string\\ or\MessageBreak
            \string\newline in caption text
          }%
          \hspace*{\linewidth}\hspace{1sp}%
        }%
        \unexpanded\expandafter{\@xnewline}%
      }%
      \edef\@xcentercr{%
        \unexpanded{\ClassInfo{\KOMAClassName}{%
            Workaround for not recommended usage of \string\\ or\MessageBreak
            \string\newline in caption text
          }%
          \hspace*{\linewidth}\hspace{1sp}%
```

```
20418         }%
20419         \unexpanded\expandafter{\@xcentercr}%
20420       }%
20421       \settowidth{\@tempdima}{\scr@@makesinglelinecaption{#1}{#2}{#3}}%
20422       \ifdim\@tempdima>\cap@width
20423         \aftergroup\scr@makemultilinecaption
20424       \else
20425         \aftergroup\scr@makesinglelinecaption
20426       \fi
20427     \else
20428       \aftergroup\scr@makemultilinecaption
20429     \fi
20430   \endgroup
20431   {#1}{#2}{#3}%
20432 }
20433 \renewcommand{\scr@makesinglelinecaption}[3]{%
20434   {%
20435     \usefontofkomafont{caption}{%
20436       \hb@xt@\hsize{%
20437         \cap@left
20438         \if@RTL
20439           \beginR
20440         \fi
20441         \scr@@makesinglelinecaption{#1}{#2}{#3}%
20442         \if@RTL
20443           \endR
20444         \fi
20445         \cap@right
20446       }\par\kern\dp\strutbox%
20447     }%
20448   }\kern-\dp\strutbox
20449 }
20450 \renewcommand{\@makecaption}[2]{%
20451   \if@captionabove
20452     \vskip\belowcaptionskip
20453   \else
20454     \vskip\abovecaptionskip
20455   \fi
20456   \@@makecaption\@firstofone{#1}{#2}%
20457   \if@captionabove
20458     \vskip\abovecaptionskip
20459   \else
20460     \vskip\belowcaptionskip
20461   \fi
20462 }
20463
20464 \renewcommand{\scr@@makesinglelinecaption}[3]{%
20465     {\usekomafont{caption}{\strut\ignorespaces
20466       #1{{\usekomafont{captionlabel}{#2\captionformat}}}%
20467       \ignorespaces #3\unskip}}%
20468 }
20469
20470 \renewcommand{\scr@makemultilinecaption}[3]{%
20471   {%
```

```
\usefontofkomafont{caption}{%
  \hb@xt@\hsize{%
    \cap@left
    \vbox{\hsize\cap@width\linewidth\hsize
      \scr@ifundefinedorrelax{@captype}{%
        \ClassWarning{\KOMAClassName}{%
          `\string\caption' outside float.\MessageBreak
          Seems you are using `\string\caption' outside a
          float.\MessageBreak
          Maybe you are using a package that uses
          `\string\@makecaption'\MessageBreak
          without setting `\string\@captype' before.\MessageBreak
          Because I cannot detect the caption type, I'm using\MessageBreak
          the empty one.%
        }%
        \let\@captype\@empty
      }{}%
      \scr@ifundefinedorrelax{ragged\@captype caption}{\raggedcaption}{%
        \@nameuse{ragged\@captype caption}%
      }%
      \ifdofullc@p
        \@hangfrom{%
          \strut
          \scr@smashdp{%
            #1{%
              \usekomafont{caption}{%
                \usekomafont{captionlabel}{#2\captionformat}%
              }%
            }%
          }%
        }%
        {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
      \else
        \ifdim\cap@indent<\z@
          \strut
          #1{%
            {\usekomafont{caption}{%
              \usekomafont{captionlabel}{#2\captionformat}%
            }%
          }\par}%
          \noindent{{\usekomafont{caption}{%
              \hspace*{-\cap@indent}#3\scr@endstrut
          }}\par}%
        \else
          \if@capbreak
            \strut
            #1{%
              {\usekomafont{caption}{%
                \usekomafont{captionlabel}{#2\captionformat}%
              }%
            }\par}%
            \noindent\@hangfrom{\hspace*{\cap@indent}}%
            {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
          \else
```

```
                \@hangfrom{\scr@smashdp\strut\hspace*{\cap@indent}}%
                {%
                  \hspace{-\cap@indent}%
                  \scr@smashdp{%
                    #1{\usekomafont{caption}{%
                        \usekomafont{captionlabel}{#2\captionformat}%
                      }%
                    }%
                  }%
                  {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
                }%
              \fi
            \fi
          \fi
        }%
        \cap@right
      }\par\kern\dp\strutbox
    }%
  }\kern-\dp\strutbox
}

\bidi@AfterFile{longtable-xetex-bidi.def}{%
  \if@komalongtable
    \renewcommand{\LT@makecaption}[3]{%
      \LT@mcol\LT@cols c{%
        \hbox to\z@{\hss\parbox[t]\linewidth{%
            \if@captionabove\else\vskip\belowcaptionskip\fi
            \@@makecaption{#1}{#2}{#3}%
            \endgraf
            \if@captionabove\vskip\abovecaptionskip\fi
          }%
          \hss
        }%
      }%
    }%
    \renewcommand*{\scr@LT@array}{}%
    \let\scr@LT@array=\LT@array
    \renewcommand*{\LT@array}{%
      \def\@captype{table}%
      \@ifundefined{LTcaptype}{}{%
        \Ifstr{\LTcaptype}{}{}{\let\@captype\LTcaptype}%
      }%
      \csname tocbasic_if_caption_above:TF\endcsname
        {\@captionabovetrue}{\@captionabovefalse}%
      \def\captionabove{\noalign{\global\@captionabovetrue}%
        \LT@caption}%
      \def\captionbelow{\noalign{\global\@captionabovefalse}%
        \LT@caption}%
      \scr@LT@array
    }%
    \ClassInfo{\KOMAClassName}{%
      longtable captions redefined%
    }%
  \fi
```

```
}

\CloneTOCEntryStyle{tocline}{part}
\TOCEntryStyleStartInitCode{part}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{\hfill}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@entryformat\endcsname[1]{\usekomafont{partentry}{##1}}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
    {\usekomafont{partentry}{\usekomafont{partentrypagenumber}{##1}}}}%
  \expandafter\renewcommand\expandafter*%
  \csname scr@tso@#1@beforeskip\endcsname{2.25em \@plus\p@}%
}

\CloneTOCEntryStyle{tocline}{section}
\TOCEntryStyleStartInitCode{section}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{%
    \if@sectionentrywithdots
      {\usekomafont{sectionentrydots}{\TOCLineLeaderFill}}\relax
    \else
      \hfill
    \fi
  }%
  \expandafter\renewcommand%
  \csname scr@tso@#1@entryformat\endcsname{\usekomafont{sectionentry}}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@pagenumberformat\endcsname[1]{{\usekomafont{sectionentry}{\usekomafont
  \expandafter\renewcommand\expandafter*%
  \csname scr@tso@#1@beforeskip\endcsname{1.0em \@plus\p@}%
}

\CloneTOCEntryStyle{tocline}{subsection}
\TOCEntryStyleStartInitCode{subsection}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{\TOCLineLeaderFill\relax}%
      \expandafter\renewcommand%
      \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
        {\normalfont\normalcolor ##1}}%
}

\CloneTOCEntryStyle{subsection}{default}

\DeclareSectionCommand[%
  style=section,%
  level=1,%
  indent=\z@,%
  beforeskip=-3.5ex \@plus -1ex \@minus -.2ex,%
  afterskip=2.3ex \@plus.2ex,%
  tocstyle=section,%
  tocindent=0pt,%
  tocnumwidth=1.5em%
]{section}
```

```
\DeclareSectionCommand[%
  style=part,%
  level=\z@,%
  tocstyle=part,%
  toclevel=\m@ne,%
  tocindent=\z@,%
  tocnumwidth=2em%
]{part}
\DeclareSectionCommand[%
  style=section,%
  level=2,%
  indent=\z@,%
  beforeskip=-3.25ex\@plus -1ex \@minus -.2ex,%
  afterskip=1.5ex \@plus .2ex,%
  tocstyle=subsection,%
  tocindent=1.5em,%
  tocnumwidth=2.3em%
]{subsection}
\DeclareSectionCommand[%
  style=section,%
  level=3,%
  indent=\z@,%
  beforeskip=-3.25ex\@plus -1ex \@minus -.2ex,%
  afterskip=1.5ex \@plus .2ex,%
  tocstyle=subsection,%
  tocindent=3.8em,%
  tocnumwidth=3.2em%
]{subsubsection}
\DeclareSectionCommand[%
  style=section,%
  level=4,%
  indent=\z@,%
  beforeskip=3.25ex \@plus1ex \@minus.2ex,%
  afterskip=-1em,%
  tocstyle=subsection,%
  tocindentfollows=subsubsection,%
  tocindent=7.0em,%
  tocnumwidth=4.1em%
]{paragraph}
\DeclareSectionCommand[%
  style=section,%
  level=5,%
  indent=\scr@parindent,%
  beforeskip=3.25ex \@plus1ex \@minus .2ex,%
  afterskip=-1em,%
  tocstyle=subsection,%
  tocindent=10em,%
  tocnumwidth=5em%
]{subparagraph}
```

143 File scrbook-xetex-bidi.def

```
\ProvidesFile{scrbook-xetex-bidi.def}[2025/09/20 v1.4 bidi adaptations for scrbook class fo
\newcommand{\scr@saved@LTRfootnotetext}{}
```

```
\newcommand{\scr@saved@RTLfootnotetext}{}
\let\scr@saved@footnotetext\@footnotetext
\let\scr@saved@LTRfootnotetext\@LTRfootnotetext
\let\scr@saved@RTLfootnotetext\@RTLfootnotetext
\renewcommand{\@footnotetext}[1]{%
  \scr@saved@footnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand{\@LTRfootnotetext}[1]{%
  \scr@saved@LTRfootnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand{\@RTLfootnotetext}[1]{%
  \scr@saved@RTLfootnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand\deffootnote[4][]{%
  \expandafter\ifnum\scr@v@is@ge{3.22}\relax
    \long\def\@makefntext##1{%
      \ExecuteDoHook{footnote/text/begin}%
      \raggedfootnote
      \if@RTL
        \rightskip
      \else
        \leftskip
      \fi
      #2
      \l@addto@macro\@trivlist{%
        \ifnum\@listdepth=\@ne\advance
          \if@RTL
            \rightmargin #2\relax
          \else
            \leftmargin #2\relax
          \fi
        \fi
      }%
      \parindent #3\noindent
      \IfArgIsEmpty{#1}{}{%
        \hskip \dimexpr #1-#2\relax
      }%
      \ftn@font\hbox to \z@{\hss\@@makefnmark}##1%
      \ExecuteDoHook{footnote/text/end}%
    }%
  \else
    \ClassInfo{\KOMAClassName}{%
      Using old \string\@makefntext\space due to compatibility
      level\MessageBreak
      less than 3.22}%
    \long\def\@makefntext##1{%
      \setlength{\@tempdimc}{#3}%
      \def\@tempa{#1}\ifx\@tempa\@empty
        \@setpar{\@@par
          \@tempdima = \hsize
          \addtolength{\@tempdima}{-#2}%
```

```
          \if@RTL
            \parshape \@ne \z@ \@tempdima
          \else
            \parshape \@ne #2 \@tempdima
          \fi
          }%
      \else
        \addtolength{\@tempdimc}{#2}%
        \addtolength{\@tempdimc}{-#1}%
        \@setpar{\@@par
          \@tempdima = \hsize
          \addtolength{\@tempdima}{-#1}%
          \@tempdimb = \hsize
          \addtolength{\@tempdimb}{-#2}%
          \if@RTL
            \parshape \tw@ \z@ \@tempdima \z@ \@tempdimb
          \else
            \parshape \tw@ #1 \@tempdima #2 \@tempdimb
          \fi
        }%
      \fi
      \par
      \parindent\@tempdimc\noindent
      \ftn@font\hbox to \z@{\hss\@@makefnmark}##1%
    }%
  \fi
  \def\@@makefnmark{\hbox{\ftnm@font{#4}}}%
}
\deffootnote[1em]{1.5em}{1em}{\textsuperscript{\thefootnotemark}}
\renewcommand*\left@footnoterule{%
  \normalsize\ftn@rule@test@values
  \kern-\dimexpr 2.6\p@+\ftn@rule@height\relax
  \ifx\@textbottom\relax\else\vskip \z@ \@plus.05fil\fi
  {\usekomafont{footnoterule}{%
      \hrule \@height\ftn@rule@height \@width\ftn@rule@width}}%
  \kern 2.6\p@}
\renewcommand*\right@footnoterule{%
  \normalsize\ftn@rule@test@values
  \kern-\dimexpr 2.6\p@+\ftn@rule@height\relax
  \ifx\@textbottom\relax\else\vskip \z@ \@plus.05fil\fi
  {\usekomafont{footnoterule}{%
      \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\ftn@rule@width\relax  \leavevmode\
  \kern 2.6\p@}
\renewcommand*\maketitle[1][1]{%
  \expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
  \else
    \def\and{%
      \end{tabular}%
      \hskip 1em \@plus.17fil%
      \begin{tabular}[t]{c}%
    }%
  \fi
  \if@titlepage
    \begin{titlepage}
```

```
    \setcounter{page}{%
      #1%
    }%
    \if@titlepageiscoverpage
      \edef\titlepage@restore{%
        \noexpand\endgroup
        \noexpand\global\noexpand\@colht\the\@colht
        \noexpand\global\noexpand\@colroom\the\@colroom
        \noexpand\global\vsize\the\vsize
        \noexpand\global\noexpand\@titlepageiscoverpagefalse
        \noexpand\let\noexpand\titlepage@restore\noexpand\relax
      }%
      \begingroup
      \topmargin=\dimexpr \coverpagetopmargin-1in\relax
      \oddsidemargin=\dimexpr \coverpageleftmargin-1in\relax
      \evensidemargin=\dimexpr \coverpageleftmargin-1in\relax
      \textwidth=\dimexpr
      \paperwidth-\coverpageleftmargin-\coverpagerightmargin\relax
      \textheight=\dimexpr
      \paperheight-\coverpagetopmargin-\coverpagebottommargin\relax
      \headheight=0pt
      \headsep=0pt
      \footskip=\baselineskip
      \@colht=\textheight
      \@colroom=\textheight
      \vsize=\textheight
      \columnwidth=\textwidth
      \hsize=\columnwidth
      \linewidth=\hsize
    \else
      \let\titlepage@restore\relax
    \fi
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let\footnote\thanks
    \let\LTRfootnote\LTRthanks
    \let\RTLfootnote\RTLthanks
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \let\@oldmakefnmark\@makefnmark
    \renewcommand*{\@makefnmark}{\rlap\@oldmakefnmark}%
    \ifx\@extratitle\@empty
      \ifx\@frontispiece\@empty
      \else
        \if@twoside\mbox{}\next@tpage\fi
        \noindent\@frontispiece\next@tdpage
      \fi
    \else
      \noindent\@extratitle
      \ifx\@frontispiece\@empty
      \else
        \next@tpage
        \noindent\@frontispiece
```

```
    \fi
    \next@tdpage
  \fi
  \setparsizes{\z@}{\z@}{\z@\@plus 1fil}\par@updaterelative
  \ifx\@titlehead\@empty \else
    \begin{minipage}[t]{\textwidth}%
      \usekomafont{titlehead}{\@titlehead\par}%
    \end{minipage}\par
  \fi
  \null\vfill
  \begin{center}
    \ifx\@subject\@empty \else
      {\usekomafont{subject}{\@subject\par}}%
      \vskip 3em
    \fi
    {\usekomafont{title}{\huge \@title\par}}%
    \vskip 1em
    {\ifx\@subtitle\@empty\else\usekomafont{subtitle}{\@subtitle\par}\fi}%
    \vskip 2em
    {%
      \usekomafont{author}{%
        \lineskip 0.75em
        \begin{tabular}[t]{c}
          \@author
        \end{tabular}\par
      }%
    }%
    \vskip 1.5em
    {\usekomafont{date}{\@date \par}}%
    \vskip \z@ \@plus3fill
    {\usekomafont{publishers}{\@publishers \par}}%
    \vskip 3em
  \end{center}\par
  \@thanks\global\let\@thanks\@empty
  \vfill\null
  \if@twoside
    \@tempswatrue
    \expandafter\ifnum \@nameuse{scr@v@3.12}>\scr@compatibility\relax
    \else
      \ifx\@uppertitleback\@empty\ifx\@lowertitleback\@empty
        \@tempswafalse
      \fi\fi
    \fi
    \if@tempswa
      \next@tpage
      \begin{minipage}[t]{\textwidth}
        \@uppertitleback
      \end{minipage}\par
      \vfill
      \begin{minipage}[b]{\textwidth}
        \@lowertitleback
      \end{minipage}\par
      \@thanks\global\let\@thanks\@empty
    \fi
```

```
    \else
      \ifx\@uppertitleback\@empty\else
        \ClassWarning{\KOMAClassName}{%
          non empty \string\uppertitleback\space ignored
          by \string\maketitle\MessageBreak
          in `twoside=false' mode%
        }%
      \fi
      \ifx\@lowertitleback\@empty\else
        \ClassWarning{\KOMAClassName}{%
          non empty \string\lowertitleback\space ignored
          by \string\maketitle\MessageBreak
          in `twoside=false' mode%
        }%
      \fi
    \fi
    \ifx\@dedication\@empty
    \else
      \next@tdpage\null\vfill
      {\centering\usekomafont{dedication}{\@dedication \par}}%
      \vskip \z@ \@plus3fill
      \@thanks\global\let\@thanks\@empty
      \cleardoubleemptypage
    \fi
    \ifx\titlepage@restore\relax\else\clearpage\titlepage@restore\fi
  \end{titlepage}
\else
  \par
  \@tempcnta=%
  #1%
  \relax\ifnum\@tempcnta=1\else
    \ClassWarning{\KOMAClassName}{%
      Optional argument of \string\maketitle\space ignored\MessageBreak
      in `titlepage=false' mode%
    }%
  \fi
  \ifx\@uppertitleback\@empty\else
    \ClassWarning{\KOMAClassName}{%
      non empty \string\uppertitleback\space ignored
      by \string\maketitle\MessageBreak
      in `titlepage=false' mode%
    }%
  \fi
  \ifx\@lowertitleback\@empty\else
    \ClassWarning{\KOMAClassName}{%
      non empty \string\lowertitleback\space ignored
      by \string\maketitle\MessageBreak
      in `titlepage=false' mode%
    }%
  \fi
  \begingroup
    \let\titlepage@restore\relax
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \let\@oldmakefnmark\@makefnmark
```

```
    \renewcommand*{\@makefnmark}{\rlap\@oldmakefnmark}%
    \next@tdpage
    \if@twocolumn
      \ifnum \col@number=\@ne
        \ifx\@extratitle\@empty
          \ifx\@frontispiece\@empty\else\if@twoside\mbox{}\fi\fi
        \else
          \@makeextratitle
        \fi
        \ifx\@frontispiece\@empty
          \ifx\@extratitle\@empty\else\next@tdpage\fi
        \else
          \next@tpage
          \@makefrontispiece
          \next@tdpage
        \fi
        \@maketitle
      \else
        \ifx\@extratitle\@empty
          \ifx\@frontispiece\@empty\else\if@twoside\mbox{}\fi\fi
        \else
          \twocolumn[\@makeextratitle]%
        \fi
        \ifx\@frontispiece\@empty
          \ifx\@extratitle\@empty\else\next@tdpage\fi
        \else
          \next@tpage
          \twocolumn[\@makefrontispiece]%
          \next@tdpage
        \fi
        \twocolumn[\@maketitle]%
      \fi
    \else
      \ifx\@extratitle\@empty
        \ifx\@frontispiece\@empty\else \mbox{}\fi
      \else
        \@makeextratitle
      \fi
      \ifx\@frontispiece\@empty
        \ifx\@extratitle\@empty\else\next@tdpage\fi
      \else
        \next@tpage
        \@makefrontispiece
        \next@tdpage
      \fi
      \@maketitle
    \fi
    \ifx\titlepagestyle\@empty\else\thispagestyle{\titlepagestyle}\fi
    \@thanks\global\let\@thanks\@empty
  \endgroup
\fi
\setcounter{footnote}{0}%
\expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
  \let\thanks\relax
```

```
    \let\LTRthanks\relax
    \let\RTLthanks\relax
    \let\maketitle\relax
    \let\@maketitle\relax
    \global\let\@thanks\@empty
    \global\let\@author\@empty
    \global\let\@date\@empty
    \global\let\@title\@empty
    \global\let\@subtitle\@empty
    \global\let\@extratitle\@empty
    \global\let\@frontispiece\@empty
    \global\let\@titlehead\@empty
    \global\let\@subject\@empty
    \global\let\@publishers\@empty
    \global\let\@uppertitleback\@empty
    \global\let\@lowertitleback\@empty
    \global\let\@dedication\@empty
    \global\let\author\relax
    \global\let\title\relax
    \global\let\extratitle\relax
    \global\let\titlehead\relax
    \global\let\subject\relax
    \global\let\publishers\relax
    \global\let\uppertitleback\relax
    \global\let\lowertitleback\relax
    \global\let\dedication\relax
    \global\let\date\relax
  \fi
  \global\let\and\relax
}%
\def\raggedsection{\if@RTL\raggedleft\else\raggedright\fi}
\renewcommand*\autodot{\if@altsecnumformat\@SepMark\fi}
\renewcommand*\thesection{%
  \expandafter\ifnum\scr@v@is@gt{2.97d}%
    \if@mainmatter\thechapter\@SepMark\fi
  \else
  \thechapter\@SepMark%
  \fi
  \@arabic\c@section
}
\renewcommand*{\thesubsection}{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*{\thesubsubsection}{%
  \thesubsection\@SepMark\@arabic\c@subsubsection
}
\renewcommand*{\theparagraph}{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*{\thesubparagraph}{%
  \theparagraph\@SepMark\@arabic\c@subparagraph
}
\expandafter\ifnum\scr@v@is@le{2.97d}%
  \renewcommand*\thefigure{\thechapter\@SepMark\@arabic\c@figure}
\fi
\expandafter\ifnum\scr@v@is@le{2.97d}%
  \renewcommand*\thetable{\thechapter\@SepMark\@arabic\c@table}
\fi
```

```
\renewcommand*{\theequation}{%
  \expandafter\ifnum\scr@v@is@gt{2.97d}%
    \if@mainmatter\thechapter\@SepMark\fi
  \else
    \thechapter\@SepMark%
  \fi
  \@arabic\c@equation
}
\renewenvironment{thebibliography}[1]{%
  \if@bib@break@
    \bib@beginhook
  \else
    \ifx\bibpreamble\relax\else\ifx\bibpreamble\@empty\else
        \setchapterpreamble{\bibpreamble}%
    \fi\fi
    \bib@heading
    \bib@beginhook
    \bib@before@hook
  \fi
  \renewcommand{\BreakBibliography}[1]{%
    \@bib@break
    \end{thebibliography}%
    \begingroup ##1\endgroup
    \begin{thebibliography}{#1}
  }%
   \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
   \bidi@@thebibliography@font@hook%
  \list{%
    \@biblabel{\@arabic\c@enumiv}%
  }{%
    \settowidth\labelwidth{\@biblabel{#1}}%
    \leftmargin\labelwidth
    \advance\leftmargin\labelsep
    \@openbib@code
    \if@bib@break@
      \edef\@tempa{%
        \noexpand\usecounter{enumiv}%
        \noexpand\setcounter{enumiv}{\the\c@enumiv}%
      }\@tempa
      \no@bib@break
    \else
      \usecounter{enumiv}%
    \fi
    \let\p@enumiv\@empty
    \renewcommand*\theenumiv{\@arabic\c@enumiv}%
  }%
  \sloppy\clubpenalty4000 \widowpenalty4000
  \sfcode`\.=\@m
}{%
  \if@bib@break@
    \def\@noitemerr{%
      \@latex@warning{%
        \string\BreakBibliography\space at begin of `thebibliography'
        environment\MessageBreak
```

```
21117         or following \string\BreakBibliography}%
21118     }%
21119   \else
21120     \def\@noitemerr{%
21121       \@latex@warning{%
21122         Empty `thebibliography' environment or
21123         \string\BreakBibliography\MessageBreak
21124         before end of `thebibliography' environment}%
21125     }%
21126   \fi
21127   \endlist
21128   \if@bib@break@
21129   \else
21130     \bib@after@hook
21131     \let\bib@before@hook\@empty
21132     \let\bib@after@hook\@empty
21133   \fi
21134   \bib@endhook
21135 }
21136 \renewcommand*{\raggeddictum}{\if@RTL\raggedright\else\raggedleft\fi}
21137 \renewcommand*{\raggeddictumtext}{\if@RTL\raggedleft\else\raggedright\fi}
21138 \renewcommand*{\raggeddictumauthor}{\if@RTL\raggedright\else\raggedleft\fi}
21139 \renewcommand\marginline[1]{%
21140   \marginpar[\if@RTL\raggedright\else\raggedleft\fi{#1}]{\if@RTL\raggedleft\else\raggedrigh
21141 }
21142 \renewcommand{\@@makecaption}[3]{%
21143   \cap@margin
21144   \begingroup
21145     \ifonelinecaptions
21146       \def\stepcounter##1{\advance\value{##1}\@ne}%
21147       \let\refstepcounter\stepcounter
21148       \let\label\@gobble
21149       \let\@footnotetext=\@gobble
21150       \let\@LTRfootnotetext=\@gobble
21151       \let\@RTLfootnotetext=\@gobble
21152       \let\hypertarget\@gobbletwo
21153       \edef\@xnewline{%
21154         \unexpanded{\ClassInfo{\KOMAClassName}{%
21155             Workaround for not recommended usage of \string\\ or\MessageBreak
21156             \string\newline in caption text
21157           }%
21158           \hspace*{\linewidth}\hspace{1sp}%
21159         }%
21160         \unexpanded\expandafter{\@xnewline}%
21161       }%
21162       \edef\@xcentercr{%
21163         \unexpanded{\ClassInfo{\KOMAClassName}{%
21164             Workaround for not recommended usage of \string\\ or\MessageBreak
21165             \string\newline in caption text
21166           }%
21167           \hspace*{\linewidth}\hspace{1sp}%
21168         }%
21169         \unexpanded\expandafter{\@xcentercr}%
21170       }%
```

```
      \settowidth{\@tempdima}{\scr@@makesinglelinecaption{#1}{#2}{#3}}%
      \ifdim\@tempdima>\cap@width
        \aftergroup\scr@makemultilinecaption
      \else
        \aftergroup\scr@makesinglelinecaption
      \fi
    \else
      \aftergroup\scr@makemultilinecaption
    \fi
  \endgroup
  {#1}{#2}{#3}%
}
\renewcommand{\scr@makesinglelinecaption}[3]{%
  {%
    \usefontofkomafont{caption}{%
      \hb@xt@\hsize{%
        \cap@left
        \if@RTL
          \beginR
        \fi
        \scr@@makesinglelinecaption{#1}{#2}{#3}%
        \if@RTL
          \endR
        \fi
        \cap@right
      }\par\kern\dp\strutbox%
    }%
  }\kern-\dp\strutbox
}
\renewcommand{\@makecaption}[2]{%
  \if@captionabove
    \vskip\belowcaptionskip
  \else
    \vskip\abovecaptionskip
  \fi
  \@@makecaption\@firstofone{#1}{#2}%
  \if@captionabove
    \vskip\abovecaptionskip
  \else
    \vskip\belowcaptionskip
  \fi
}

\renewcommand{\scr@@makesinglelinecaption}[3]{%
    {\usekomafont{caption}{\strut\ignorespaces
      #1{{\usekomafont{captionlabel}{#2\captionformat}}}%
      \ignorespaces #3\unskip}}%
}

\renewcommand{\scr@makemultilinecaption}[3]{%
  {%
    \usefontofkomafont{caption}{%
      \hb@xt@\hsize{%
        \cap@left
```

```
21225         \vbox{\hsize\cap@width\linewidth\hsize
21226           \scr@ifundefinedorrelax{@captype}{%
21227             \ClassWarning{\KOMAClassName}{%
21228               `\string\caption' outside float.\MessageBreak
21229               Seems you are using `\string\caption' outside a
21230               float.\MessageBreak
21231               Maybe you are using a package that uses
21232               `\string\@makecaption'\MessageBreak
21233               without setting `\string\@captype' before.\MessageBreak
21234               Because I cannot detect the caption type, I'm using\MessageBreak
21235               the empty one.%
21236             }%
21237             \let\@captype\@empty
21238           }{}%
21239           \scr@ifundefinedorrelax{ragged\@captype caption}{\raggedcaption}{%
21240             \@nameuse{ragged\@captype caption}%
21241           }%
21242           \ifdofullc@p
21243             \@hangfrom{%
21244               \strut
21245               \scr@smashdp{%
21246                 #1{%
21247                   \usekomafont{caption}{%
21248                     \usekomafont{captionlabel}{#2\captionformat}%
21249                   }%
21250                 }%
21251               }%
21252             }%
21253             {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
21254           \else
21255             \ifdim\cap@indent<\z@
21256               \strut
21257               #1{%
21258                 {\usekomafont{caption}{%
21259                   \usekomafont{captionlabel}{#2\captionformat}%
21260                 }%
21261               }\par}%
21262               \noindent{{\usekomafont{caption}{%
21263                   \hspace*{-\cap@indent}#3\scr@endstrut
21264               }}\par}%
21265             \else
21266               \if@capbreak
21267                 \strut
21268                 #1{%
21269                   {\usekomafont{caption}{%
21270                     \usekomafont{captionlabel}{#2\captionformat}%
21271                   }
21272                 }\par}%
21273                 \noindent\@hangfrom{\hspace*{\cap@indent}}%
21274                 {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
21275               \else
21276                 \@hangfrom{\scr@smashdp\strut\hspace*{\cap@indent}}%
21277                 {%
21278                   \hspace{-\cap@indent}%
```

```
                  \scr@smashdp{%
                    #1{\usekomafont{caption}{%
                        \usekomafont{captionlabel}{#2\captionformat}%
                      }%
                    }%
                  }%
                  {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
                }%
              \fi
            \fi
          \fi
        }%
        \cap@right
      }\par\kern\dp\strutbox
    }%
  }\kern-\dp\strutbox
}


\bidi@AfterFile{longtable-xetex-bidi.def}{%
  \if@komalongtable
    \renewcommand{\LT@makecaption}[3]{%
      \LT@mcol\LT@cols c{%
        \hbox to\z@{\hss\parbox[t]\linewidth{%
            \if@captionabove\else\vskip\belowcaptionskip\fi
            \@@makecaption{#1}{#2}{#3}%
            \endgraf
            \if@captionabove\vskip\abovecaptionskip\fi
          }%
          \hss
        }%
      }%
    }%
    \renewcommand*{\scr@LT@array}{}%
    \let\scr@LT@array=\LT@array
    \renewcommand*{\LT@array}{%
      \def\@captype{table}%
      \@ifundefined{LTcaptype}{}{%
        \Ifstr{\LTcaptype}{}{}{\let\@captype\LTcaptype}%
      }%
      \csname tocbasic_if_caption_above:TF\endcsname
        {\@captionabovetrue}{\@captionabovefalse}%
      \def\captionabove{\noalign{\global\@captionabovetrue}%
        \LT@caption}%
      \def\captionbelow{\noalign{\global\@captionabovefalse}%
        \LT@caption}%
      \scr@LT@array
    }%
    \ClassInfo{\KOMAClassName}{%
      longtable captions redefined%
    }%
  \fi
}

```

```
\CloneTOCEntryStyle{tocline}{part}
\TOCEntryStyleStartInitCode{part}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{\hfill}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@entryformat\endcsname[1]{\usekomafont{partentry}{##1}}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
    {\usekomafont{partentry}{\usekomafont{partentrypagenumber}{##1}}}}%
  \expandafter\renewcommand\expandafter*%
  \csname scr@tso@#1@beforeskip\endcsname{2.25em \@plus\p@}%
}

\CloneTOCEntryStyle{tocline}{chapter}
\TOCEntryStyleStartInitCode{chapter}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{%
    \if@chapterentrywithdots
      {\usekomafont{chapterentrydots}{\TOCLineLeaderFill}}\relax
    \else
      \hfill
    \fi
  }%
  \expandafter\renewcommand%
  \csname scr@tso@#1@entryformat\endcsname{\usekomafont{chapterentry}}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
    {\usekomafont{chapterentry}{\usekomafont{chapterentrypagenumber}{##1}}}}%
  \expandafter\renewcommand\expandafter*%
  \csname scr@tso@#1@beforeskip\endcsname{1.0em \@plus\p@}%
}

\CloneTOCEntryStyle{tocline}{section}
\TOCEntryStyleStartInitCode{section}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{\TOCLineLeaderFill\relax}%
      \expandafter\renewcommand%
      \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
        {\normalfont\normalcolor ##1}}%
}

\CloneTOCEntryStyle{section}{default}

\DeclareSectionCommand[%
  style=chapter,%
  level=\z@,%
  pagestyle=plain,%
  tocstyle=chapter,%
  tocindent=\z@,%
  tocnumwidth=1.5em%
]{chapter}
\DeclareSectionCommand[%
  style=section,%
  level=1,%
```

```
21387   indent=\z@,%
21388   beforeskip=-3.5ex \@plus -1ex \@minus -.2ex,%
21389   afterskip=2.3ex \@plus.2ex,%
21390   tocstyle=section,%
21391   tocindentfollows=chapter,%
21392   tocindent=1.5em,%
21393   tocnumwidth=2.3em%
21394 ]{section}
21395 \DeclareSectionCommand[%
21396   style=part,%
21397   level=\m@ne,%
21398   pagestyle=plain,%
21399   tocstyle=part,%
21400   toclevel=\m@ne,%
21401   tocindent=\z@,%
21402   tocnumwidth=2em%
21403 ]{part}
21404 \DeclareSectionCommand[%
21405   style=section,%
21406   level=2,%
21407   indent=\z@,%
21408   beforeskip=-3.25ex\@plus -1ex \@minus -.2ex,%
21409   afterskip=1.5ex \@plus .2ex,%
21410   tocstyle=section,%
21411   tocindent=3.8em,%
21412   tocnumwidth=3.2em%
21413 ]{subsection}
21414 \DeclareSectionCommand[%
21415   style=section,%
21416   level=3,%
21417   indent=\z@,%
21418   beforeskip=-3.25ex\@plus -1ex \@minus -.2ex,%
21419   afterskip=1.5ex \@plus .2ex,%
21420   tocstyle=section,%
21421   tocindent=7.0em,%
21422   tocnumwidth=4.1em%
21423 ]{subsubsection}
21424 \DeclareSectionCommand[%
21425   style=section,%
21426   level=4,%
21427   indent=\z@,%
21428   beforeskip=3.25ex \@plus1ex \@minus.2ex,%
21429   afterskip=-1em,%
21430   tocindentfollows=subsubsection,%
21431   tocstyle=section,%
21432   tocindent=10em,%
21433   tocnumwidth=5em%
21434 ]{paragraph}
21435 \DeclareSectionCommand[%
21436   style=section,%
21437   level=5,%
21438   indent=\scr@parindent,%
21439   beforeskip=3.25ex \@plus1ex \@minus .2ex,%
21440   afterskip=-1em,%
```

```
  tocstyle=section,%
  tocindent=12em,%
  tocnumwidth=6em%
]{subparagraph}
```

144 File scrreprt-xetex-bidi.def

```
\ProvidesFile{scrreprt-xetex-bidi.def}[2025/09/20 v1.4 bidi adaptations for scrreprt class
\newcommand{\scr@saved@LTRfootnotetext}{}
\newcommand{\scr@saved@RTLfootnotetext}{}
\let\scr@saved@footnotetext\@footnotetext
\let\scr@saved@LTRfootnotetext\@LTRfootnotetext
\let\scr@saved@RTLfootnotetext\@RTLfootnotetext
\renewcommand{\@footnotetext}[1]{%
  \scr@saved@footnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand{\@LTRfootnotetext}[1]{%
  \scr@saved@LTRfootnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand{\@RTLfootnotetext}[1]{%
  \scr@saved@RTLfootnotetext{#1}%
  \csname FN@mf@prepare\endcsname
}
\renewcommand\deffootnote[4][]{%
  \expandafter\ifnum\scr@v@is@ge{3.22}\relax
    \long\def\@makefntext##1{%
      \ExecuteDoHook{footnote/text/begin}%
      \raggedfootnote
      \if@RTL
        \rightskip
      \else
        \leftskip
      \fi
      #2
      \l@addto@macro\@trivlist{%
        \ifnum\@listdepth=\@ne
          \if@RTL
            \advance\rightmargin #2\relax
          \else
            \advance\leftmargin #2\relax
          \fi
        \fi
      }%
      \parindent #3\noindent
      \IfArgIsEmpty{#1}{}{%
        \hskip \dimexpr #1-#2\relax
      }%
      \ftn@font\hbox to \z@{\hss\@@makefnmark}##1%
      \ExecuteDoHook{footnote/text/end}%
    }%
  \else
    \ClassInfo{\KOMAClassName}{%
```

```
      Using old \string\@makefntext\space due to compatibility
      level\MessageBreak
      less than 3.22}%
    \long\def\@makefntext##1{%
      \setlength{\@tempdimc}{#3}%
      \def\@tempa{#1}\ifx\@tempa\@empty
        \@setpar{\@@par
          \@tempdima = \hsize
          \addtolength{\@tempdima}{-#2}%
          \if@RTL
            \parshape \@ne \z@ \@tempdima
          \else
            \parshape \@ne #2 \@tempdima
          \fi
          }%
      \else
        \addtolength{\@tempdimc}{#2}%
        \addtolength{\@tempdimc}{-#1}%
        \@setpar{\@@par
          \@tempdima = \hsize
          \addtolength{\@tempdima}{-#1}%
          \@tempdimb = \hsize
          \addtolength{\@tempdimb}{-#2}%
          \if@RTL
            \parshape \tw@ \z@ \@tempdima \z@ \@tempdimb
          \else
            \parshape \tw@ #1 \@tempdima #2 \@tempdimb
          \fi
        }%
      \fi
      \par
      \parindent\@tempdimc\noindent
      \ftn@font\hbox to \z@{\hss\@@makefnmark}##1%
    }%
  \fi
  \def\@@makefnmark{\hbox{\ftnm@font{#4}}}%
}
\deffootnote[1em]{1.5em}{1em}{\textsuperscript{\thefootnotemark}}
\renewcommand*\left@footnoterule{%
  \normalsize\ftn@rule@test@values
  \kern-\dimexpr 2.6\p@+\ftn@rule@height\relax
  \ifx\@textbottom\relax\else\vskip \z@ \@plus.05fil\fi
  {\usekomafont{footnoterule}{%
      \hrule \@height\ftn@rule@height \@width\ftn@rule@width}}%
  \kern 2.6\p@}
\renewcommand*\right@footnoterule{%
  \normalsize\ftn@rule@test@values
  \kern-\dimexpr 2.6\p@+\ftn@rule@height\relax
  \ifx\@textbottom\relax\else\vskip \z@ \@plus.05fil\fi
  {\usekomafont{footnoterule}{%
      \hbox to \columnwidth{\hskip \dimexpr\columnwidth-\ftn@rule@width\relax  \leavevmode\
  \kern 2.6\p@}
\renewcommand*\maketitle[1][1]{%
  \expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
```

```
\else
  \def\and{%
    \end{tabular}%
    \hskip 1em \@plus.17fil%
    \begin{tabular}[t]{c}%
  }%
\fi
\if@titlepage
  \begin{titlepage}
    \setcounter{page}{%
      #1%
    }%
    \if@titlepageiscoverpage
      \edef\titlepage@restore{%
        \noexpand\endgroup
        \noexpand\global\noexpand\@colht\the\@colht
        \noexpand\global\noexpand\@colroom\the\@colroom
        \noexpand\global\vsize\the\vsize
        \noexpand\global\noexpand\@titlepageiscoverpagefalse
        \noexpand\let\noexpand\titlepage@restore\noexpand\relax
      }%
      \begingroup
      \topmargin=\dimexpr \coverpagetopmargin-1in\relax
      \oddsidemargin=\dimexpr \coverpageleftmargin-1in\relax
      \evensidemargin=\dimexpr \coverpageleftmargin-1in\relax
      \textwidth=\dimexpr
      \paperwidth-\coverpageleftmargin-\coverpagerightmargin\relax
      \textheight=\dimexpr
      \paperheight-\coverpagetopmargin-\coverpagebottommargin\relax
      \headheight=0pt
      \headsep=0pt
      \footskip=\baselineskip
      \@colht=\textheight
      \@colroom=\textheight
      \vsize=\textheight
      \columnwidth=\textwidth
      \hsize=\columnwidth
      \linewidth=\hsize
    \else
      \let\titlepage@restore\relax
    \fi
    \let\footnotesize\small
    \let\right@footnoterule\relax
    \let\left@footnoterule\relax
    \let\textwidth@footnoterule\relax
    \let\footnote\thanks
    \let\LTRfootnote\LTRthanks
    \let\RTLfootnote\RTLthanks
    \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
    \let\@oldmakefnmark\@makefnmark
    \renewcommand*{\@makefnmark}{\rlap\@oldmakefnmark}%
    \ifx\@extratitle\@empty
      \ifx\@frontispiece\@empty
      \else
```

```
21600         \if@twoside\mbox{}\next@tpage\fi
21601         \noindent\@frontispiece\next@tdpage
21602       \fi
21603     \else
21604       \noindent\@extratitle
21605       \ifx\@frontispiece\@empty
21606       \else
21607         \next@tpage
21608         \noindent\@frontispiece
21609       \fi
21610       \next@tdpage
21611     \fi
21612     \setparsizes{\z@}{\z@}{\z@\@plus 1fil}\par@updaterelative
21613     \ifx\@titlehead\@empty \else
21614       \begin{minipage}[t]{\textwidth}%
21615         \usekomafont{titlehead}{\@titlehead\par}%
21616       \end{minipage}\par
21617     \fi
21618     \null\vfill
21619     \begin{center}
21620       \ifx\@subject\@empty \else
21621         {\usekomafont{subject}{\@subject\par}}%
21622         \vskip 3em
21623       \fi
21624       {\usekomafont{title}{\huge \@title\par}}%
21625       \vskip 1em
21626       {\ifx\@subtitle\@empty\else\usekomafont{subtitle}{\@subtitle\par}\fi}%
21627       \vskip 2em
21628       {%
21629         \usekomafont{author}{%
21630           \lineskip 0.75em
21631           \begin{tabular}[t]{c}
21632             \@author
21633           \end{tabular}\par
21634         }%
21635       }%
21636       \vskip 1.5em
21637       {\usekomafont{date}{\@date \par}}%
21638       \vskip \z@ \@plus3fill
21639       {\usekomafont{publishers}{\@publishers \par}}%
21640       \vskip 3em
21641     \end{center}\par
21642     \@thanks\global\let\@thanks\@empty
21643     \vfill\null
21644     \if@twoside
21645       \@tempswatrue
21646       \expandafter\ifnum \@nameuse{scr@v@3.12}>\scr@compatibility\relax
21647       \else
21648         \ifx\@uppertitleback\@empty\ifx\@lowertitleback\@empty
21649           \@tempswafalse
21650         \fi\fi
21651       \fi
21652       \if@tempswa
21653         \next@tpage
```

```
21654         \begin{minipage}[t]{\textwidth}
21655           \@uppertitleback
21656         \end{minipage}\par
21657         \vfill
21658         \begin{minipage}[b]{\textwidth}
21659           \@lowertitleback
21660         \end{minipage}\par
21661         \@thanks\global\let\@thanks\@empty
21662       \fi
21663     \else
21664       \ifx\@uppertitleback\@empty\else
21665         \ClassWarning{\KOMAClassName}{%
21666           non empty \string\uppertitleback\space ignored
21667           by \string\maketitle\MessageBreak
21668           in `twoside=false' mode%
21669         }%
21670       \fi
21671       \ifx\@lowertitleback\@empty\else
21672         \ClassWarning{\KOMAClassName}{%
21673           non empty \string\lowertitleback\space ignored
21674           by \string\maketitle\MessageBreak
21675           in `twoside=false' mode%
21676         }%
21677       \fi
21678     \fi
21679     \ifx\@dedication\@empty
21680     \else
21681       \next@tdpage\null\vfill
21682       {\centering\usekomafont{dedication}{\@dedication \par}}%
21683       \vskip \z@ \@plus3fill
21684       \@thanks\global\let\@thanks\@empty
21685       \cleardoubleemptypage
21686     \fi
21687     \ifx\titlepage@restore\relax\else\clearpage\titlepage@restore\fi
21688   \end{titlepage}
21689 \else
21690   \par
21691   \@tempcnta=%
21692   #1%
21693   \relax\ifnum\@tempcnta=1\else
21694     \ClassWarning{\KOMAClassName}{%
21695       Optional argument of \string\maketitle\space ignored\MessageBreak
21696       in `titlepage=false' mode%
21697     }%
21698   \fi
21699   \ifx\@uppertitleback\@empty\else
21700     \ClassWarning{\KOMAClassName}{%
21701       non empty \string\uppertitleback\space ignored
21702       by \string\maketitle\MessageBreak
21703       in `titlepage=false' mode%
21704     }%
21705   \fi
21706   \ifx\@lowertitleback\@empty\else
21707     \ClassWarning{\KOMAClassName}{%
```

```
21708       non empty \string\lowertitleback\space ignored
21709       by \string\maketitle\MessageBreak
21710       in `titlepage=false' mode%
21711     }%
21712   \fi
21713   \begingroup
21714     \let\titlepage@restore\relax
21715     \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
21716     \let\@oldmakefnmark\@makefnmark
21717     \renewcommand*{\@makefnmark}{\rlap\@oldmakefnmark}%
21718     \next@tdpage
21719     \if@twocolumn
21720       \ifnum \col@number=\@ne
21721         \ifx\@extratitle\@empty
21722           \ifx\@frontispiece\@empty\else\if@twoside\mbox{}\fi\fi
21723         \else
21724           \@makeextratitle
21725         \fi
21726         \ifx\@frontispiece\@empty
21727           \ifx\@extratitle\@empty\else\next@tdpage\fi
21728         \else
21729           \next@tpage
21730           \@makefrontispiece
21731           \next@tdpage
21732         \fi
21733         \@maketitle
21734       \else
21735         \ifx\@extratitle\@empty
21736           \ifx\@frontispiece\@empty\else\if@twoside\mbox{}\fi\fi
21737         \else
21738           \twocolumn[\@makeextratitle]%
21739         \fi
21740         \ifx\@frontispiece\@empty
21741           \ifx\@extratitle\@empty\else\next@tdpage\fi
21742         \else
21743           \next@tpage
21744           \twocolumn[\@makefrontispiece]%
21745           \next@tdpage
21746         \fi
21747         \twocolumn[\@maketitle]%
21748       \fi
21749     \else
21750       \ifx\@extratitle\@empty
21751         \ifx\@frontispiece\@empty\else \mbox{}\fi
21752       \else
21753         \@makeextratitle
21754       \fi
21755       \ifx\@frontispiece\@empty
21756         \ifx\@extratitle\@empty\else\next@tdpage\fi
21757       \else
21758         \next@tpage
21759         \@makefrontispiece
21760         \next@tdpage
21761       \fi
```

```
        \@maketitle
      \fi
      \ifx\titlepagestyle\@empty\else\thispagestyle{\titlepagestyle}\fi
      \@thanks\global\let\@thanks\@empty
    \endgroup
  \fi
  \setcounter{footnote}{0}%
  \expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
    \let\thanks\relax
    \let\LTRthanks\relax
    \let\RTLthanks\relax
    \let\maketitle\relax
    \let\@maketitle\relax
    \global\let\@thanks\@empty
    \global\let\@author\@empty
    \global\let\@date\@empty
    \global\let\@title\@empty
    \global\let\@subtitle\@empty
    \global\let\@extratitle\@empty
    \global\let\@frontispiece\@empty
    \global\let\@titlehead\@empty
    \global\let\@subject\@empty
    \global\let\@publishers\@empty
    \global\let\@uppertitleback\@empty
    \global\let\@lowertitleback\@empty
    \global\let\@dedication\@empty
    \global\let\author\relax
    \global\let\title\relax
    \global\let\extratitle\relax
    \global\let\titlehead\relax
    \global\let\subject\relax
    \global\let\publishers\relax
    \global\let\uppertitleback\relax
    \global\let\lowertitleback\relax
    \global\let\dedication\relax
    \global\let\date\relax
  \fi
  \global\let\and\relax
}%
\def\raggedsection{\if@RTL\raggedleft\else\raggedright\fi}
\renewcommand*\autodot{\if@altsecnumformat\@SepMark\fi}
\renewcommand*\thesection{%
  \thechapter\@SepMark%
  \@arabic\c@section
}
\renewcommand*{\thesubsection}{\thesection\@SepMark\@arabic\c@subsection}
\renewcommand*{\thesubsubsection}{%
  \thesubsection\@SepMark\@arabic\c@subsubsection
}
\renewcommand*{\theparagraph}{\thesubsubsection\@SepMark\@arabic\c@paragraph}
\renewcommand*{\thesubparagraph}{%
  \theparagraph\@SepMark\@arabic\c@subparagraph
}
\expandafter\ifnum\scr@v@is@le{2.97d}%
```

```
21816   \renewcommand*\thefigure{\thechapter\@SepMark\@arabic\c@figure}
21817 \fi
21818 \expandafter\ifnum\scr@v@is@le{2.97d}%
21819   \renewcommand*\thetable{\thechapter\@SepMark\@arabic\c@table}
21820 \fi
21821 \renewcommand*\theequation{%
21822   \thechapter\@SepMark%
21823   \@arabic\c@equation
21824 }
21825 \renewenvironment{thebibliography}[1]{%
21826   \if@bib@break@
21827     \bib@beginhook
21828   \else
21829     \ifx\bibpreamble\relax\else\ifx\bibpreamble\@empty\else
21830         \setchapterpreamble{\bibpreamble}%
21831     \fi\fi
21832     \bib@heading
21833     \bib@beginhook
21834     \bib@before@hook
21835   \fi
21836   \renewcommand{\BreakBibliography}[1]{%
21837     \@bib@break
21838     \end{thebibliography}%
21839     \begingroup ##1\endgroup
21840     \begin{thebibliography}{#1}
21841   }%
21842   \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
21843   \bidi@@thebibliography@font@hook%
21844   \list{%
21845     \@biblabel{\@arabic\c@enumiv}%
21846   }{%
21847     \settowidth\labelwidth{\@biblabel{#1}}%
21848     \leftmargin\labelwidth
21849     \advance\leftmargin\labelsep
21850     \@openbib@code
21851     \if@bib@break@
21852       \edef\@tempa{%
21853         \noexpand\usecounter{enumiv}%
21854         \noexpand\setcounter{enumiv}{\the\c@enumiv}%
21855       }\@tempa
21856       \no@bib@break
21857     \else
21858       \usecounter{enumiv}%
21859     \fi
21860     \let\p@enumiv\@empty
21861     \renewcommand*\theenumiv{\@arabic\c@enumiv}%
21862   }%
21863   \sloppy\clubpenalty4000 \widowpenalty4000
21864   \sfcode`\.=\@m
21865 }{%
21866   \if@bib@break@
21867     \def\@noitemerr{%
21868       \@latex@warning{%
21869         \string\BreakBibliography\space at begin of `thebibliography'
```

```
        environment\MessageBreak
        or following \string\BreakBibliography}%
    }%
  \else
    \def\@noitemerr{%
      \@latex@warning{%
        Empty `thebibliography' environment or
        \string\BreakBibliography\MessageBreak
        before end of `thebibliography' environment}%
    }%
  \fi
  \endlist
  \if@bib@break@
  \else
    \bib@after@hook
    \let\bib@before@hook\@empty
    \let\bib@after@hook\@empty
  \fi
  \bib@endhook
}
\renewcommand*{\raggeddictum}{\if@RTL\raggedright\else\raggedleft\fi}
\renewcommand*{\raggeddictumtext}{\if@RTL\raggedleft\else\raggedright\fi}
\renewcommand*{\raggeddictumauthor}{\if@RTL\raggedright\else\raggedleft\fi}
\renewcommand\marginline[1]{%
  \marginpar[\if@RTL\raggedright\else\raggedleft\fi{#1}]{\if@RTL\raggedleft\else\raggedrigh
}
\renewcommand{\@@makecaption}[3]{%
  \cap@margin
  \begingroup
    \ifonelinecaptions
      \def\stepcounter##1{\advance\value{##1}\@ne}%
      \let\refstepcounter\stepcounter
      \let\label\@gobble
      \let\@footnotetext=\@gobble
      \let\@LTRfootnotetext=\@gobble
      \let\@RTLfootnotetext=\@gobble
      \let\hypertarget\@gobbletwo
      \edef\@xnewline{%
        \unexpanded{\ClassInfo{\KOMAClassName}{%
            Workaround for not recommended usage of \string\\ or\MessageBreak
            \string\newline in caption text
          }%
          \hspace*{\linewidth}\hspace{1sp}%
        }%
        \unexpanded\expandafter{\@xnewline}%
      }%
      \edef\@xcentercr{%
        \unexpanded{\ClassInfo{\KOMAClassName}{%
            Workaround for not recommended usage of \string\\ or\MessageBreak
            \string\newline in caption text
          }%
          \hspace*{\linewidth}\hspace{1sp}%
        }%
        \unexpanded\expandafter{\@xcentercr}%
```

```
      }%
      \settowidth{\@tempdima}{\scr@@makesinglelinecaption{#1}{#2}{#3}}%
      \ifdim\@tempdima>\cap@width
        \aftergroup\scr@makemultilinecaption
      \else
        \aftergroup\scr@makesinglelinecaption
      \fi
    \else
      \aftergroup\scr@makemultilinecaption
    \fi
  \endgroup
  {#1}{#2}{#3}%
}
\renewcommand{\scr@makesinglelinecaption}[3]{%
  {%
    \usefontofkomafont{caption}{%
      \hb@xt@\hsize{%
        \cap@left
        \if@RTL
          \beginR
        \fi
        \scr@@makesinglelinecaption{#1}{#2}{#3}%
        \if@RTL
          \endR
        \fi
        \cap@right
      }\par\kern\dp\strutbox%
    }%
  }\kern-\dp\strutbox
}
\renewcommand{\@makecaption}[2]{%
  \if@captionabove
    \vskip\belowcaptionskip
  \else
    \vskip\abovecaptionskip
  \fi
  \@@makecaption\@firstofone{#1}{#2}%
  \if@captionabove
    \vskip\abovecaptionskip
  \else
    \vskip\belowcaptionskip
  \fi
}

\renewcommand{\scr@@makesinglelinecaption}[3]{%
    {\usekomafont{caption}{\strut\ignorespaces
      #1{{\usekomafont{captionlabel}{#2\captionformat}}}%
      \ignorespaces #3\unskip}}%
}

\renewcommand{\scr@makemultilinecaption}[3]{%
  {%
    \usefontofkomafont{caption}{%
      \hb@xt@\hsize{%
```

```
\cap@left
\vbox{\hsize\cap@width\linewidth\hsize
  \scr@ifundefinedorrelax{@captype}{%
    \ClassWarning{\KOMAClassName}{%
      `\string\caption' outside float.\MessageBreak
      Seems you are using `\string\caption' outside a
      float.\MessageBreak
      Maybe you are using a package that uses
      `\string\@makecaption'\MessageBreak
      without setting `\string\@captype' before.\MessageBreak
      Because I cannot detect the caption type, I'm using\MessageBreak
      the empty one.%
    }%
    \let\@captype\@empty
  }{}%
  \scr@ifundefinedorrelax{ragged\@captype caption}{\raggedcaption}{%
    \@nameuse{ragged\@captype caption}%
  }%
  \ifdofullc@p
    \@hangfrom{%
      \strut
      \scr@smashdp{%
        #1{%
          \usekomafont{caption}{%
            \usekomafont{captionlabel}{#2\captionformat}%
          }%
        }%
      }%
    }%
    {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
  \else
    \ifdim\cap@indent<\z@
      \strut
      #1{%
        {\usekomafont{caption}{%
          \usekomafont{captionlabel}{#2\captionformat}%
        }%
      }\par}%
      \noindent{{\usekomafont{caption}{%
          \hspace*{-\cap@indent}#3\scr@endstrut
      }}\par}%
    \else
      \if@capbreak
        \strut
        #1{%
          {\usekomafont{caption}{%
            \usekomafont{captionlabel}{#2\captionformat}%
          }%
        }\par}%
        \noindent\@hangfrom{\hspace*{\cap@indent}}%
        {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
      \else
        \@hangfrom{\scr@smashdp\strut\hspace*{\cap@indent}}%
        {%
```

```
                  \hspace{-\cap@indent}%
                  \scr@smashdp{%
                    #1{\usekomafont{caption}{%
                        \usekomafont{captionlabel}{#2\captionformat}%
                      }%
                    }%
                  }%
                  {{\usekomafont{caption}{#3\scr@endstrut}}\par}%
                }%
              \fi
            \fi
          \fi
        }%
        \cap@right
      }\par\kern\dp\strutbox
    }%
  }\kern-\dp\strutbox
}


\bidi@AfterFile{longtable-xetex-bidi.def}{%
  \if@komalongtable
    \renewcommand{\LT@makecaption}[3]{%
      \LT@mcol\LT@cols c{%
        \hbox to\z@{\hss\parbox[t]\linewidth{%
            \if@captionabove\else\vskip\belowcaptionskip\fi
            \@@makecaption{#1}{#2}{#3}%
            \endgraf
            \if@captionabove\vskip\abovecaptionskip\fi
          }%
          \hss
        }%
      }%
    }%
    \renewcommand*{\scr@LT@array}{}%
    \let\scr@LT@array=\LT@array
    \renewcommand*{\LT@array}{%
      \def\@captype{table}%
      \@ifundefined{LTcaptype}{}{%
        \Ifstr{\LTcaptype}{}{}{\let\@captype\LTcaptype}%
      }%
      \csname tocbasic_if_caption_above:TF\endcsname
        {\@captionabovetrue}{\@captionabovefalse}%
      \def\captionabove{\noalign{\global\@captionabovetrue}%
        \LT@caption}%
      \def\captionbelow{\noalign{\global\@captionabovefalse}%
        \LT@caption}%
      \scr@LT@array
    }%
    \ClassInfo{\KOMAClassName}{%
      longtable captions redefined%
    }%
  \fi
}
```

```
\CloneTOCEntryStyle{tocline}{part}
\TOCEntryStyleStartInitCode{part}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{\hfill}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@entryformat\endcsname[1]{\usekomafont{partentry}{##1}}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
    {\usekomafont{partentry}{\usekomafont{partentrypagenumber}{##1}}}}%
  \expandafter\renewcommand\expandafter*%
  \csname scr@tso@#1@beforeskip\endcsname{2.25em \@plus\p@}%
}

\CloneTOCEntryStyle{tocline}{chapter}
\TOCEntryStyleStartInitCode{chapter}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{%
    \if@chapterentrywithdots
      {\usekomafont{chapterentrydots}{\TOCLineLeaderFill}}\relax
    \else
      \hfill
    \fi
  }%
  \expandafter\renewcommand%
  \csname scr@tso@#1@entryformat\endcsname{\usekomafont{chapterentry}}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
    {\usekomafont{chapterentry}{\usekomafont{chapterentrypagenumber}{##1}}}}%
  \expandafter\renewcommand\expandafter*%
  \csname scr@tso@#1@beforeskip\endcsname{1.0em \@plus\p@}%
}

\CloneTOCEntryStyle{tocline}{section}
\TOCEntryStyleStartInitCode{section}{%
  \expandafter\renewcommand%
  \csname scr@tso@#1@linefill\endcsname{\TOCLineLeaderFill\relax}%
      \expandafter\renewcommand%
      \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
        {\normalfont\normalcolor ##1}}%
}

\CloneTOCEntryStyle{section}{default}

\DeclareSectionCommand[%
  style=chapter,%
  level=\z@,%
  pagestyle=plain,%
  tocstyle=chapter,%
  tocindent=\z@,%
  tocnumwidth=1.5em%
]{chapter}
\DeclareSectionCommand[%
  style=section,%
```

```
22140   level=1,%
22141   indent=\z@,%
22142   beforeskip=-3.5ex \@plus -1ex \@minus -.2ex,%
22143   afterskip=2.3ex \@plus.2ex,%
22144   tocstyle=section,%
22145   tocindentfollows=chapter,%
22146   tocindent=1.5em,%
22147   tocnumwidth=2.3em%
22148 ]{section}
22149 \DeclareSectionCommand[%
22150   style=part,%
22151   level=\m@ne,%
22152   pagestyle=plain,%
22153   tocstyle=part,%
22154   toclevel=\m@ne,%
22155   tocindent=\z@,%
22156   tocnumwidth=2em%
22157 ]{part}
22158 \DeclareSectionCommand[%
22159   style=section,%
22160   level=2,%
22161   indent=\z@,%
22162   beforeskip=-3.25ex\@plus -1ex \@minus -.2ex,%
22163   afterskip=1.5ex \@plus .2ex,%
22164   tocstyle=section,%
22165   tocindent=3.8em,%
22166   tocnumwidth=3.2em%
22167 ]{subsection}
22168 \DeclareSectionCommand[%
22169   style=section,%
22170   level=3,%
22171   indent=\z@,%
22172   beforeskip=-3.25ex\@plus -1ex \@minus -.2ex,%
22173   afterskip=1.5ex \@plus .2ex,%
22174   tocstyle=section,%
22175   tocindent=7.0em,%
22176   tocnumwidth=4.1em%
22177 ]{subsubsection}
22178 \DeclareSectionCommand[%
22179   style=section,%
22180   level=4,%
22181   indent=\z@,%
22182   beforeskip=3.25ex \@plus1ex \@minus.2ex,%
22183   afterskip=-1em,%
22184   tocindentfollows=subsubsection,%
22185   tocstyle=section,%
22186   tocindent=10em,%
22187   tocnumwidth=5em%
22188 ]{paragraph}
22189 \DeclareSectionCommand[%
22190   style=section,%
22191   level=5,%
22192   indent=\scr@parindent,%
22193   beforeskip=3.25ex \@plus1ex \@minus .2ex,%
```

```
  afterskip=-1em,%
  tocstyle=section,%
  tocindent=12em,%
  tocnumwidth=6em%
]{subparagraph}
```

145 File sidecap-xetex-bidi.def

```
\ProvidesFile{sidecap-xetex-bidi.def}[2025/01/03 v0.2 bidi adaptations for sidecap package
\RequirePackage{ragged2e}
\renewcommand*{\SC@FLOAT}[2]{\if@RTL%
    \isSC@ODD{{#1}\hspace{\sidecaptionsep}{#2}} {{#2}\hspace{\sidecaptionsep}{#1}}\else%
\isSC@ODD{{#2}\hspace{\sidecaptionsep}{#1}} {{#1}\hspace{\sidecaptionsep}{#2}}\fi}
  \renewcommand*\SC@justify@caption{\if@RTL%
\isSC@ODD{\RaggedLeft}{\RaggedRight}\else%
    \isSC@ODD{\RaggedRight}{\RaggedLeft}\fi}

\@ifpackagewith{sidecap}{innercaption}{%
\if@RTL  \renewcommand*{\SC@FLOAT}[2]{%
    \isSC@ODD{{#2}\hspace{\sidecaptionsep}{#1}} {{#1}\hspace{\sidecaptionsep}{#2}}}
  \renewcommand*\SC@justify@caption{%
    \isSC@ODD{\RaggedRight}{\RaggedLeft}}\else
  \renewcommand*{\SC@FLOAT}[2]{%
    \isSC@ODD{{#1}\hspace{\sidecaptionsep}{#2}} {{#2}\hspace{\sidecaptionsep}{#1}}}
  \renewcommand*\SC@justify@caption{%
    \isSC@ODD{\RaggedLeft}{\RaggedRight}}\fi
}{}

\@ifpackagewith{sidecap}{rightcaption}{%
  \if@RTL\renewcommand*{\SC@FLOAT}[2]{{#1}\hspace{\sidecaptionsep}{#2}}
  \def\SC@justify@caption{\RaggedLeft}\else%
  \renewcommand*{\SC@FLOAT}[2]{{#2}\hspace{\sidecaptionsep}{#1}}
  \def\SC@justify@caption{\RaggedRight}\fi%
}{}

\@ifpackagewith{sidecap}{leftcaption}{%
\if@RTL  \renewcommand*{\SC@FLOAT}[2]{{#2}\hspace{\sidecaptionsep}{#1}}
  \def\SC@justify@caption{\RaggedRight}\else%
  \renewcommand*{\SC@FLOAT}[2]{{#1}\hspace{\sidecaptionsep}{#2}}
  \def\SC@justify@caption{\RaggedLeft}\fi%
}{}
```

146 File soul-xetex-bidi.def

```
\ProvidesFile{soul-xetex-bidi.def}[2015/10/16 v0.1 bidi adaptations for soul package for Xe
\long\def\SOUL@start#1{%
   \let\bidi@RTL@everypar\@empty
    \let\<\SOUL@lowerthan
    \let\>\empty
    \def\soulomit{\noexpand\soulomit}%
    \gdef\SOUL@eventuallyexhyphen##1{}%
    \let\SOUL@soeventuallyskip\relax
    \SOUL@spaceskip=\fontdimen\tw@\font\@plus\fontdimen\thr@@\font
        \@minus\fontdimen4\font
```

```
    \SOUL@ignorespacesfalse
    \leavevmode
    \SOUL@preamble
    \SOUL@lasttoken={}%
    \SOUL@word={}%
    \SOUL@minus\z@
    \SOUL@comma\z@
    \SOUL@apo\z@
    \SOUL@grave\z@
    \SOUL@do{#1}%
    \SOUL@postamble
}}
\def\SOUL@ulunderline#1{{%
    \setbox\z@\hbox{#1}%
    \dimen@=\wd\z@
    \dimen@i=\SOUL@uloverlap
    \advance\dimen@2\dimen@i
    \if@RTL
    \unhcopy\z@
    \llap{%
        \null
        \kern-\dimen@i
        \SOUL@ulcolor{\SOUL@ulleaders\hskip\dimen@}%
    }%
    \else
    \rlap{%
        \null
        \kern-\dimen@i
        \SOUL@ulcolor{\SOUL@ulleaders\hskip\dimen@}%
    }%
    \unhcopy\z@
    \fi
}}
\def\bidi@SOUL@ulleaders{%
    \leaders\hb@xt@0.1pt{\hss\SOUL@ulcolor{\vrule\@depth\SOUL@uldp\@height\SOUL@ulht}\hss}\
}
\def\SOUL@uleveryspace#1{%
       \if@RTL
       #1%
       \bidi@SOUL@ulleaders
       \hskip\spaceskip
       \else
    \SOUL@ulcolor{%
        #1%
        \SOUL@ulleaders
        \hskip\spaceskip
    }%
    \fi
    \null
}
```

147 File stabular-xetex-bidi.def

```
\ProvidesFile{stabular-xetex-bidi.def}[2015/11/07 v0.3 bidi adaptations for stabular packag
```

```
\def\@stabular{%
   \leavevmode \bgroup \if@RTLtab\beginR \fi
   \let\@acol\@tabacol
   \let\@classz\@tabclassz
   \let\@classiv\@tabclassiv \let\\\@tabularcr\@stabarray}
\def\endstabular{\crcr\egroup\if@RTLtab\egroup\endR\egroup\fi
                 \egroup \if@RTLtab\endR\fi\egroup}
\expandafter \let \csname endstabular*\endcsname = \endstabular
\def\@sarray[#1]#2{%
  \bgroup
  \setbox\@arstrutbox\hbox{%
    \vrule \@height\arraystretch\ht\strutbox
           \@depth\arraystretch \dp\strutbox
           \@width\z@}%
  \@mkpream{#2}%
  \edef\@preamble{%
    \ialign \noexpand\@halignto
      \bgroup \@arstrut \@preamble \tabskip\z@skip \cr}%
  \let\@startpbox\@@startpbox \let\@endpbox\@@endpbox
  \let\tabularnewline\\%
    \let\@sharp##%
    \set@typeset@protect
    \lineskip\z@skip\baselineskip\z@skip
  \if@RTLtab\hbox\bgroup\beginR\@hboxRconstructtrue\if #1t\vtop \else \vbox \fi\bgroup\fi
    \@preamble}
```

148 File subfigure-xetex-bidi.def

```
\ProvidesFile{subfigure-xetex-bidi.def}[2010/03/01 v0.1 bidi adaptations for subfigure pack
\AtBeginDocument{%
\let\p@subfigure=\thefigure
\let\p@subtable=\thetable%
}
```

149 File tabls-xetex-bidi.def

```
\ProvidesFile{tabls-xetex-bidi.def}[2015/11/07 v0.3 bidi adaptations for tabls package for
\def\endtabular{\endarray $\if@RTLtab\endR\fi\egroup}

\expandafter\let\csname endtabular*\endcsname=\endtabular

\def\endarray{\ifvmode\csname crcr\endcsname % just do \crcr if \\ given
  \else \\[\z@ \global\advance\@arstdepth-\@otarlinesep]%
  \fi\egroup\if@RTLtab\egroup\endR\egroup\fi\@unrecurse\egroup}

\def\@array[#1]#2{%  remember global variables to allow recursion:
 \edef\@unrecurse{\global\@skip@bove\the\@skip@bove
     \global\@arstheight\the\@arstheight\global\@arstdepth\the\@arstdepth}%
 \let\@otarlinesep\@tarlinesep \global\@skip@bove-\@otarlinesep
 \ifx\@classz\@arrayclassz \let\@tarlinesep\arraylinesep
 \else \let\@tarlinesep\tablinesep \fi
 \divide\@tarlinesep\tw@ % half sep is applied to height & depth
 \let\@seesize\relax \let\@rememsize\relax \@mkpream{#2}%
 \@tempdima\arraystretch\ht\strutbox \@tempdimb\arraystretch\dp\strutbox
```

```
\ifdim\@tarlinesep>\z@ % (need \protect for \multicolumn)
  \def\@rememsize{\protect\@r@m@msize}\let\@seesize\@s@@size
  \advance\@tempdima-\@tarlinesep \advance\@tempdimb-\@tarlinesep
\fi \setbox\@arstrutbox\hbox{% set up smaller strut
   \vrule \@height\@tempdima \@depth\@tempdimb \@width\z@}%
\let\protect\noexpand
\edef\@preamble{\ialign \noexpand\@halignto \bgroup
\unhcopy\@arstrutbox \@preamble \tabskip\z@skip &\@sharp \cr}%
\let\@startpbox\@@startpbox \let\@endpbox\@@endpbox
\if#1t\vtop \else \if#1b\vbox \else \vcenter \fi\fi
\bgroup \let\par\@empty
\global\@arstheight\ht\@arstrutbox \global\@arstdepth\dp\@arstrutbox
\advance\extrarulesep.5\arrayrulewidth
\let\@sharp##\let\protect\relax \lineskip\z@skip \baselineskip\z@skip
\if@RTLtab\hbox\bgroup\beginR\@hboxRconstructtrue\if#1t\vtop \else \vbox \fi\bgroup\fi
\@preamble}
```

150 File tabularx-xetex-bidi.def

```
\ProvidesFile{tabularx-xetex-bidi.def}[2014/11/08 v0.1 bidi adaptations for tabularx packag
\def\TX@endtabularx{%
   \expandafter\expandafter\expandafter
     \TX@find@endtabularxa\csname end\TX@\endcsname
     \endtabularx\TX@\endtabularx\TX@find@endtabularxa
  \expandafter\TX@newcol\expandafter{\tabularxcolumn{\TX@col@width}}%
  \let\verb\TX@verb
  \def\@elt##1{\global\value{##1}\the\value{##1}\relax}%
  \edef\TX@ckpt{\cl@@ckpt}%
  \let\@elt\relax
  \TX@old@table\maxdimen
  \TX@col@width\TX@target
  \global\TX@cols\@ne
  \TX@typeout@
    {\@spaces Table Width\@spaces Column Width\@spaces X Columns}%
  \TX@trial{\def\NC@rewrite@X{%
          \global\advance\TX@cols\@ne\NC@find p{\TX@col@width}}}%
  \loop
    \TX@arith
    \ifTX@
    \TX@trial{}%
  \repeat
  {\let\@footnotetext\TX@ftntext\let\@xfootnotenext\TX@xftntext
   \let\@LTRfootnotetext\TX@LTRftntext\let\@xLTRfootnotenext\TX@xLTRftntext
   \let\@RTLfootnotetext\TX@RTLftntext\let\@xRTLfootnotenext\TX@xRTLftntext
    \csname tabular*\expandafter\endcsname\expandafter\TX@target
      \the\toks@
    \csname endtabular*\endcsname}%
  \global\TX@ftn\expandafter{\expandafter}\the\TX@ftn
  \ifnum0=`{\fi}%
   \expandafter\expandafter\expandafter
   \TX@find@endtabularxbb
    \expandafter\end\expandafter{\TX@}%
    \endtabularx\TX@\endtabularx\TX@find@endtabularxb
}
```

```
\def\TX@trial#1{%
  \setbox\@tempboxa\hbox{%
    #1\relax
  \let\@footnotetext\TX@trial@ftn
  \let\@LTRfootnotetext\TX@trial@ftn
  \let\@RTLfootnotetext\TX@trial@ftn
  \let\TX@vwarn\@empty
   \expandafter\let\expandafter\tabularx\csname tabular*\endcsname
   \expandafter\let\expandafter\endtabularx\csname endtabular*\endcsname
   \def\write{\begingroup
     \def\let{\afterassignment\endgroup\toks@}%
        \afterassignment\let\count@}%
    \hbadness\@M
    \hfuzz\maxdimen
    \let\hbadness\@tempcnta
    \let\hfuzz\@tempdima
    \expandafter\tabular\the\toks@
    \endtabular}%
  \TX@ckpt
  \TX@typeout@{\@spaces
     \expandafter\TX@align
        \the\wd\@tempboxa\space\space\space\space\space\@@
     \expandafter\TX@align
        \the\TX@col@width\space\space\space\space\space\@@
     \@spaces\the\TX@cols}}

\long\def\TX@LTRftntext#1{%
  \edef\@tempa{\the\TX@ftn\noexpand\LTRfootnotetext
                    [\the\csname c@\@mpfn\endcsname]}%
  \global\TX@ftn\expandafter{\@tempa{#1}}}%
\long\def\TX@xLTRftntext[#1]#2{%
  \global\TX@ftn\expandafter{\the\TX@ftn\LTRfootnotetext[#1]{#2}}}

\long\def\TX@RTLftntext#1{%
  \edef\@tempa{\the\TX@ftn\noexpand\RTLfootnotetext
                    [\the\csname c@\@mpfn\endcsname]}%
  \global\TX@ftn\expandafter{\@tempa{#1}}}%
\long\def\TX@xRTLftntext[#1]#2{%
  \global\TX@ftn\expandafter{\the\TX@ftn\RTLfootnotetext[#1]{#2}}}
```

151 File tabulary-xetex-bidi.def

```
\ProvidesFile{tabulary-xetex-bidi.def}[2010/07/25 v0.1 bidi adaptations for tabulary packag
\def\@testpach{\@chclass
 \ifnum \@lastchclass=6 \@ne \@chnum \@ne \else
  \ifnum \@lastchclass=7 5 \else
   \ifnum \@lastchclass=8 \tw@ \else
    \ifnum \@lastchclass=9 \thr@@
   \else \z@
   \ifnum \@lastchclass = 10 \else
   \edef\@nextchar{\expandafter\string\@nextchar}%
   \@chnum
   \if \@nextchar c\z@ \else
```

```
    \if \@nextchar \if@RTLtab r\else l\fi\@ne \else
     \if \@nextchar \if@RTLtab l\else r\fi\tw@ \else
   \if \@nextchar C7 \else
    \if \@nextchar L8 \else
     \if \@nextchar R9 \else
     \if \@nextchar J10 \else
   \z@ \@chclass
   \if\@nextchar |\@ne \else
    \if \@nextchar !6 \else
     \if \@nextchar @7 \else
      \if \@nextchar <8 \else
       \if \@nextchar >9 \else
  10
  \@chnum
  \if \@nextchar m\thr@@\else
   \if \@nextchar p4 \else
    \if \@nextchar b5 \else
   \z@ \@chclass \z@ \@preamerr \z@ \fi \fi \fi \fi\fi \fi \fi\fi \fi
     \fi  \fi  \fi  \fi  \fi  \fi \fi \fi \fi \fi \fi}
```

152 File tc-xetex-xetex-bidi.def

```
\ProvidesFile{tc-xetex-xetex-bidi.def}[2014/07/08 v0.1 bidi adaptations for Clipping driver
\def\@cliptoboxdim#1{%
    \setbox#1=\hbox{%
        \Gin@defaultbp\WIDTH{\wd#1}%
        \Gin@defaultbp\DEPTH{\dp#1}%
        \@tempdima\ht#1%
        \advance\@tempdima\dp#1%
        \Gin@defaultbp\TOTALHEIGHT{\@tempdima}%
        \beginL\special{pdf:bcontent }%
        \special{%
            pdf:literal direct
                0 -\DEPTH\space \WIDTH\space \TOTALHEIGHT\space re
        }%
        \special{pdf:literal direct W }%
        \special{pdf:literal direct n }%
            \if@RTL\beginR\fi\box#1\if@RTL\endR\fi%
        \special{pdf:econtent }\endL%
    }%
}
```

153 File tcolorbox-xetex-bidi.def

```
\ProvidesFile{tcolorbox-xetex-bidi.def}[2018/11/11 v0.2 bidi adaptations for tcolorbox pack
\let\endtcb@lrbox=\endminipage
\let\endtcb@savebox=\endtcb@lrbox

\bidi@patchcmd{\tcb@vbox}{%
  \let\@footnotetext\@mpfootnotetext%
}{%
  \let\@footnotetext\@mpfootnotetext%
  \let\@LTRfootnotetext\@mpLTRfootnotetext%
  \let\@RTLfootnotetext\@mpRTLfootnotetext%
```

```
}{}{}

\bidi@patchcmd{\endtcb@vbox}{%
    \footnoterule%
}{%
    \bidi@mpfootnoterule%
}{}{}
\bidi@apptocmd\tcb@@icolorbox{%
  \@bidi@list@minipage@parboxfalse
}{}{}
```

154 File thmbox-xetex-bidi.def

```
\ProvidesFile{thmbox-xetex-bidi.def}[2025/09/04 v0.1 bidi adaptations for thmbox package fo
\renewenvironment{thmbox}[2][]{%
  \parskip\z@%
  \setkeys{thmbox}{#1}%
  \ifx\thmbox@style S\else\ifx\thmbox@style M\else\ifx\thmbox@style L\else%
    \PackageWarning{thmbox}{\thmbox@style\ is not a valid style for
      \string\thmbox, using M}%
    \let\thmbox@style=M%
  \fi\fi\fi%
  \thmbox@head{{#2}}\nobreak\relax%
  \thmbox@dim=\hsize%
  \advance\thmbox@dim-\leftskip%
  \advance\thmbox@dim-\rightskip%
  \setbox\thmbox@box=\vbox\bgroup%
    \if@RTL
      \@hboxRconstructtrue
    \fi
    \hsize=\thmbox@dim%
    \advance\hsize -\thmbox@leftmargin%
    \advance\hsize -\thmbox@rightmargin%
    \textwidth=\hsize%
    \linewidth=\hsize%
    \vskip\thmbox@vskip%
    \begingroup}{\endgroup%
    \vskip\thmbox@vskip%
  \egroup%
  \thmbox@start%
  \ifx\thmbox@style S\else\thmbox@tail\fi%
  \@endparenv}
```

155 File titlesec-xetex-bidi.def

```
\ProvidesFile{titlesec-xetex-bidi.def}[2010/07/25 v0.1 bidi adaptations for titlesec packag
\renewcommand\filright{%
  \gdef\ttl@filleft##1{\hskip##1}%
  \gdef\ttl@filright##1{\hfill}%
  \let\\\@centercr
  \advance\rightskip\z@ \@plus 1fil
\parfillskip\z@}
\def\ttlh@hang#1#2#3#4#5#6#7#8{%
  \gdef\ttl@makeline##1{\ttl@calc\hspace{#6}##1\ttl@calc\hspace{#7}}%
```

```
  \setlength\leftskip{#6}%
  \setlength\rightskip{#7}%
  \interlinepenalty\@M
  \ttl@changecentercr
  \ttl@beginlongest
  #1{\ifhmode\ttl@hmode@error\fi
     \ttl@glcmds
     \parindent\z@
     \leavevmode
     \begingroup
       \ifttl@label
          \sbox\z@{#2\strut\ttl@calc\hspace{#3}}%
          \if@RTL\advance\rightskip\wd\z@\else\advance\leftskip\wd\z@\fi
          \llap{\box\z@}%
       \fi
       #4{#8}%
       \kern\z@\strut\@@par
     \endgroup
     \nobreak\ttl@midlongest#5\@@par}%
  \ttl@endlongest}
```

156 File titletoc-xetex-bidi.def

```
\ProvidesFile{titletoc-xetex-bidi.def}[2013/04/10 v0.2 bidi adaptations for titletoc packag
\renewcommand\filright{%
  \gdef\ttl@filleft##1{\hskip##1}%
  \gdef\ttl@filright##1{\hfill}%
  \let\\\@centercr
  \advance\rightskip\z@ \@plus 1fil
\parfillskip\z@}
\renewcommand\contentspush[1]{%
  \sbox\z@{#1}%
  \xdef\ttl@b{\advance\if@RTL\rightskip\else\leftskip\fi\the\wd\z@}%
  \aftergroup\ttl@b
  \leavevmode\llap{\box\z@}}
\def\ttl@outnoblock#1#2#3{%
  \begingroup
  \ifnum\ttl@b>\ttl@a
    \nobreak
  \else\ifnum\ttl@b<\ttl@a
    \addpenalty{\@secpenalty}%
  \else
    \addpenalty{\z@}%
  \fi\fi
  \ttl@contentsstretch
  \nobreak
  \ifcase#1\relax\else\interlinepenalty\@M\fi
  \parindent\z@
  \ifx\@nil#2%
    \PackageError{titletoc}{Unimplemented}%
     {The optional argument is currently mandatory}%
  \else
    \if@RTL\setlength\rightskip{#2}\else
    \setlength\leftskip{#2}\fi%
```

```
  \fi
  \if@RTL\setlength\leftskip{\@pnumwidth}\else\setlength\rightskip{\@pnumwidth}\fi%
  \let\contentsmargin\ttl@margin
  \def\ttl@makeline##1{##1}%
  #3%
  \addtolength{\parfillskip}{-\ttl@corr}%
  \if@RTL\addtolength{\leftskip}{\ttl@corr}\else\addtolength{\rightskip}{\ttl@corr}\fi%
  \let\ttl@leaders\leaders}
\renewcommand\ttl@margin[2][\z@]{%
  \def\ttl@corr{#1}%
  \advance\if@RTL\leftskip\else\rightskip\fi-\@pnumwidth\relax
  \advance\if@RTL\leftskip\else\rightskip\fi#2\relax
  \def\@pnumwidth{#2}}
\let\ttl@savel@part\l@part
\def\l@part{\ttl@lselect{part}}

\let\ttl@savel@chapter\l@chapter
\def\l@chapter{\ttl@lselect{chapter}}
```

157 File tocbibind-xetex-bidi.def

```
\ProvidesFile{tocbibind-xetex-bidi.def}[2025/01/03 v0.5 bidi adaptations for tocbibind pack
\IfClassLoadedT{memoir}{\endinput}
\if@dotocbib
  \ApplyPatchIfPackageLoadedF{natbib}{% natbib not loaded
    \renewcommand{\bibsection}{\t@cb@bchapsec}
    \renewenvironment{thebibliography}[1]{%
      \bibsection
      \begin{thebibitemlist}{#1}}{\end{thebibitemlist}}}
  \renewenvironment{thebibitemlist}[1]{
    \if@RTL\if@LTRbibitems\@RTLfalse\else\fi\else\if@RTLbibitems\@RTLtrue\else\fi\fi
    \bidi@@thebibliography@font@hook%
    \list{\@biblabel{\@arabic\c@enumiv}}%
         {\settowidth\labelwidth{\@biblabel{#1}}%
          \leftmargin\labelwidth
          \advance\leftmargin\labelsep
          \@openbib@code
          \usecounter{enumiv}%
          \let\p@enumiv\@empty
          \renewcommand\theenumiv{\@arabic\c@enumiv}}%
    \sloppy
    \clubpenalty4000
    \@clubpenalty \clubpenalty
    \widowpenalty4000%
    \sfcode`\.\@m}
   {\def\@noitemerr
     {\@latex@warning{Empty `thebibliography' environment}}%
     \endlist}

\ApplyPatchCodeToPackage{chapterbib}{%
  \@ifpackagewith{chapterbib}{sectionbib}%
    {\renewcommand{\sectionbib}[2]{}}%
    {}%
 }
```

```
22641
22642 \fi
22643 \if@inltxdoc\else
22644   \renewenvironment{theindex}%
22645     {\if@twocolumn
22646        \@restonecolfalse
22647      \else
22648        \@restonecoltrue
22649      \fi
22650      \if@bibchapter
22651         \if@donumindex
22652           \refstepcounter{chapter}
22653           \twocolumn[\vspace*{2\topskip}%
22654                      \@makechapterhead{\indexname}]%
22655           \addcontentsline{toc}{chapter}{\protect\numberline{\thechapter}\indexname}
22656           \chaptermark{\indexname}
22657         \else
22658           \if@dotocind
22659             \twocolumn[\vspace*{2\topskip}%
22660                        \@makeschapterhead{\indexname}]%
22661             \prw@mkboth{\indexname}
22662             \addcontentsline{toc}{chapter}{\indexname}
22663           \else
22664             \twocolumn[\vspace*{2\topskip}%
22665                        \@makeschapterhead{\indexname}]%
22666             \prw@mkboth{\indexname}
22667           \fi
22668         \fi
22669      \else
22670         \if@donumindex
22671           \twocolumn[\vspace*{-1.5\topskip}%
22672                      \@nameuse{\@tocextra}{\indexname}]%
22673           \csname \@tocextra mark\endcsname{\indexname}
22674         \else
22675           \if@dotocind
22676             \twocolumn[\vspace*{-1.5\topskip}%
22677                        \toc@headstar{\@tocextra}{\indexname}]%
22678             \prw@mkboth{\indexname}
22679             \addcontentsline{toc}{\@tocextra}{\indexname}
22680           \else
22681             \twocolumn[\vspace*{-1.5\topskip}%
22682                        \toc@headstar{\@tocextra}{\indexname}]%
22683             \prw@mkboth{\indexname}
22684           \fi
22685         \fi
22686      \fi
22687    \thispagestyle{plain}\parindent\z@
22688    \parskip\z@ \@plus .3\p@\relax
22689    \let\item\@idxitem}
22690    {\if@restonecol\onecolumn\else\clearpage\fi}
22691 \fi
```

158 File tocloft-xetex-bidi.def

```
\ProvidesFile{tocloft-xetex-bidi.def}[2025/01/03 v0.4 bidi adaptations for tocloft package
\IfClassLoadedT{memoir}{\endinput}
\renewcommand{\cftpnumalign}{\if@RTL l\else r\fi}
\let\cftdot\@SepMark
\if@cfthaspart
\renewcommand*{\l@part}[2]{
  \@cftdopartfalse
  \ifnum \c@tocdepth >-2\relax
    \if@cfthaschapter
      \@cftdoparttrue
    \fi
    \ifnum \c@tocdepth >\m@ne
      \if@cfthaschapter\else
        \@cftdoparttrue
      \fi
    \fi
  \fi
  \if@cftdopart
    \if@cfthaschapter
      \addpenalty{-\@highpenalty}
    \else
      \addpenalty\@secpenalty
    \fi
    \addvspace{\cftbeforepartskip}
    \begingroup
      {\if@RTL\rightskip\else\leftskip\fi \cftpartindent\relax
       \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
       \parfillskip -\if@RTL\leftskip\else\rightskip\fi
       \parindent \cftpartindent\relax\@afterindenttrue
       \interlinepenalty\@M
       \leavevmode
       \@tempdima \cftpartnumwidth\relax
       \let\@cftbsnum \cftpartpresnum
       \let\@cftasnum \cftpartaftersnum
       \let\@cftasnumb \cftpartaftersnumb
       \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\r
       {\cftpartfont \cftpartpresnum #1}
       \cftpartfillnum{#2}}
      \nobreak
      \if@cfthaschapter
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}
      \else
        \if@compatibility
          \global\@nobreaktrue
          \everypar{\global\@nobreakfalse\everypar{}}
        \fi
      \fi
    \endgroup
  \fi}
\fi
\if@cfthaschapter
\renewcommand*{\l@chapter}[2]{
  \ifnum \c@tocdepth >\m@ne
```

```
    \addpenalty{-\@highpenalty}
    \vskip \cftbeforechapskip
    {\if@RTL\rightskip\else\leftskip\fi \cftchapindent\relax
     \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
     \parfillskip -\if@RTL\leftskip\else\rightskip\fi
     \parindent \cftchapindent\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima \cftchapnumwidth\relax
     \let\@cftbsnum \cftchappresnum
     \let\@cftasnum \cftchapaftersnum
     \let\@cftasnumb \cftchapaftersnumb
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\cftchapfont #1}\nobreak
     \cftchapfillnum{#2}}
  \fi}
\fi
\renewcommand*{\l@section}[2]{%
  \ifnum \c@tocdepth >\z@
    \if@cfthaschapter
      \vskip \cftbeforesecskip
    \else
      \addpenalty\@secpenalty
      \addvspace{\cftbeforesecskip}
    \fi
    {\if@RTL\rightskip\else\leftskip\fi \cftsecindent\relax
     \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
     \parfillskip -\if@RTL\leftskip\else\rightskip\fi
     \parindent \cftsecindent\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima \cftsecnumwidth\relax
     \let\@cftbsnum \cftsecpresnum
     \let\@cftasnum \cftsecaftersnum
     \let\@cftasnumb \cftsecaftersnumb
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\cftsecfont #1}\nobreak
     \cftsecfillnum{#2}}
  \fi}
\renewcommand*{\l@subsection}[2]{%
  \ifnum \c@tocdepth >\@ne
    \vskip \cftbeforesubsecskip
    {\if@RTL\rightskip\else\leftskip\fi \cftsubsecindent\relax
     \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
     \parfillskip -\if@RTL\leftskip\else\rightskip\fi
     \parindent \cftsubsecindent\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima \cftsubsecnumwidth\relax
     \let\@cftbsnum \cftsubsecpresnum
     \let\@cftasnum \cftsubsecaftersnum
     \let\@cftasnumb \cftsubsecaftersnumb
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\cftsubsecfont #1}\nobreak
```

```
22800     \cftsubsecfillnum{#2}}
22801   \fi}
22802 \renewcommand*{\l@subsubsection}[2]{%
22803   \ifnum \c@tocdepth >\tw@
22804     \vskip \cftbeforesubsubsecskip
22805     {\if@RTL\rightskip\else\leftskip\fi \cftsubsubsecindent\relax
22806      \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
22807      \parfillskip -\if@RTL\leftskip\else\rightskip\fi
22808      \parindent \cftsubsubsecindent\relax\@afterindenttrue
22809      \interlinepenalty\@M
22810      \leavevmode
22811      \@tempdima \cftsubsubsecnumwidth\relax
22812      \let\@cftbsnum \cftsubsubsecpresnum
22813      \let\@cftasnum \cftsubsubsecaftersnum
22814      \let\@cftasnumb \cftsubsubsecaftersnumb
22815      \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
22816      {\cftsubsubsecfont #1}\nobreak
22817      \cftsubsubsecfillnum{#2}}
22818   \fi}
22819 \renewcommand*{\l@paragraph}[2]{%
22820   \ifnum \c@tocdepth >3\relax
22821     \vskip \cftbeforeparaskip
22822     {\if@RTL\rightskip\else\leftskip\fi \cftparaindent\relax
22823      \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
22824      \parfillskip -\if@RTL\leftskip\else\rightskip\fi
22825      \parindent \cftparaindent\relax\@afterindenttrue
22826      \interlinepenalty\@M
22827      \leavevmode
22828      \@tempdima \cftparanumwidth\relax
22829      \let\@cftbsnum \cftparapresnum
22830      \let\@cftasnum \cftparaaftersnum
22831      \let\@cftasnumb \cftparaaftersnumb
22832      \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
22833      {\cftparafont #1}\nobreak
22834      \cftparafillnum{#2}}
22835   \fi}
22836 \renewcommand*{\l@subparagraph}[2]{%
22837   \ifnum \c@tocdepth >4\relax
22838     \vskip \cftbeforesubparaskip
22839     {\if@RTL\rightskip\else\leftskip\fi \cftsubparaindent\relax
22840      \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
22841      \parfillskip -\if@RTL\leftskip\else\rightskip\fi
22842      \parindent \cftsubparaindent\relax\@afterindenttrue
22843      \interlinepenalty\@M
22844      \leavevmode
22845      \@tempdima \cftsubparanumwidth\relax
22846      \let\@cftbsnum \cftsubparapresnum
22847      \let\@cftasnum \cftsubparaaftersnum
22848      \let\@cftasnumb \cftsubparaaftersnumb
22849      \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
22850      {\cftsubparafont #1}\nobreak
22851      \cftsubparafillnum{#2}}
22852   \fi}
22853 \renewcommand*{\l@figure}[2]{%
```

```
  \ifnum \c@lofdepth >\z@
    \vskip \cftbeforefigskip
    {\if@RTL\rightskip\else\leftskip\fi \cftfigindent\relax
     \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
     \parfillskip -\if@RTL\leftskip\else\rightskip\fi
     \parindent \cftfigindent\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima \cftfignumwidth\relax
     \let\@cftbsnum \cftfigpresnum
     \let\@cftasnum \cftfigaftersnum
     \let\@cftasnumb \cftfigaftersnumb
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\cftfigfont #1}\nobreak
     \cftfigfillnum{#2}}
   \fi
  }
\renewcommand*{\l@table}[2]{%
  \ifnum\c@lotdepth >\z@
    \vskip \cftbeforetabskip
    {\if@RTL\rightskip\else\leftskip\fi \cfttabindent\relax
     \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
     \parfillskip -\if@RTL\leftskip\else\rightskip\fi
     \parindent \cfttabindent\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima \cfttabnumwidth\relax
     \let\@cftbsnum \cfttabpresnum
     \let\@cftasnum \cfttabaftersnum
     \let\@cftasnumb \cfttabaftersnumb
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\cfttabfont #1}\nobreak
     \cfttabfillnum{#2}}
   \fi
  }
\renewcommand{\@cftl@subfig}{
\renewcommand*{\l@subfigure}[2]{%
  \ifnum \c@lofdepth > \toclevel@subfigure
    \vskip \cftbeforesubfigskip
    {\if@RTL\rightskip\else\leftskip\fi \cftsubfigindent\relax
     \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
     \parfillskip -\if@RTL\leftskip\else\rightskip\fi
     \parindent \cftsubfigindent\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima \cftsubfignumwidth\relax
     \let\@cftbsnum \cftsubfigpresnum
     \let\@cftasnum \cftsubfigaftersnum
     \let\@cftasnumb \cftsubfigaftersnumb
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\cftsubfigfont ##1}\nobreak
     \cftsubfigfillnum{##2}}
  \fi
  }
```

```
}
\renewcommand{\@cftl@subtab}{
\renewcommand*{\l@subtable}[2]{%
  \ifnum \c@lotdepth > \toclevel@subtable
    \vskip \cftbeforesubtabskip
    {\if@RTL\rightskip\else\leftskip\fi \cftsubtabindent\relax
     \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
     \parfillskip -\if@RTL\leftskip\else\rightskip\fi
     \parindent \cftsubtabindent\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima \cftsubtabnumwidth\relax
     \let\@cftbsnum \cftsubtabpresnum
     \let\@cftasnum \cftsubtabaftersnum
     \let\@cftasnumb \cftsubtabaftersnumb
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {\cftsubtabfont ##1}\nobreak
     \cftsubtabfillnum{##2}}
  \fi
  }
}
\renewcommand{\newlistentry}[4][\@empty]{%
  \@ifundefined{c@#2}{%    check & set the counter
    \ifx \@empty#1\relax
      \newcounter{#2}
    \else
      \@ifundefined{c@#1}{\PackageWarning{tocloft}%
                          {#1 has no counter for use as a `within'}
        \newcounter{#2}}%
      {\newcounter{#2}[#1]%
       \expandafter\edef\csname the#2\endcsname{%
         \expandafter\noexpand\csname the#1\endcsname\@SepMark\noexpand\arabic{#2}}}
    \fi
    \setcounter{#2}{0}
  }
  {\PackageError{tocloft}{#2 has been previously defined}{\@eha}}

  \@namedef{l@#2}##1##2{%
    \ifnum \@nameuse{c@#3depth} > #4\relax
      \vskip \@nameuse{cftbefore#2skip}
      {\if@RTL\rightskip\else\leftskip\fi \@nameuse{cft#2indent}\relax
       \if@RTL\leftskip\else\rightskip\fi \@tocrmarg
       \parfillskip -\if@RTL\leftskip\else\rightskip\fi
       \parindent \@nameuse{cft#2indent}\relax\@afterindenttrue
       \interlinepenalty\@M
       \leavevmode
       \@tempdima \@nameuse{cft#2numwidth}\relax
       \expandafter\let\expandafter\@cftbsnum\csname cft#2presnum\endcsname
       \expandafter\let\expandafter\@cftasnum\csname cft#2aftersnum\endcsname
       \expandafter\let\expandafter\@cftasnumb\csname cft#2aftersnumb\endcsname
       \advance\if@RTL\rightskip\else\leftskip\fi\@tempdima \null\nobreak\hskip -\if@RTL\ri
       {\@nameuse{cft#2font}##1}\nobreak
       \@nameuse{cft#2fillnum}{##2}}
    \fi
```

```
  }  % end of \l@#2
\expandafter\newlength\csname cftbefore#2skip\endcsname
  \setlength{\@nameuse{cftbefore#2skip}}{\z@ \@plus .2\p@}
\expandafter\newlength\csname cft#2indent\endcsname
\expandafter\newlength\csname cft#2numwidth\endcsname
\ifcase #4\relax  % 0
  \setlength{\@nameuse{cft#2indent}}{0em}
  \setlength{\@nameuse{cft#2numwidth}}{1.5em}
\or               % 1
  \setlength{\@nameuse{cft#2indent}}{1.5em}
  \setlength{\@nameuse{cft#2numwidth}}{2.3em}
\or               % 2
  \setlength{\@nameuse{cft#2indent}}{3.8em}
  \setlength{\@nameuse{cft#2numwidth}}{3.2em}
\or               % 3
  \setlength{\@nameuse{cft#2indent}}{7.0em}
  \setlength{\@nameuse{cft#2numwidth}}{4.1em}
\else             % anything else
  \setlength{\@nameuse{cft#2indent}}{10.0em}
  \setlength{\@nameuse{cft#2numwidth}}{5.0em}
\fi
\@namedef{cft#2font}{\normalfont}
\@namedef{cft#2presnum}{}
\@namedef{cft#2aftersnum}{}
\@namedef{cft#2aftersnumb}{}
\@namedef{cft#2dotsep}{\cftdotsep}
\@namedef{cft#2leader}{\normalfont\cftdotfill{\@nameuse{cft#2dotsep}}}
\@namedef{cft#2pagefont}{\normalfont}
\@namedef{cft#2afterpnum}{}
\@namedef{toclevel@#2}{#4}
\@namedef{cft#2fillnum}##1{%
  {\@nameuse{cft#2leader}}\nobreak
  \hb@xt@\@pnumwidth{\hfil\@nameuse{cft#2pagefont}##1}\@nameuse{cft#2afterpnum}\par}
} % end \newlistentry
\renewcommand{\cftchapterprecistoc}[1]{\addtocontents{toc}{%
  {\if@RTL\rightskip\else\leftskip\fi \cftchapindent\relax
   \advance\if@RTL\righskip\else\leftskip\fi \cftchapnumwidth\relax
   \if@RTL\leftskip\else\rightskip\fi \@tocrmarg\relax
   \textit{#1}\protect\par}}}
```

159 File tocbasic-xetex-bidi.def

```
\ProvidesFile{tocbasic-xetex-bidi.def}[2022/06/15 v0.5 bidi adaptations for tocbasic packag
\bidi@undef\scr@dte@def@l@undottedtocline
\bidi@undef\scr@dte@undottedtocline@init
\DeclareTOCEntryStyle{undottedtocline}[{%
  \DefineTOCEntryLengthOption{indent}%
    {scr@tso@}{@indent}{entry indent}%
  \DefineTOCEntryLengthOption{numwidth}%
    {scr@tso@}{@numwidth}{entry number width}%
  \@ifundefined{#1tocdepth}{%
    \Ifstr{#1}{part}{\@namedef{#1tocdepth}{-1}}{%
      \Ifstr{#1}{chapter}{\@namedef{#1tocdepth}{0}}{%
```

```
        \Ifstr{#1}{section}{\@namedef{#1tocdepth}{1}}{%
          \Ifstr{#1}{subsection}{\@namedef{#1tocdepth}{2}}{%
            \Ifstr{#1}{subsubsection}{\@namedef{#1tocdepth}{3}}{%
              \Ifstr{#1}{paragraph}{\@namedef{#1tocdepth}{4}}{%
                \Ifstr{#1}{subparagraph}{\@namedef{#1tocdepth}{5}}{%
                  \Ifstr{#1}{figure}{\@namedef{#1tocdepth}{1}}{%
                    \Ifstr{#1}{table}{\@namedef{#1tocdepth}{1}}{%
                      \expandafter\let\csname #1tocdepth\expandafter\endcsname
                      \csname #1numdepth\endcsname
                    }%
                  }%
                }%
              }%
            }%
          }%
        }%
      }%
    }%
  }{}%
  \@ifundefined{scr@tso@#1@indent}{%
    \@ifundefined{scr@#1@tocindent}{%
      \Ifstr{#1}{figure}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
        \Ifstr{#1}{table}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
          \Ifstr{#1}{part}{\@namedef{scr@tso@#1@indent}{0em}}{%
            \Ifstr{#1}{chapter}{\@namedef{scr@tso@#1@indent}{0em}}{%
              \scr@ifundefinedorrelax{l@chapter}{%
                \Ifstr{#1}{section}{\@namedef{scr@tso@#1@indent}{0pt}}{%
                  \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
                    \Ifstr{#1}{subsubsection}{%
                      \@namedef{scr@tso@#1@indent}{3.8em}%
                    }{%
                      \Ifstr{#1}{paragraph}{%
                        \@namedef{scr@tso@#1@indent}{7em}%
                      }{%
                        \Ifstr{#1}{subparagraph}{%
                          \@namedef{scr@tso@#1@indent}{10em}%
                        }{%
                        }%
                      }%
                    }%
                  }%
                }%
              }{%
                \Ifstr{#1}{section}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
                  \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@indent}{3.8em}}{%
                    \Ifstr{#1}{subsubsection}{%
                      \@namedef{scr@tso@#1@indent}{7.0em}%
                    }{%
                      \Ifstr{#1}{paragraph}{%
                        \@namedef{scr@tso@#1@indent}{10em}%
                      }{%
                        \Ifstr{#1}{subparagraph}{%
                          \@namedef{scr@tso@#1@indent}{12em}%
                        }{%
```

```
                        }%
                      }%
                    }%
                  }%
                }%
              }%
            }%
          }%
        }%
      }%
    }{%
      \@namedef{scr@tso@#1@indent}{\@nameuse{scr@#1@tocindent}}%
    }%
  }{}%
  \@ifundefined{scr@tso@#1@numwidth}{%
    \@ifundefined{scr@#1@tocnumwidth}{%
      \Ifstr{#1}{figure}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
        \Ifstr{#1}{table}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
          \Ifstr{#1}{chapter}{\@namedef{scr@tso@#1@numwidth}{1.5em}}{%
            \scr@ifundefinedorrelax{chapter}{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@numwidth}{1.5em}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@numwidth}{3.2em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@numwidth}{4.1em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@numwidth}{5m}%
                      }{%
                      }%
                    }%
                  }%
                }%
              }%
            }{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@numwidth}{3.2em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@numwidth}{3.1em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@numwidth}{5em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@numwidth}{6em}%
                      }{%
                      }%
                    }%
                  }%
                }%
              }%
            }%
```

```
          }%
        }%
      }%
    }{%
      \@namedef{scr@tso@#1@numwidth}{\@nameuse{scr@#1@tocnumwidth}}%
    }%
  }{}%
}]{%
  \ifnum \c@tocdepth >\numexpr \@nameuse{#1tocdepth}-\@ne\relax
    \ifnum \@nameuse{#1tocdepth}<\@ne
      \scr@ifundefinedorrelax{chapter}{%
        \addpenalty\@secpenalty
        \addvspace{1.0em \@plus\p@}%
      }{%
        \addpenalty{-\@highpenalty}%
        \vskip 1.0em \@plus\p@
      }%
    \else
      \addpenalty\@secpenalty
      \addvspace{1.0em \@plus\p@}%
    \fi
    \setlength\@tempdima{\@nameuse{scr@tso@#1@numwidth}}%
    \begingroup
      \parindent \z@ \bidi@rightskip \@pnumwidth
      \parfillskip -\@pnumwidth
      \leavevmode
      \bfseries
      \advance\bidi@leftskip\@tempdima
      \Iftocfeature{\@currext}{noindent}{%
        \hskip -\bidi@leftskip
      }{%
        \advance\bidi@leftskip\@nameuse{scr@tso@#1@indent}%
        \hskip -\dimexpr \bidi@leftskip-\@nameuse{scr@tso@#1@indent}\relax
      }%
      ##1%
      \nobreak
      \hfil \nobreak\hb@xt@\@pnumwidth{\hss ##2}%
      \par
      \penalty\@highpenalty
    \endgroup
  \fi
}

\bidi@undef\scr@dte@def@l@largetocline
\bidi@undef\scr@dte@largetocline@init
\DeclareTOCEntryStyle{largetocline}[{%
  \DefineTOCEntryLengthOption{indent}%
    {scr@tso@}{@indent}{entry indent}%
  \@ifundefined{#1tocdepth}{%
    \Ifstr{#1}{part}{\@namedef{#1tocdepth}{-1}}{%
      \Ifstr{#1}{chapter}{\@namedef{#1tocdepth}{0}}{%
        \Ifstr{#1}{section}{\@namedef{#1tocdepth}{1}}{%
          \Ifstr{#1}{subsection}{\@namedef{#1tocdepth}{2}}{%
            \Ifstr{#1}{subsubsection}{\@namedef{#1tocdepth}{3}}{%
```

```
            \Ifstr{#1}{paragraph}{\@namedef{#1tocdepth}{4}}{%
              \Ifstr{#1}{subparagraph}{\@namedef{#1tocdepth}{5}}{%
                \Ifstr{#1}{figure}{\@namedef{#1tocdepth}{1}}{%
                  \Ifstr{#1}{table}{\@namedef{#1tocdepth}{1}}{%
                    \expandafter\let\csname #1tocdepth\expandafter\endcsname
                    \csname #1numdepth\endcsname
                  }%
                }%
              }%
            }%
          }%
        }%
      }%
    }%
  }%
}{}%
\@ifundefined{scr@tso@#1@indent}{%
  \@ifundefined{scr@#1@tocindent}{%
    \Ifstr{#1}{figure}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
      \Ifstr{#1}{table}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
        \Ifstr{#1}{part}{\@namedef{scr@tso@#1@indent}{0em}}{%
          \Ifstr{#1}{chapter}{\@namedef{scr@tso@#1@indent}{0em}}{%
            \scr@ifundefinedorrelax{l@chapter}{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@indent}{0pt}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@indent}{3.8em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@indent}{7em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@indent}{10em}%
                      }{%
                      }%
                    }%
                  }%
                }%
              }%
            }{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@indent}{3.8em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@indent}{7.0em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@indent}{10em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@indent}{12em}%
                      }{%
                      }%
                    }%
                  }%
```

```
                  }%
                }%
              }%
            }%
          }%
        }%
      }%
    }{%
      \@namedef{scr@tso@#1@indent}{\@nameuse{scr@#1@tocindent}}%
    }%
  }{}%
}]{%
  \ifnum \c@tocdepth >\numexpr \@nameuse{#1tocdepth}-\@ne\relax
    \ifnum \@nameuse{#1tocdepth}<\@ne
      \scr@ifundefinedorrelax{chapter}{%
        \addpenalty\@secpenalty
        \addvspace{2.25em \@plus\p@}%
      }{%
        \addpenalty{-\@highpenalty}%
        \addvspace{2.25em \@plus\p@}%
      }%
    \else
      \addpenalty\@secpenalty
      \addvspace{2.25em \@plus\p@}%
    \fi
    \setlength\@tempdima{3em}%
    \begingroup
      \parindent \z@ \bidi@rightskip \@pnumwidth
      \parfillskip -\@pnumwidth
      \leavevmode
      \large
      \bfseries
      \Iftocfeature{\@currext}{noindent}{%
      }{%
        \advance\bidi@leftskip\@nameuse{scr@tso@#1@indent}%
      }%
      ##1%
      \hfil \nobreak\hb@xt@\@pnumwidth{\hss ##2}%
      \par
      \nobreak
      \ifnum 0=
        \scr@ifundefinedorrelax{chapter}{\if@compatibility 1\else 0\fi}{1}\relax
        \global\@nobreaktrue
        \everypar{\global\@nobreakfalse\everypar{}}%
      \fi
    \endgroup
  \fi
}

\renewcommand*{\scr@dte@tocline}[3]{%
  \ifnum \@nameuse{#1tocdepth}>\c@tocdepth
  \else
    \tocbasic@DependOnPenaltyAndTOCLevel{#1}%
    \addvspace{\@nameuse{scr@tso@#1@beforeskip}}\relax
```

```
\@nameuse{Ifscr@tso@#1@dynindent}{%
  \expandafter\ifx\csname scr@tso@#1@indentfollows\endcsname\@empty
    \PackageWarning{tocbasic}{`dynindent' for `#1' not available}%
  \else
    \edef\reserved@a{\@nameuse{scr@tso@#1@indentfollows}}%
    \@for \reserved@a:=\reserved@a\do {%
      \scr@trim@spaces\reserved@a
      \ifx\reserved@a\@empty\else
        \scr@ifundefinedorrelax{\reserved@a tocdepth}{%
        }{%
          \ifnum \@nameuse{\reserved@a tocdepth}<\@nameuse{#1tocdepth}%
            \@tempdima\@nameuse{scr@tso@\reserved@a @indent}\relax
            \@nameuse{Ifscr@tso@\reserved@a @dynnumwidth}{%
              \scr@ifundefinedorrelax
              {scr@dte@\reserved@a @lastmaxnumwidth}{%
                \advance\@tempdima
                \@nameuse{scr@tso@\reserved@a @numwidth}\relax
              }{%
                \advance\@tempdima
                \@nameuse{scr@dte@\reserved@a @lastmaxnumwidth}\relax
              }%
            }{%
              \advance\@tempdima
              \@nameuse{scr@tso@\reserved@a @numwidth}\relax
            }%
            \ifdim \@tempdima>\@nameuse{scr@tso@#1@indent}\relax
              \expandafter\edef\csname scr@tso@#1@indent\endcsname
              {\the\@tempdima}%
            \fi
          \fi
        }%
      \fi
    }%
  \fi
}{}%
{%
  \Iftocfeature{\@currext}{noindent}{%
    \bidi@leftskip \z@
  }{%
    \bidi@leftskip \@nameuse{scr@tso@#1@indent}\relax
  }%
  \bidi@rightskip \@nameuse{scr@tso@#1@rightindent}\relax
  \parfillskip -\bidi@rightskip
  \@nameuse{Ifscr@tso@#1@raggedpage}{%
    \addtolength{\parfillskip}{\z@ \@plus 1fil}%
  }{}%
  \Iftocfeature{\@currext}{noindent}{%
    \parindent \z@
  }{%
    \parindent \@nameuse{scr@tso@#1@indent}\relax
  }%
  \@afterindenttrue
  \interlinepenalty\@M
  \expandafter\ifx\csname ragged#1entry\endcsname\raggedright
```

```
23337         \addtolength\bidi@rightskip\@flushglue
23338       \else
23339         \def\reserved@a{\raggedright}%
23340         \expandafter\ifx\csname ragged#1entry\endcsname\reserved@a
23341           \addtolength\bidi@rightskip\@flushglue
23342         \else
23343           \renewcommand\reserved@a{\raggedright}%
23344           \expandafter\ifx\csname ragged#1entry\endcsname\reserved@a
23345             \addtolength\bidi@rightskip\@flushglue
23346           \fi
23347         \fi
23348       \fi
23349       \leavevmode
23350       \@tempdima \@nameuse{scr@tso@#1@numwidth}\relax
23351       \@nameuse{Ifscr@tso@#1@dynnumwidth}{%
23352         \scr@ifundefinedorrelax{scr@dte@#1@lastmaxnumwidth}{}{%
23353           \ifdim \@nameuse{scr@dte@#1@lastmaxnumwidth}>\@tempdima
23354             \@tempdima\@nameuse{scr@dte@#1@lastmaxnumwidth}\relax
23355           \fi
23356         }%
23357       }{}%
23358       \advance\bidi@leftskip \@tempdima
23359       \null\nobreak\hskip -\bidi@leftskip
23360       {%
23361         \usetocbasicnumberline
23362         \let\scr@dte@numberline@box\numberline@box
23363         \def\numberline@box##1{%
23364           \sbox\scr@dte@tocline@numbox{\@nameuse{scr@tso@#1@numberformat}{##1}}%
23365           \global\scr@dte@tocline@numberwidth
23366           \dimexpr\wd\scr@dte@tocline@numbox+\@nameuse{scr@tso@#1@numsep}\relax
23367           \relax
23368           \ifdim \scr@dte@tocline@numberwidth
23369                 >\@nameuse{scr@dte@#1@maxnumwidth}\relax
23370             \global\@nameuse{scr@dte@#1@maxnumwidth}\scr@dte@tocline@numberwidth
23371           \fi
23372           \@nameuse{Ifscr@tso@#1@dynnumwidth}{}{%
23373             \ifdim \scr@dte@tocline@numberwidth
23374                   >\dimexpr \@nameuse{scr@tso@#1@numwidth}%
23375                             +\@nameuse{scr@tso@#1@numsep}\relax\relax
23376               \PackageWarning{tocbasic}{%
23377                 number width of #1 toc entries should be
23378                 increased!\MessageBreak
23379                 Currently used number width =
23380                 \the\wd\scr@dte@tocline@numbox,\MessageBreak
23381                 Wanted number separation
23382                 \space\space\space =
23383                 \the\dimexpr\@nameuse{scr@tso@#1@numsep}\relax,\MessageBreak
23384                 Reserved number width \space\space\space\space\space\space =
23385                 \the\dimexpr\@nameuse{scr@tso@#1@numwidth}\relax%
23386               }%
23387             \fi
23388           }%
23389           \scr@dte@numberline@box{\@nameuse{scr@tso@#1@numberformat}{##1}}%
23390           \@nameuse{Ifscr@tso@#1@breakafternumber}{%
```

```
            {\parfillskip\@flushglue\par}\nobreak\hskip-\bidi@leftskip
          }{}%
        }%
        {\@nameuse{scr@tso@#1@entryformat}{%
          #2%
          \nobreak
          {%
            \normalfont\normalsize\@nameuse{scr@tso@#1@linefill}%
            \nobreak
            \expandafter\let\expandafter\scr@dte@pagenumberwidth
            \csname scr@tso@#1@pagenumberwidth\endcsname
            \@nameuse{scr@tso@#1@pagenumberbox}{%
              \@nameuse{scr@tso@#1@pagenumberformat}{#3}%
            }%
          }%
        }}\@par
      }%
    }%
    \tocbasic@SetPenaltyByTOCLevel{#1}%
  \fi
}


\bidi@undef\scr@dte@def@l@tocline
\bidi@undef\scr@dte@tocline@init
\DeclareTOCEntryStyle{tocline}[{%
  \DefineTOCEntryLengthOption{beforeskip}%
    {scr@tso@}{@beforeskip}{vertical skip before the entry}%
  \DefineTOCEntryIfOption{breakafternumber}%
    {scr@tso@}{@breakafternumber}{line break after number flag}%
  \DefineTOCEntryIfOption{dynnumwidth}%
    {scr@tso@}{@dynnumwidth}{dynamic number width flag}%
  \DefineTOCEntryListOption{indentfollows}%
    {scr@tso@}{@indentfollows}{list of levels that define the indent}%
  \DefineTOCEntryIfOption{dynindent}%
    {scr@tso@}{@dynindent}{dynamic indent width flag}%
  \DefineTOCEntryCommandOption{entryformat}%
    {scr@tso@}{@entryformat}[1]{entry format}%
  \DefineTOCEntryCommandOption{entrynumberformat}%
    {scr@tso@}{@numberformat}[1]{entry number format}%
  \DefineTOCEntryCommandOption{linefill}[\TOCLineLeaderFill]%
    {scr@tso@}{@linefill}{filling between text and page number}%
  \DefineTOCEntryLengthOption{numsep}%
    {scr@tso@}{@numsep}{entry number separation}%
  \DefineTOCEntryCommandOption{onstarthigherlevel}%
    {scr@tso@}{@LastTOCLevelWasLower}{start higher level entry hook}%
  \DefineTOCEntryCommandOption{onstartlowerlevel}%
    {scr@tso@}{@LastTOCLevelWasHigher}{start lower level entry hook}%
  \DefineTOCEntryCommandOption{onstartsamelevel}%
    {scr@tso@}{@LastTOCLevelWasSame}{start same level entry hook}%
  \DefineTOCEntryCommandOption{pagenumberbox}%
    {scr@tso@}{@pagenumberbox}[1]{page number box}%
  \DefineTOCEntryCommandOption{pagenumberformat}%
    {scr@tso@}{@pagenumberformat}[1]{page number format}%
```

```
\DefineTOCEntryLengthOption{pagenumberwidth}%
  {scr@tso@}{@pagenumberwidth}{width of page number box}%
\DefineTOCEntryLengthOption{rightindent}%
  {scr@tso@}{@rightindent}{entry's text right indent}%
\DefineTOCEntryOption{raggedentrytext}[true]{%
  \FamilySetBool{KOMAarg}{raggedentrytext}{@tempswa}{##1}%
  \ifx\FamilyKeyState\FamilyKeyStateProcessed
    \if@tempswa
      \expandafter\let\csname ragged\scr@dte@current entry\endcsname
      \raggedright
    \else
      \expandafter\let\csname ragged\scr@dte@current entry\endcsname
      \relax
    \fi
  \fi
}%
\DefineTOCEntryIfOption{raggedpagenumber}%
  {scr@tso@}{@raggedpage}{page number ragged flag}%
\DefineTOCEntryLengthOption{indent}%
  {scr@tso@}{@indent}{entry indent}%
\DefineTOCEntryLengthOption{numwidth}%
  {scr@tso@}{@numwidth}{entry number width}%
\scr@ifundefinedorrelax{#1tocdepth}{%
  \Ifstrstart{#1}{sub}{%
    \scr@ifundefinedorrelax{\scr@dte@nosub{#1}tocdepth}{}{%
      \expandafter\edef\csname #1tocdepth\endcsname{%
        \the\numexpr \noexpand\@nameuse{\scr@dte@nosub{#1}tocdepth}+\@ne\relax
      }%
    }%
  }{}%
}{}%
\@ifundefined{#1tocdepth}{%
  \Ifstr{#1}{part}{\@namedef{#1tocdepth}{-1}}{%
    \Ifstr{#1}{chapter}{\@namedef{#1tocdepth}{0}}{%
      \Ifstr{#1}{section}{\@namedef{#1tocdepth}{1}}{%
        \Ifstr{#1}{subsection}{\@namedef{#1tocdepth}{2}}{%
          \Ifstr{#1}{subsubsection}{\@namedef{#1tocdepth}{3}}{%
            \Ifstr{#1}{paragraph}{\@namedef{#1tocdepth}{4}}{%
              \Ifstr{#1}{subparagraph}{\@namedef{#1tocdepth}{5}}{%
                \Ifstr{#1}{figure}{\@namedef{#1tocdepth}{1}}{%
                  \Ifstr{#1}{table}{\@namedef{#1tocdepth}{1}}{%
                    \expandafter\let\csname #1tocdepth\expandafter\endcsname
                    \csname #1numdepth\endcsname
                  }%
                }%
              }%
            }%
          }%
        }%
      }%
    }%
  }%
}{}%
\scr@ifundefinedorrelax{scr@tso@#1@indent}{%
```

```
    \@ifundefined{scr@#1@tocindent}{%
      \Ifstrstart{#1}{sub}{%
        \scr@ifundefinedorrelax{scr@tso@\scr@dte@nosub{#1}@indent}{%
          \scr@ifundefinedorrelax{scr@tso@\scr@dte@nosub{#1}@numwidth}{}{%
            \expandafter\edef\csname scr@tso@#1@indent\endcsname{%
              \glueexpr \noexpand\@nameuse{scr@tso@\scr@dte@nosub{#1}@numwidth}%
              \relax
            }%
          }%
        }{%
          \scr@ifundefinedorrelax{scr@tso@\scr@dte@nosub{#1}@numwidth}{%
            \expandafter\edef\csname scr@tso@#1@indent\endcsname{%
              \glueexpr \noexpand\@nameuse{scr@tso@\scr@dte@nosub{#1}@indent}%
              \relax
            }%
          }{%
            \expandafter\edef\csname scr@tso@#1@indent\endcsname{%
              \glueexpr \noexpand\@nameuse{scr@tso@\scr@dte@nosub{#1}@indent}%
                        +\noexpand\@nameuse{scr@tso@\scr@dte@nosub{#1}@numwidth}%
              \relax
            }%
          }%
        }%
      }{}%
    }{%
      \@namedef{scr@tso@#1@indent}{\@nameuse{scr@#1@tocindent}}%
    }%
  }{}%
  \scr@ifundefinedorrelax{scr@tso@#1@pagenumberwidth}{%
    \Ifstrstart{#1}{sub}{%
      \scr@ifundefinedorrelax{scr@tso@\scr@dte@nosub{#1}@pagenumberwidth}{%
        \@namedef{scr@tso@#1@pagenumberwidth}{\@pnumwidth}%
      }{%
        \expandafter\let
        \csname scr@tso@#1@pagenumberwidth\expandafter\endcsname
        \csname scr@tso@\scr@dte@nosub{#1}@pagenumberwidth\endcsname
      }%
    }{%
      \@namedef{scr@tso@#1@pagenumberwidth}{\@pnumwidth}%
    }%
  }{}%
  \scr@ifundefinedorrelax{scr@tso@#1@rightindent}{%
    \Ifstrstart{#1}{sub}{%
      \scr@ifundefinedorrelax{scr@tso@\scr@dte@nosub{#1}@rightindent}{%
        \@namedef{scr@tso@#1@rightindent}{\@tocrmarg}%
      }{%
        \expandafter\let
        \csname scr@tso@#1@rightindent\expandafter\endcsname
        \csname scr@tso@\scr@dte@nosub{#1}@rightindent\endcsname
      }%
    }{%
      \@namedef{scr@tso@#1@rightindent}{\@tocrmarg}%
    }%
  }{}%
```

```
\@ifundefined{scr@tso@#1@indent}{%
    \Ifstr{#1}{figure}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
      \Ifstr{#1}{table}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
        \Ifstr{#1}{part}{\@namedef{scr@tso@#1@indent}{0em}}{%
          \Ifstr{#1}{chapter}{\@namedef{scr@tso@#1@indent}{0em}}{%
            \scr@ifundefinedorrelax{l@chapter}{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@indent}{0pt}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@indent}{3.8em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@indent}{7em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@indent}{10em}%
                      }{%
                      }%
                    }%
                  }%
                }%
              }%
            }{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@indent}{1.5em}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@indent}{3.8em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@indent}{7.0em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@indent}{10em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@indent}{12em}%
                      }{%
                      }%
                    }%
                  }%
                }%
              }%
            }%
          }%
        }%
      }%
    }%
}{}%
\scr@ifundefinedorrelax{scr@tso@#1@numwidth}{%
  \scr@ifundefinedorrelax{scr@#1@tocnumwidth}{%
    \Ifstrstart{#1}{sub}{%
      \scr@ifundefinedorrelax{scr@tso@\scr@dte@nosub{#1}@numwidth}{}{%
        \expandafter\edef\csname scr@tso@#1@numwidth\endcsname{%
          \glueexpr \noexpand\@nameuse{scr@tso@\scr@dte@nosub{#1}@numwidth}%
                    +.9em%
          \relax
        }%
```

```
        }%
      }{}%
    }{%
      \@namedef{scr@tso@#1@numwidth}{\@nameuse{scr@#1@tocnumwidth}}%
    }%
  }{}%
  \@ifundefined{scr@tso@#1@numwidth}{%
      \Ifstr{#1}{figure}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
        \Ifstr{#1}{table}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
          \Ifstr{#1}{chapter}{\@namedef{scr@tso@#1@numwidth}{1.5em}}{%
            \scr@ifundefinedorrelax{chapter}{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@numwidth}{1.5em}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@numwidth}{3.2em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@numwidth}{4.1em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@numwidth}{5m}%
                      }{%
                      }%
                    }%
                  }%
                }%
              }%
            }{%
              \Ifstr{#1}{section}{\@namedef{scr@tso@#1@numwidth}{2.3em}}{%
                \Ifstr{#1}{subsection}{\@namedef{scr@tso@#1@numwidth}{3.2em}}{%
                  \Ifstr{#1}{subsubsection}{%
                    \@namedef{scr@tso@#1@numwidth}{3.1em}%
                  }{%
                    \Ifstr{#1}{paragraph}{%
                      \@namedef{scr@tso@#1@numwidth}{5em}%
                    }{%
                      \Ifstr{#1}{subparagraph}{%
                        \@namedef{scr@tso@#1@numwidth}{6em}%
                      }{%
                      }%
                    }%
                  }%
                }%
              }%
            }%
          }%
        }%
      }%
  }{}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@LastTOCLevelWasLower\endcsname{\LastTOCLevelWasLower}%
  \expandafter\renewcommand%
  \csname scr@tso@#1@LastTOCLevelWasSame\endcsname{\LastTOCLevelWasSame}%
  \expandafter\renewcommand%
```

```
\csname scr@tso@#1@LastTOCLevelWasHigher\endcsname{\LastTOCLevelWasHigher}%
\@ifundefined{scr@tso@#1@beforeskip}{%
  \Ifstr{#1}{part}{%
    \@namedef{scr@tso@#1@beforeskip}{\glueexpr 2.25em \@plus\p@\relax}%
  }{%
    \Ifstr{#1}{chapter}{%
      \@namedef{scr@tso@#1@beforeskip}{\glueexpr 1.0em \@plus\p@\relax}%
    }{%
      \Ifstr{#1}{section}{%
        \scr@ifundefinedorrelax{l@chapter}{%
          \@namedef{scr@tso@#1@beforeskip}{\glueexpr 1.0em \@plus\p@\relax}%
        }{}%
      }{}%
    }%
  }%
  \expandafter\renewcommand\expandafter*%
  \csname scr@tso@#1@beforeskip\endcsname{\glueexpr \z@ plus .2\p@\relax}%
}{}%
\@ifundefined{scr@dte@#1@maxnumwidth}{%
  \expandafter\newlength\csname scr@dte@#1@maxnumwidth\endcsname
  \setlength{\@nameuse{scr@dte@#1@maxnumwidth}}{\z@}%
}{}%
\renewcommand*{\scr@dte@donumwidth}{}%
\g@addto@macro{\scr@dte@donumwidth}{\do{#1}}%
\expandafter\renewcommand\expandafter*%
\csname scr@tso@#1@numsep\endcsname{.4em}%
\expandafter\renewcommand%
\csname scr@tso@#1@numberformat\endcsname[1]{##1}%
\Ifstr{#1}{part}{%
  \expandafter\providecommand%
  \csname scr@tso@#1@entryformat\endcsname[1]{\large\bfseries ##1}%
}{%
  \Ifstr{#1}{chapter}{%
    \expandafter\providecommand%
    \csname scr@tso@#1@entryformat\endcsname[1]{\bfseries ##1}%
  }{%
    \scr@ifundefinedorrelax{l@chapter}{%
      \Ifstr{#1}{section}{%
        \expandafter\providecommand%
        \csname scr@tso@#1@entryformat\endcsname[1]{\bfseries ##1}%
      }{}%
    }{}%
    \expandafter\providecommand%
    \csname scr@tso@#1@entryformat\endcsname[1]{##1}%
  }%
}%
\expandafter\renewcommand
\csname Ifscr@tso@#1@breakafternumber\endcsname[2]{##2}%
\@ifundefined{scr@tso@#1@linefill}{%
  \Ifstr{#1}{part}{%
    \@namedef{scr@tso@#1@linefill}{\hfill}%
  }{%
    \Ifstr{#1}{chapter}{%
      \@namedef{scr@tso@#1@linefill}{\hfill}%
```

```
      }{%
        \scr@ifundefinedorrelax{l@chapter}{%
          \Ifstr{#1}{section}{%
            \@namedef{scr@tso@#1@linefill}{\hfill}%
          }{}%
        }{}%
        \expandafter\renewcommand%
        \csname scr@tso@#1@linefill\endcsname{\TOCLineLeaderFill\relax}%
      }%
    }%
  }{}%
  \expandafter\renewcommand\csname Ifscr@tso@#1@raggedpage\endcsname[2]{##2}%
  \Ifstr{#1}{part}{%
    \expandafter\providecommand%
    \csname scr@tso@#1@pagenumberformat\endcsname[1]{\large\bfseries ##1}%
  }{%
    \Ifstr{#1}{chapter}{%
      \expandafter\providecommand%
      \csname scr@tso@#1@pagenumberformat\endcsname[1]{\bfseries ##1}%
    }{%
      \scr@ifundefinedorrelax{l@chapter}{%
        \Ifstr{#1}{section}{%
          \expandafter\providecommand%
          \csname scr@tso@#1@pagenumberformat\endcsname[1]{\bfseries ##1}%
        }{}%
      }{}%
      \expandafter\providecommand%
      \csname scr@tso@#1@pagenumberformat\endcsname[1]{%
        {\normalfont\normalcolor ##1}}%
    }%
  }%
  \expandafter\renewcommand%
  \csname scr@tso@#1@pagenumberbox\endcsname[1]{%
    \hb@xt@\@nameuse{scr@dte@pagenumberwidth}{\hfil ##1}}%
  \expandafter\renewcommand\csname Ifscr@tso@#1@dynnumwidth\endcsname[2]{##2}%
  \expandafter\renewcommand\csname Ifscr@tso@#1@dynindent\endcsname[2]{##2}%
  \scr@ifundefinedorrelax{scr@tso@#1@indentfollows}{%
    \Ifstrstart{#1}{sub}{%
      \expandafter\edef\csname scr@tso@#1@indentfollows\endcsname{%
        \scr@dte@nosub{#1}%
      }%
    }{%
      \expandafter\let\csname scr@tso@#1@indentfollows\endcsname\@empty
    }%
  }{}%
}]{%
  \scr@dte@tocline{#1}{##1}{##2}%
}

\if@bidi@csdef{scr@tso@figure@pagenumberformat}{%
  \renewcommand*{\scr@tso@figure@pagenumberformat}[1]{%
     {\normalfont\normalcolor #1}%
   }%
}{}
```

```
\if@bidi@csdef{scr@tso@table@pagenumberformat}{%
  \renewcommand*{\scr@tso@table@pagenumberformat}[1]{%
     {\normalfont\normalcolor #1}%
   }%
}{}
```

160 File tocstyle-xetex-bidi.def

```
\ProvidesFile{tocstyle-xetex-bidi.def}[2010/07/25 v0.1 bidi adaptations for tocstyle packag
\renewcommand*{\tocstyle@dottedtocline}[5]{%
  \let\numberline\tocstyle@numberline
  \ifnum #1>\c@tocdepth \else
    \if@tocstyle@penalties
      \begingroup
        \@tempcnta 20010
        \advance \@tempcnta by -#1
        \ifnum \@tempcnta>\lastpenalty
          \aftergroup\penalty\aftergroup\@lowpenalty
        \fi
      \endgroup
    \fi
    \edef\tocstyledepth{#1}%
    \tocstyle@activate@features
    \ifx\tocstyle@feature@entryvskip\relax
      \vskip \z@ \@plus.2\p@
    \else
      \addvspace{\tocstyle@feature@entryvskip}%
    \fi
    {%
      \parskip \z@ \parindent \z@ \if@RTL\rightskip\else\leftskip\fi \z@ \if@RTL\leftskip\e
      \tocstyle@feature@raggedhook
      \@tempdima #3\relax
      \@tempdimb #2\relax
      \typeout{m (\tocstyleTOC, \tocstyledepth): \the\@tempdima}%
      \ifnum #1>\z@\relax
        \@tempcnta #1\relax \advance\@tempcnta \m@ne
        \ifcsname tocstyle@skipwidth@\tocstyleTOC @\the\@tempcnta\endcsname
          \ifcsname tocstyle@numwidth@\tocstyleTOC @\the\@tempcnta\endcsname
            \@tempdimb
            \csname tocstyle@skipwidth@\tocstyleTOC @\the\@tempcnta\endcsname
            \advance\@tempdimb
            \csname tocstyle@numwidth@\tocstyleTOC @\the\@tempcnta\endcsname
          \fi
        \fi
      \fi
      \typeout{C (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
      \ifcsname tocstyle@skipwidth@\tocstyleTOC @#1\endcsname
        \ifdim \@tempdimb>
        \csname tocstyle@skipwidth@\tocstyleTOC @#1\endcsname\relax
          \expandafter\xdef\csname tocstyle@skipwidth@\tocstyleTOC
          @#1\endcsname{\the\@tempdimb}%
        \fi
```

```
23820       \else
23821         \expandafter\xdef\csname tocstyle@skipwidth@\tocstyleTOC
23822         @#1\endcsname{\the\@tempdimb}%
23823       \fi
23824       \iftocstyle@autolength
23825         \ifcsname tocstyle@maxskipwidth@\tocstyleTOC @#1\endcsname
23826           \@tempdimb \csname tocstyle@maxskipwidth@\tocstyleTOC @#1\endcsname
23827           \relax
23828         \fi
23829         \ifcsname tocstyle@maxnumwidth@\tocstyleTOC @#1\endcsname
23830           \@tempdima \csname tocstyle@maxnumwidth@\tocstyleTOC @#1\endcsname
23831           \relax
23832         \fi
23833         \typeout{a (\tocstyleTOC, \tocstyledepth): \the\@tempdima}%
23834         \typeout{A (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
23835       \else
23836         \@tempdimb #2\relax
23837         \typeout{M (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
23838       \fi
23839       \ifcsname tocstyle@unumwidth@\tocstyleTOC @\endcsname
23840         \ifdim \@tempdima>
23841         \csname tocstyle@unumwidth@\tocstyleTOC @\endcsname\relax
23842           \expandafter\xdef\csname tocstyle@unumwidth@\tocstyleTOC
23843           @\endcsname{\the\@tempdima}%
23844         \fi
23845       \else
23846         \expandafter\xdef\csname tocstyle@unumwidth@\tocstyleTOC
23847         @\endcsname{\the\@tempdima}%
23848       \fi
23849       \ifcase\tocstyle@indentstyle\relax\else
23850         \@tempdimb \z@
23851         \ifcsname tocstyle@maxunumwidth@\tocstyleTOC @\endcsname
23852           \@tempdima \csname tocstyle@maxunumwidth@\tocstyleTOC @\endcsname
23853           \relax
23854         \fi
23855         \typeout{s (\tocstyleTOC, \tocstyledepth): \the\@tempdima}%
23856         \typeout{S (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
23857       \fi
23858       \advance\parindent \@tempdimb\@afterindenttrue
23859       \advance\if@RTL\rightskip\else\leftskip\fi \parindent
23860       \advance\if@RTL\leftskip\else\rightskip\fi \@tocrmarg
23861       \parfillskip -\if@RTL\leftskip\else\rightskip\fi
23862       \ifx\tocstyle@feature@parfillskip\relax\else
23863         \advance\parfillskip \tocstyle@feature@parfillskip\relax
23864       \fi
23865       \interlinepenalty\@M
23866       \leavevmode
23867       \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima
23868       \null\nobreak
23869       \iftocstyle@indentnotnumbered\else
23870         \hskip -\if@RTL\rightskip\else\leftskip\fi
23871       \fi
23872       \tocstyle@feature@entryhook
23873       {#4}\nobreak
```

```
      \ifx\tocstyle@feature@leaders\relax
        \leaders\hbox{$\m@th
          \mkern \@dotsep mu\hbox{\tocstyle@feature@dothook .}%
          \mkern \@dotsep mu$}\hfill
      \else
        \tocstyle@feature@leaders
      \fi
      \nobreak
      \ifx\tocstyle@feature@pagenumberbox\relax
        \hb@xt@\@pnumwidth{\hfil\tocstyle@feature@pagenumberhook #5}%
      \else
        \tocstyle@feature@pagenumberbox{\tocstyle@feature@pagenumberhook #5}%
      \fi
      \par
    }%
    \if@tocstyle@penalties
      \bgroup
        \@tempcnta 20009
        \advance\@tempcnta by -#1
        \edef\reserved@a{\egroup\penalty\the\@tempcnta\relax}%
      \reserved@a
    \fi
  \fi}
\renewcommand*{\tocstyle@numberline}[1]{%
  \begingroup
    \ifx\tocstyle@feature@spaceafternumber\relax
      \settowidth\@tempdima{\tocstyle@@numberline{#1}\enskip}%
    \else
      \settowidth\@tempdima{\tocstyle@@numberline{#1}}%
      \advance \@tempdima \tocstyle@feature@spaceafternumber\relax
    \fi
    \ifcsname tocstyle@numwidth@\tocstyleTOC @\tocstyledepth\endcsname
      \ifdim \@tempdima >
      \csname tocstyle@numwidth@\tocstyleTOC @\tocstyledepth\endcsname\relax
        \expandafter\xdef\csname tocstyle@numwidth@\tocstyleTOC
        @\tocstyledepth\endcsname{\the\@tempdima}%
      \fi
    \else
      \expandafter\xdef\csname tocstyle@numwidth@\tocstyleTOC
      @\tocstyledepth\endcsname{\the\@tempdima}%
    \fi
  \endgroup
  \iftocstyle@indentnotnumbered
    \hskip -\if@RTL\rightskip\else\leftskip\fi
  \fi
  \ifcase \tocstyle@indentstyle
    \hb@xt@\@tempdima{\tocstyle@@numberline{#1}\hfil}%
  \or
    \hb@xt@\@tempdima{\tocstyle@@numberline{#1}\hfil}%
  \else
    \ifx\tocstyle@feature@spaceafternumber\relax
      \hbox{\tocstyle@@numberline{#1}\enskip}%
    \else
      \hbox{\tocstyle@@numberline{#1}\hskip
```

```
        \tocstyle@feature@spaceafternumber\relax}%
    \fi
  \fi
}
\AtBeginDocument{%
  \ifcsname l@part\endcsname
    \ifcsname l@chapter\endcsname
      \setbox\@tempboxa\vbox{\hsize\maxdimen
        \l@part{\tocstyle@l@define{part}{-1}}{}}%
    \else
      \setbox\@tempboxa\vbox{\hsize\maxdimen
        \l@part{\tocstyle@l@define{part}{0}}{}}%
    \fi
  \fi
  \ifcsname l@chapter\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@chapter{\tocstyle@l@define{chapter}{0}}{}}%
  \fi
  \ifcsname l@section\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@section{\tocstyle@l@define{section}{1}}{}}%
  \fi
  \ifcsname l@subsection\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@subsection{\tocstyle@l@define{subsection}{2}}{}}%
  \fi
  \ifcsname l@subsubsection\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@subsubsection{\tocstyle@l@define{subsubsection}{3}}{}}%
  \fi
  \ifcsname l@paragraph\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@paragraph{\tocstyle@l@define{paragraph}{4}}{}}%
  \fi
  \ifcsname l@subparagraph\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@subparagraph{\tocstyle@l@define{subparagraph}{5}}{}}%
  \fi
  \ifcsname l@table\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@table{\tocstyle@l@define{table}{1}}{}}%
  \fi
  \ifcsname l@figure\endcsname
    \setbox\@tempboxa\vbox{\hsize\maxdimen
      \l@figure{\tocstyle@l@define{figure}{1}}{}}%
  \fi
  \def\@tempa#1#2#3#4#5{%
    \ifnum #1>\c@tocdepth \else
      \vskip \z@ \@plus.2\p@
      {\if@RTL\rightskip\else\leftskip\fi #2\relax \if@RTL\leftskip\else\rightskip\fi \@toc
       \parindent #2\relax\@afterindenttrue
       \interlinepenalty\@M
       \leavevmode
       \@tempdima #3\relax
```

```
      \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\r
      {#4}\nobreak
      \leaders\hbox{$\m@th
         \mkern \@dotsep mu\hbox{.}\mkern \@dotsep
         mu$}\hfill
      \nobreak
      \hb@xt@\@pnumwidth{{\hfil \normalfont \normalcolor #5}}%
      \par}%
  \fi}%
\ifx\@dottedtocline\@tempa\else
  \tocstyle@macrochangewarning\@dottedtocline
\fi
\let\tocstyle@saved@dottedtocline\@dottedtocline
\def\@tempa#1{\hb@xt@\@tempdima{#1\autodot\hfil}}%
\ifx\numberline\@tempa\else
  \def\@tempa#1{\hb@xt@\@tempdima{#1\hfil}}%
  \ifx\numberline@tempa\else
    \tocstyle@macrochangewarning\numberline
  \fi
\fi
\let\tocstyle@saved@numberline\numberline
}
\renewcommand*{\tocstyle@l@define}[2]{%
  \advance\if@RTL\rightskip\else\leftskip\fi-\@tempdima
  \edef\@tempa{%
    \noexpand\global\noexpand\let
    \expandafter\noexpand\csname tocstyle@saved@l@#1\endcsname
    \expandafter\noexpand\csname l@#1\endcsname
    \noexpand\gdef
    \expandafter\noexpand\csname tocstyle@l@#1\endcsname{%
      \noexpand\@dottedtocline{#2}{\the\if@RTL\rightskip\else\leftskip\fi}{\the\@tempdima}}
    \noexpand\g@addto@macro\noexpand\tocstyle@activate@all@l{%
      \noexpand\let\expandafter\noexpand\csname l@#1\endcsname
      \expandafter\noexpand\csname tocstyle@l@#1\endcsname
    }%
  }%
  \PackageInfo{tocstyle}{prepare \expandafter\string
    \csname l@#1\endcsname\space for redefinition}%
  \@tempa
}
```

161 File todonotes-xetex-bidi.def

```
\ProvidesFile{todonotes-xetex-bidi.def}[2016/11/08 v0.4 bidi adaptations for todonotes pack
\newif\if@bidi@todonotes@textdirection@RTL
\newif\if@bidi@todonotes@figposition@right
\newcommand{\@bidi@todonotes@align}{}%
\define@key{todonotes}{align}{\renewcommand{\@bidi@todonotes@align}{#1}}%
\newcommand{\@bidi@todonotes@textdirection}{}%
\define@choicekey{todonotes}{textdirection}[\bidi@todonotes@tempa\bidi@todonotes@tempb]{rig
  \ifcase\bidi@todonotes@tempb\relax
    \@bidi@todonotes@textdirection@RTLtrue
    \let\@bidi@todonotes@textdirection\RLE
  \or
```

```
    \@bidi@todonotes@textdirection@RTLfalse
    \let\@bidi@todonotes@textdirection\LRE
  \fi}
\define@choicekey{todonotes}{figposition}[\bidi@todonotes@tempa\bidi@todonotes@tempb]{right
  \ifcase\bidi@todonotes@tempb\relax
    \@bidi@todonotes@figposition@righttrue
  \or
    \@bidi@todonotes@figposition@rightfalse
  \fi}
\if@todonotes@disabled%
\else % \if@todonotes@disabled
\renewcommand{\@todonotes@drawInlineNote}{%
    \if@todonotes@dviStyle%
        {\par\noindent\begin{tikzpicture}[remember picture]%
            \draw node[inlinenotestyle] {};\end{tikzpicture}\par}%
            \if@todonotes@authorgiven%
                {\noindent \@todonotes@sizecommand \@todonotes@author:\,\@todonotes@text}%
            \else%
                {\noindent \@todonotes@sizecommand \@todonotes@text}%
            \fi
        {\par\noindent\begin{tikzpicture}[remember picture]%
            \draw node[inlinenotestyle] {};\end{tikzpicture}\par}%
    \else%
        {\par\noindent\begin{tikzpicture}[remember picture]%
           \if@bidi@todonotes@textdirection@RTL\setRTL\fi%
            \draw node[inlinenotestyle,font=\@todonotes@sizecommand,align=\@bidi@todonotes@
                \if@todonotes@authorgiven%
                    {\noindent \@todonotes@sizecommand \@todonotes@author:\,\@todonotes@tex
                \else%
                    {\noindent \@todonotes@sizecommand \@todonotes@text}%
                \fi};%
            \end{tikzpicture}\par}%
    \fi}%
\renewcommand{\@todonotes@drawMarginNoteWithLine}{%
\begin{tikzpicture}[remember picture, overlay, baseline=-0.75ex]%
    \node [coordinate] (inText) {};%
\end{tikzpicture}%
\marginpar[{% Draw note in left margin
    \@todonotes@drawMarginNote%
    \if@RTL\@todonotes@drawLineToRightMargin\else\@todonotes@drawLineToLeftMargin\fi%
}]{% Draw note in right margin
    \@todonotes@drawMarginNote%
    \if@RTL\@todonotes@drawLineToLeftMargin\else\@todonotes@drawLineToRightMargin\fi%
}%
}%
\renewcommand{\@todonotes@drawMarginNote}{%
\if@todonotes@dviStyle%
    \begin{tikzpicture}[remember picture]%
        \draw node[notestyle] {};%
    \end{tikzpicture}\\%
    \begin{minipage}{\@todonotes@textwidth}%
    \if@todonotes@authorgiven%
      \@todonotes@sizecommand \@todonotes@author \@todonotes@text%
    \else%
```

```
24087       \@todonotes@sizecommand \@todonotes@text%
24088     \fi%
24089     \end{minipage}\\%
24090     \begin{tikzpicture}[remember picture]%
24091         \draw node[notestyle] (inNote) {};%
24092     \end{tikzpicture}%
24093 \else%
24094     \let\originalHbadness\hbadness%
24095     \hbadness 100000%
24096     \begin{tikzpicture}[remember picture,baseline=(X.base)]%
24097        \if@bidi@todonotes@textdirection@RTL\setRTL\fi%
24098         \node(X){\vphantom{X}};%
24099         \draw node[notestyle,font=\@todonotes@sizecommand,anchor=north,align=\@bidi@todonot
24100             {\@todonotes@text};%
24101         \if@todonotes@authorgiven%
24102             \draw node[notestyle,font=\@todonotes@sizecommand,anchor=north,align=\@bidi@tod
24103                 {\@todonotes@sizecommand\@todonotes@author};%
24104             \node(Y)[below=of X]{};%
24105             \draw node[notestyle,font=\@todonotes@sizecommand,anchor=north,align=\@bidi@tod
24106                 {\@todonotes@text};%
24107         \else%
24108             \draw node[notestyle,font=\@todonotes@sizecommand,anchor=north,align=\@bidi@tod
24109                 {\@todonotes@text};%
24110         \fi%
24111     \end{tikzpicture}%
24112     \hbadness \originalHbadness%
24113 \fi}%
24114 \renewcommand{\missingfigure}[2][]{%
24115 \setkeys{todonotes}{#1}%
24116 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
24117 \par
24118 \noindent
24119 \begin{tikzpicture}
24120 \draw[fill=\@todonotes@currentfigcolor, draw = black!40, line width=2pt]
24121     (-2, -2.5) rectangle +(\@todonotes@currentfigwidth, \@todonotes@currentfigheight);
24122 \if@bidi@todonotes@figposition@right%
24123 \begin{scope}[xshift=\@todonotes@currentfigwidth-4cm]
24124 \fi%
24125 \draw[red, fill=white, rounded corners = 5pt, line width=10pt]
24126     (30:2cm) -- (150:2cm) -- (270:2cm) -- cycle;
24127 \if@bidi@todonotes@figposition@right%
24128 \end{scope}
24129 \begin{scope}[xshift=-3.8cm]
24130 \fi%
24131 \if@bidi@todonotes@textdirection@RTL\setRTL\fi%
24132 \draw (2, -0.3) node[right, text
24133     width=\@todonotes@currentfigwidth-4.5cm,align=\@bidi@todonotes@align] {#2};
24134 \if@bidi@todonotes@figposition@right%
24135 \end{scope}
24136 \begin{scope}[xshift=\@todonotes@currentfigwidth-4cm]
24137 \fi%
24138 \draw (0, 0.3) node[align=\@bidi@todonotes@align] {\@bidi@todonotes@textdirection{\@todonot
24139 \draw (0, -0.3) node[align=\@bidi@todonotes@align] {\@bidi@todonotes@textdirection{\@todono
24140 \if@bidi@todonotes@figposition@right%
```

```
\end{scope}
\fi%
\end{tikzpicture}\hfill
}% Ending \missingfigure command
\fi % Ending \@todonotes@ifdisabled
\presetkeys%
    {todonotes}%
    {align=left,%
    textdirection=lefttoright,%
    figposition=left}{}%
```

162 File wrapfig-xetex-bidi.def

```
\ProvidesFile{wrapfig-xetex-bidi.def}[2014/04/23 v0.3 bidi adaptations for wrapfig package
\let\WF@@everypar\bidi@n@everypar
\def\WF@putfigmaybe{%
\ifinner
  \vskip-\parskip \global\WF@floatfalse
  \let\pagetotal\maxdimen % kludge flag for "not top of page"
\else % outer page
  \@tempdima\pagedepth % save page depth
   {\advance\parskip\@tempdima\if@RTL\advance\parskip\baselineskip\fi\vskip-\parskip}% back
   \penalty\interlinepenalty % update pg. parameters
   \@tempdimb\pagegoal \advance\@tempdimb-\pagetotal % room left on page
   \ifdim\@tempdimb<\z@ % \WF@info{Page overfull already;}%
      \global\WF@floatfalse
      \ifdim-\@tempdimb>\pageshrink \else \pagebreak \fi
   \else
      \ifdim\WF@size>\@tempdimb
         \ifWF@float \dimen@.5\baselineskip \else \dimen@ 2\baselineskip\fi
         \ifdim\pagestretch>\dimen@ \dimen@\pagestretch \fi
         \ifdim\pagefilstretch>\z@ \dimen@\@tempdimb \fi
         \ifdim\pagefillstretch>\z@ \dimen@\@tempdimb \fi
         \advance\dimen@.5\baselineskip
         \ifdim\dimen@>\@tempdimb % \WF@info{Page nearly full; can stretch}%
            \global\WF@floatfalse \pagebreak
         \fi
      \else % \WF@info{Fits in \the\@tempdimb;}%
         \global\WF@floatfalse
   \fi\fi
   \vskip\@tempdima\relax % (return erased page depth)
\fi
\noindent
\ifWF@float
  \WF@fltmes
\else % putting here;
  \WF@info{Put \WF@wfname here:}%
  {\ifodd\if@twoside\c@page\else\@ne\fi % assign l/r to i/o placement
    \lccode`i`l\lccode`o`r\else \lccode`i`r\lccode`o`l\fi
    \xdef\WF@place{\the\lccode\lccode\WF@place}}% twice to get only l or r
  \hbox to\z@{% llap or rlap depending on {l} or {r}; calc effective width
   \@tempdima\wd\WF@box \@tempdimb\WF@ovh
   \advance\@tempdima-\@tempdimb \advance\@tempdima\columnsep
   \@tempdimb\hsize \advance\@tempdimb-\@tempdima
```

```
  \xdef\WF@adjlw{\the\@tempdima}%
  \ifnum `l=\WF@place % fig on left
   \if@RTL%
    \kern\@tempdimb \kern\columnsep
   \def\@tempa{\hss}% position to left of the gap
    \else%
   \hss % figure overlaps space to the left
   \def\@tempa{\kern\columnsep}% position to left of the gap
   \fi%
  \else  %  fig on right
   \if@RTL%
    \hss
     \@tempdima\z@
     \def\@tempa{\kern\columnsep}
    \else%
   \@tempdima\z@ % no left indentation
   \kern\@tempdimb \kern\columnsep
   \def\@tempa{\hss}% figure overlaps space to the right
   \fi%
  \fi
  \ifdim\@tempdimb<\hsize
   \xdef\WF@wrapil{\the\@tempdima \the\@tempdimb}% indentation and length
   \xdef\WF@adjtlm{\the\@tempdima}%
  \else
   \xdef\WF@wrapil{\z@ \the\hsize}%
   \xdef\WF@adjlw{\z@}\xdef\WF@adjtlm{\z@}%
  \fi
  \ifdim\pagetotal=\z@ % \WF@info{Put \WF@wfname at top of p.\thepage}%
   \global\advance\WF@size-\intextsep
  \else % \WF@info{Putting \WF@wfname in middle of page}%
   \setbox\WF@box\hbox{\lower\intextsep\box\WF@box}%
  \fi \dp\WF@box\z@ \box\WF@box \@tempa
 }% end \hbox to 0pt
  \aftergroup\WF@startwrapping % after the \endgroup which immediately follows
\fi}
```

163 File xcolor-xetex-bidi.def

```
\ProvidesFile{xcolor-xetex-bidi.def}[2022/06/13 v0.3 bidi adaptations for xcolor package fo
\long\def\color@b@x#1#2#3%
 {\leavevmode\ifmmode\else\if@RTL\beginL\fi\fi
  \setbox\z@\hbox{\kern\fboxsep{\set@color\if@RTL\beginR\fi#3\if@RTL\endR\fi}\kern\fboxsep}
  \dimen@\ht\z@\advance\dimen@\fboxsep\ht\z@\dimen@
  \dimen@\dp\z@\advance\dimen@\fboxsep\dp\z@\dimen@
  {#1{#2\color@block{\wd\z@}{\ht\z@}{\dp\z@}\box\z@}}\ifmmode\else\if@RTL\endL\fi\fi}
\protected\def\normalcolor{\let\current@color\default@color\ifhmode\if@RTL\beginL\aftergrou
\DeclareRobustCommand\color
 {\ifhmode\if@RTL\beginL\aftergroup\endR\fi\fi\@ifnextchar[\@undeclaredcolor\@declaredcolor
\def\@undeclaredcolor[#1]#2%
 {\begingroup
  \let\@@cls\@empty
  \XC@getmodclr12{#1}{#2}{}%
   {\ifblendcolors
      \ifx\colorblend\@empty\else
```

```
        \edef\@@mix{\expandafter\@gobble\colorblend}\@tempswafalse
        \XC@coremodel\@@mod\@@clr\@xcolor@{}{}\@@mod\@@clr
      \fi
    \fi
    \ifconvertcolorsU
      \edef\@@tmp{\XC@tgt@mod{\@@mod}}%
      \convertcolorspec\@@mod\@@clr\@@tmp\@@clr \let\@@mod\@@tmp
    \fi
    \ifmaskcolors
      \convertcolorspec\@@mod\@@clr\XC@mmod\@@clr
      \let\@@mod\XC@mmod
      \XC@inflate\@@mod\XC@mclr\@@clr\@@tmp
      \expandafter\XC@mul\@@tmp,\@@clr
    \fi
    \edef\@@tmp{\noexpand\XC@undeclaredcolor{\@@mod}{\@@clr}}%
    \expandafter\endgroup\@@tmp}}
\def\@declaredcolor#1%
 {\XC@edef\XC@@tmp{#1}\XC@@tstfalse
  \ifcase\XC@type\XC@@tmp\relax \XC@@tsttrue\or \relax\else
    \ifblendcolors\XC@@tsttrue\fi \ifmaskcolors\XC@@tsttrue\fi
    \ifconvertcolorsU\XC@@tsttrue\fi
  \fi
  \ifXC@@tst
    \expandafter\XC@declaredcolor\else
    \expandafter\XC@declaredc@lor\fi}
\def\XC@undeclaredcolor#1#2%
 {\@ifundefinedmodel{#1}%
   {\c@lor@error{model `#1'}}%
   {\@nameuse{color@#1}\current@color{#2}%
    \edef\XC@current@color{\noexpand\xcolor@{}{\current@color}{#1}{#2}}%
    \XC@display}\ifhmode\if@RTL\beginR\aftergroup\endL\fi\fi\ignorespaces}
\def\XC@declaredc@lor
 {\XC@let@Nc\XC@current@color{\string\color@\XC@@tmp}%
  \edef\current@color{\XC@current@color}%
  \XC@display\ifhmode\if@RTL\beginR\aftergroup\endL\fi\fi\ignorespaces}
\DeclareRobustCommand\bidicolor
 {\@ifnextchar[\@bidiundeclaredcolor\@bidideclaredcolor}
\def\@bidiundeclaredcolor[#1]#2%
 {\begingroup
  \let\@@cls\@empty
  \XC@getmodclr12{#1}{#2}{}%
   {\ifblendcolors
      \ifx\colorblend\@empty\else
        \edef\@@mix{\expandafter\@gobble\colorblend}\@tempswafalse
        \XC@coremodel\@@mod\@@clr\@xcolor@{}{}\@@mod\@@clr
      \fi
    \fi
    \ifconvertcolorsU
      \edef\@@tmp{\XC@tgt@mod{\@@mod}}%
      \convertcolorspec\@@mod\@@clr\@@tmp\@@clr \let\@@mod\@@tmp
    \fi
    \ifmaskcolors
      \convertcolorspec\@@mod\@@clr\XC@mmod\@@clr
      \let\@@mod\XC@mmod
```

```
      \XC@inflate\@@mod\XC@mclr\@@clr\@@tmp
      \expandafter\XC@mul\@@tmp,\@@clr
    \fi
    \edef\@@tmp{\noexpand\XC@bidiundeclaredcolor{\@@mod}{\@@clr}}%
    \expandafter\endgroup\@@tmp}}
\def\XC@bidiundeclaredcolor#1#2%
 {\@ifundefinedmodel{#1}%
   {\c@lor@error{model `#1'}}%
   {\@nameuse{color@#1}\current@color{#2}%
    \edef\XC@current@color{\noexpand\xcolor@{}{\current@color}{#1}{#2}}%
    \XC@display}}
\def\@bidideclaredcolor#1%
 {\XC@edef\XC@@tmp{#1}\XC@@tstfalse
  \ifcase\XC@type\XC@@tmp\relax \XC@@tsttrue\or \relax\else
    \ifblendcolors\XC@@tsttrue\fi \ifmaskcolors\XC@@tsttrue\fi
    \ifconvertcolorsU\XC@@tsttrue\fi
  \fi
  \ifXC@@tst
    \expandafter\XC@bidideclaredcolor\else
    \expandafter\XC@bidideclaredc@lor\fi}
\def\XC@bidideclaredcolor
 {\XC@split\XC@@tmp
  \edef\@@tmp{\noexpand\@bidiundeclaredcolor[\@@mod]{\@@clr}}%
  \expandafter\endgroup\@@tmp}
\def\XC@bidideclaredc@lor
 {\XC@let@Nc\XC@current@color{\string\color@\XC@@tmp}%
  \edef\current@color{\XC@current@color}%
  \XC@display}
\def\color@box#1#2{\color@b@x\relax{\bidicolor#1{#2}}}
\def\color@fbox#1#2#3#{\protect\color@fb@x{#1}{#2}{#3}}
\def\color@fb@x#1#2#3#4%
 {\color@b@x{\fboxsep\z@\bidicolor#1{#2}\XC@fbox}%
   {\@ifxempty{#3}{\bidicolor#1}{\bidicolor#3}{#4}}}
\def\color@setgroup{\begingroup\ifhmode\if@RTL\beginL\aftergroup\endR\fi\fi\set@color\ifhmo
```

164 File latex-xetex-bidi.def

```
\ProvidesFile{latex-xetex-bidi.def}[2025/09/20 v1.5.3 bidi adaptations  for `latex.ltx' for
\newcommand{\TeXXeTOn}{\TeXXeTstate\@ne}
\newcommand{\TeXXeTOff}{\TeXXeTstate\z@}
\TeXXeTOn
\def\bidi@RTL@everypar{{\setbox\z@\lastbox\if@RTL\beginR\else\beginL\fi\ifvoid\z@\else\useb
   \let\bidi@o@everypar=\everypar
   \newtoks\bidi@n@everypar
   \bidi@n@everypar\expandafter{\the\bidi@o@everypar}
   \bidi@o@everypar{\bidi@RTL@everypar\the\bidi@n@everypar}
   \let\everypar=\bidi@n@everypar
\def\moreLRE{\bracetext \aftergroup\endL \beginL\@RTLfalse}
\def\moreRLE{\bracetext \aftergroup\endR \beginR\@RTLtrue}
\protected\def\hboxR{\hbox\bgroup
 \everyhbox{%
  \aftergroup\egroup
  \everyhbox{}%
  \beginR
```

```
  \@hboxRconstructtrue
  \bgroup
  \aftergroup\endR
  \aftergroup\egroup
 }\hbox}
\protected\def\hboxL{\hbox\bgroup
 \everyhbox{%
  \aftergroup\egroup
  \everyhbox{}%
  \beginL
  \@hboxRconstructfalse
  \bgroup
  \aftergroup\endL
  \aftergroup\egroup
 }\hbox}
\protected\def\vboxR{\vbox\bgroup
 \everyvbox{%
  \aftergroup\egroup
  \everyvbox{}%
  \@RTLtrue
  \@RTLtabtrue
  \bgroup
  \aftergroup\egroup
 }\vbox}
\protected\def\vboxL{\vbox\bgroup
 \everyvbox{%
  \aftergroup\egroup
  \everyvbox{}%
  \@RTLfalse
  \@RTLtabfalse
  \bgroup
  \aftergroup\egroup
 }\vbox}
\newcommand*{\bidi@leftskip}{\if@RTL\rightskip\else\leftskip\fi}
\newcommand*{\bidi@rightskip}{\if@RTL\leftskip\else\rightskip\fi}
\def\LTR{\par\@RTLfalse\@RTL@footnotefalse\@RTLtabfalse\hsize\linewidth\parshape\z@\bidi@be
\def\endLTR{\par}
\newenvironment{LTR*}{\LTR
  \everypar{%
    {\setbox\z@\lastbox
      \ifvoid\z@
        \kern-\parindent
    \fi}%
  }%
}{\endLTR\@endpetrue}
\def\RTL{\par\@RTLtrue\@RTL@footnotetrue\@RTLtabtrue\hsize\linewidth\parshape\z@\bidi@beame
\def\endRTL{\par}
\newenvironment{RTL*}{\RTL
  \everypar{%
    {\setbox\z@\lastbox
      \ifvoid\z@
        \kern-\parindent
    \fi}%
  }%
```

```
}{\endRTL\@endpetrue}
\def\setRTL{\@RTLtrue\@RTL@footnotetrue\@RTLtabtrue\bidi@beamer@ragged}
\def\setLTR{\@RTLfalse\@RTL@footnotefalse\@RTLtabfalse\bidi@beamer@ragged}
\let\unsetRTL=\setLTR
\let\unsetLTR=\setRTL
\let\LR=\LRE
\let\RL=\RLE
\def\@ensure@RTL#1{\if@RTL#1\else\RLE{#1}\fi}
\def\@ensure@LTR#1{\if@RTL\LRE{#1}\else#1\fi}
\let\@ensure@RL=\@ensure@RTL
\let\@ensure@LR=\@ensure@LTR
\def\@ensure@dir#1{\if@RTL\RLE{#1}\else{#1}\fi}
\let\@ensure@maindir=\@ensure@dir
\def\@@RTL{RTL}
\def\@@LTR{LTR}
\def\save@dir{\if@RTL\gdef\saved@@dir{RTL}\else\gdef\saved@@dir{LTR}\fi}
\def\reset@dir{\ifx\saved@@dir\@@RTL\setRTL\else\ifx\saved@@dir\@@LTR\setLTR\else\relax\fi\
\let\@@TeX\TeX
\def\TeX{\@ensure@LTR{\@@TeX}}
\let\@@LaTeX\LaTeX
\def\LaTeX{\@ensure@LTR{\@@LaTeX}}
\let\@@LaTeXe\LaTeXe
\def\LaTeXe{\@ensure@LTR{\@@LaTeXe}}
\long\def\bidi@reflect@box#1{%
  \leavevmode
  \setbox\z@\hbox{{#1}}%
  \setbox\tw@\hbox{\special{x:gsave}\special{x:scale -1 1}\rlap{\copy\z@}\special{x:grestor
  \hb@xt@\wd\z@{\kern\wd\z@\box\tw@\hss}%
}
\if@bidi@csundef{XeTeX}{%
\bidi@newrobustcmd*{\XeTeX}{\LR{\leavevmode$\smash{\hbox{X\lower.5ex
  \hbox{\kern-.125em\bidi@reflect@box{E}}\kern-.1667em \TeX}}$}}%
}{%
\let\@bidi@orig@XeTeX\XeTeX
\bidi@renewrobustcmd*{\XeTeX}{\LR{\@bidi@orig@XeTeX}}%
}
\if@bidi@csundef{XeLaTeX}{%
\bidi@newrobustcmd*{\XeLaTeX}{\LR{\leavevmode$\smash{\hbox{X\lower.5ex
  \hbox{\kern-.125em\bidi@reflect@box{E}}\kern-.1667em \LaTeX}}$}}%
}{%
\let\@bidi@orig@XeLaTeX\XeLaTeX
\bidi@renewrobustcmd*{\XeLaTeX}{\LR{\@bidi@orig@XeLaTeX}}%
}
\let\setRL=\setRTL
\let\setLR=\setLTR
\let\unsetRL=\setLTR
\def\bidi@tabular@RTLcases{\let\@halignto\@empty\@bidi@tabular@RTLcases}
\ApplyPatchIfPackageLoaded{array}{%
\def\@bidi@tabular@RTLcases{\@RTLtabtrue%
  \leavevmode
  \hbox \bgroup $\left.\col@sep\tabcolsep \let\d@llarbegin\begingroup
                                        \let\d@llarend\endgroup
  \@tabarray}
\def\endbidi@tabular@RTLcases{\endarray \right\rbrace$\egroup}
```

```
}{%
\def\@bidi@tabular@RTLcases{\@RTLtabtrue%
   \leavevmode \hbox \bgroup
   $\left.\let\@acol\@tabacol
   \let\@classz\@tabclassz
   \let\@classiv\@tabclassiv \let\\\@tabularcr\@tabarray}

\def\endbidi@tabular@RTLcases{\crcr\egroup\if@RTLtab\egroup\endR\egroup\fi
                  \egroup\right\rbrace $\egroup}}
\def\RTLcases#1{\left.\vcenter{\normalbaselines\m@th
    \ialign{$##\hfil$&\quad{##}\hfil\crcr#1\crcr}}\,\right\}}
\renewenvironment{RTLcases}{%
  \bidi@matrix@check\RTLcases\env@RTLcases
}{%
  \endbidi@tabular@RTLcases%
}
\def\env@RTLcases{%
  \let\@ifnextchar\bidi@new@ifnextchar
  \def\arraystretch{1.2}%
  \bidi@tabular@RTLcases{@{}r@{\quad}r@{}}%
}
\def\SepMark#1{\gdef\@SepMark{#1}}
\SepMark{.}
\def\@thmcountersep{\@SepMark}
\def\setRTLbibitems{\@RTLbibitemstrue\@LTRbibitemsfalse}
\def\setLTRbibitems{\@LTRbibitemstrue\@RTLbibitemsfalse}
\def\setdefaultbibitems{\@RTLbibitemsfalse\@LTRbibitemsfalse}
\newcommand*{\bidi@@thebibliography@font@hook}{}
\def\list#1#2{%
  \ifnum \@listdepth >5\relax
    \@toodeep
  \else
    \global\advance\@listdepth\@ne
  \fi
  \rightmargin\z@
  \listparindent\z@
  \itemindent\z@
  \csname @list\romannumeral\the\@listdepth\endcsname
  \def\@itemlabel{#1}%
  \let\makelabel\@mklab
  \@nmbrlistfalse
  #2\relax
  \@trivlist
  \parskip\parsep
  \parindent\listparindent
  \advance\linewidth -\rightmargin
  \advance\linewidth -\leftmargin
  \if@bidi@list@minipage@parbox
  \if@RTL
  \advance\@totalleftmargin \leftmargin
  \else
  \advance\@totalleftmargin \rightmargin
  \fi
  \else
```

```
  \if@hboxRconstruct
  \if@bidi@list@minipage@parbox@not@nob
  \if@RTL
    \advance\@totalleftmargin \rightmargin
  \else
    \advance\@totalleftmargin \leftmargin
  \fi
  \else
  \if@RTL
  \advance\@totalleftmargin \leftmargin
  \else
  \advance\@totalleftmargin \rightmargin
  \fi\fi
  \else
  \if@RTL
    \advance\@totalleftmargin \rightmargin
  \else
    \advance\@totalleftmargin \leftmargin
  \fi\fi\fi
  \parshape \@ne \@totalleftmargin \linewidth
  \ignorespaces}
\long\def\@iiiparbox#1#2[#3]#4#5{%
  \leavevmode
  \@pboxswfalse
  \if@hboxRconstruct
    \@bidi@list@minipage@parbox@not@nobtrue
  \fi
  \if@RTL
    \ifx#1t%
      \@bidi@list@minipage@parboxtrue
    \else
      \ifx#1b%
        \@bidi@list@minipage@parboxtrue
      \fi
    \fi
  \fi
  \setlength\@tempdima{#4}%
  \@begin@tempboxa\vbox{\hsize\@tempdima\@parboxrestore#5\@@par}%
    \ifx\relax#2\else
      \setlength\@tempdimb{#2}%
      \edef\@parboxto{to\the\@tempdimb}%
    \fi
    \if#1b\vbox
    \else\if #1t\vtop
    \else\ifmmode\vcenter
    \else\@pboxswtrue $\vcenter
    \fi\fi\fi
    \@parboxto{\let\hss\vss\let\unhbox\unvbox
       \csname bm@#3\endcsname}%
    \if@pboxsw \m@th$\fi
  \@end@tempboxa}
\newenvironment{LTRitems}
                 {\par\@RTLfalse\@RTLtabfalse\bidi@beamer@ragged
                  \if@bidi@list@minipage@parbox
```

```
                  \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth
                  \else \if@hboxRconstruct\if@bidi@list@minipage@parbox@not@nob
                  \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth\else
                  \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth\fi
                  \else \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth\f
                  \ignorespaces}{\vskip\z@}
\newenvironment{RTLitems}
                 {\par\@RTLtrue\@RTLtabtrue\bidi@beamer@ragged
                  \if@bidi@list@minipage@parbox
                  \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth
                  \else \if@hboxRconstruct\if@bidi@list@minipage@parbox@not@nob
                  \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth\else
                  \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth\fi
                  \else \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth\f
                  \ignorespaces}{\vskip\z@}
\newenvironment{LTRbibitems}
                 {\par\@RTLfalse\@RTLtabfalse\bidi@beamer@ragged
                  \if@bidi@list@minipage@parbox
                  \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth
                  \else \if@hboxRconstruct\if@bidi@list@minipage@parbox@not@nob
                  \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth\else
                  \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth\fi
                  \else \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth\f
                  \ignorespaces}{\vskip\z@}
\newenvironment{RTLbibitems}
                 {\par\@RTLtrue\@RTLtabtrue\bidi@beamer@ragged
                  \if@bidi@list@minipage@parbox
                  \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth
                  \else \if@hboxRconstruct\if@bidi@list@minipage@parbox@not@nob
                  \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth\else
                  \parshape \@ne \dimexpr(\@totalleftmargin+\leftmargin) \linewidth\fi
                  \else \parshape \@ne \dimexpr(\@totalleftmargin-\leftmargin) \linewidth\f
                  \ignorespaces}{\vskip\z@}
\def\raggedright{%
  \let\\\@centercr\@rightskip\@flushglue \rightskip\@rightskip
  \leftskip\z@skip
  \parindent\z@\parfillskip\z@skip}
\let\bidi@orig@raggedleft\raggedleft
\let\bidi@orig@raggedright\raggedright
\renewcommand\raggedleft{\if@bidi@list@minipage@parbox\bidi@orig@raggedright\else\if@hboxRc
\renewcommand\raggedright{\if@bidi@list@minipage@parbox\bidi@orig@raggedleft\else\if@hboxRc
\newcommand{\bidi@raggedright}{\if@RTL\raggedleft\else\raggedright\fi}
\newcommand{\bidi@raggedleft}{\if@RTL\raggedright\else\raggedleft\fi}
\DeclareRobustCommand\centerline[1]{%
\if@RTL\@@line{\hss\beginR#1\endR\hss}
\else\@@line{\hss#1\hss}\fi}
\def\bidi@orig@leftline#1{%
\if@RTL\@@line{\beginR#1\endR\hss}
\else\@@line{#1\hss}\fi}
\def\bidi@orig@rightline#1{%
\if@RTL\@@line{\hss\beginR#1\endR}
\else\@@line{\hss#1}\fi}
\DeclareRobustCommand\leftline[1]{\ifhmode\if@RTL\bidi@orig@rightline{#1}\else\bidi@orig@le
\DeclareRobustCommand\rightline[1]{\ifhmode\if@RTL\bidi@orig@leftline{#1}\else\bidi@orig@ri
```

```
\DeclareRobustCommand\bidirlap[1]{\hb@xt@\z@{\if@RTL\hss\fi#1\if@RTL\else\hss\fi}}
\DeclareRobustCommand\bidillap[1]{\hb@xt@\z@{\if@RTL\else\hss\fi#1\if@RTL\hss\fi}}
\def\@hangfrom#1{\setbox\@tempboxa\hbox{{#1}}%
      \hangindent \if@RTL-\else\fi\wd\@tempboxa\noindent\box\@tempboxa}
\def\narrower{%
  \advance\if@RTL\rightskip\else\leftskip\fi\parindent
  \advance\if@RTL\leftskip\else\rightskip\fi\parindent}
\DeclareRobustCommand\underline[1]{%
  \relax
  \ifmmode\@@underline{#1}%
  \else
\if@RTL $\@@underline{\hbox{\beginR#1\endR}}\m@th$\relax
\else
$\@@underline{\hbox{#1}}\m@th$\relax\fi\fi}
\if@compatibility
   \let\undertext=\underline
\fi
\def\@tabular{%
   \leavevmode \hbox \bgroup \if@RTLtab\beginR \fi
   $\let\@acol\@tabacol
   \let\@classz\@tabclassz
   \let\@classiv\@tabclassiv \let\\\@tabularcr\@tabarray}
\def\endtabular{\crcr\egroup\if@RTLtab\egroup\endR\egroup\fi
                  \egroup $\if@RTLtab\endR\fi\egroup}
\expandafter \let \csname endtabular*\endcsname = \endtabular
\def\@array[#1]#2{%
  \if #1t\vtop \else \if#1b\vbox \else \vcenter \fi\fi
  \bgroup
  \setbox\@arstrutbox\hbox{%
    \vrule \@height\arraystretch\ht\strutbox
           \@depth\arraystretch \dp\strutbox
           \@width\z@}%
  \@mkpream{#2}%
  \edef\@preamble{%
    \ialign \noexpand\@halignto
      \bgroup \@arstrut \@preamble \tabskip\z@skip \cr}%
  \let\@startpbox\@@startpbox \let\@endpbox\@@endpbox
  \let\tabularnewline\\%
    \let\par\@empty
    \let\@sharp##%
    \set@typeset@protect
    \lineskip\z@skip\baselineskip\z@skip
    \ifhmode \@preamerr\z@ \@@par\fi
  \if@RTLtab\hbox\bgroup\beginR\@hboxRconstructtrue\if #1t\vtop \else \vbox \fi\bgroup\fi
    \@preamble}
\def\array{\let\@acol\@arrayacol \let\@classz\@arrayclassz
 \let\@classiv\@arrayclassiv
 \let\\\@arraycr\let\@halignto\@empty\@RTLtabfalse\@tabarray}
\def\@testpach#1{\@chclass \ifnum \@lastchclass=\tw@ 4 \else
    \ifnum \@lastchclass=3 5 \else
     \z@ \if #1c\@chnum \z@ \else
                              \if \if@RTLtab#1r\else#1l\fi\@chnum \@ne \else
                              \if \if@RTLtab#1l\else#1r\fi\@chnum \tw@ \else
          \@chclass \if #1|\@ne \else
```

```
                    \if #1@\tw@ \else
                    \if #1p3 \else \z@ \@preamerr 0\fi
  \fi  \fi  \fi  \fi  \fi  \fi
\fi}
\def\bm@l{\if@RTL\hss\unhbox\@tempboxa\else\unhbox\@tempboxa\hss\fi}
\def\bm@r{\if@RTL\unhbox\@tempboxa\hss\else\hss\unhbox\@tempboxa\fi}
\def\bm@t{\unhbox\@tempboxa\hss}
\def\bm@b{\hss\unhbox\@tempboxa}
\def\@dottedtocline#1#2#3#4#5{%
  \ifnum #1>\c@tocdepth \else
    \vskip \z@ \@plus.2\p@
    {\if@RTL\rightskip\else\leftskip\fi #2\relax \if@RTL\leftskip\else\rightskip\fi \@tocrm
     \parindent #2\relax\@afterindenttrue
     \interlinepenalty\@M
     \leavevmode
     \@tempdima #3\relax
     \advance\if@RTL\rightskip\else\leftskip\fi \@tempdima \null\nobreak\hskip -\if@RTL\rig
     {#4}\nobreak
     \leaders\hbox{$\m@th
        \mkern \@dotsep mu\hbox{.}\mkern \@dotsep
        mu$}\hfill
     \nobreak
     \hb@xt@\@pnumwidth{{\hfil\normalfont \normalcolor #5}}%
     \par}%
  \fi}

\newcount\bidi@column@check@number

\def\bidi@column@status#1{\gdef\bidi@current@column@status{#1}}

\def\bidi@set@column@status#1#2{%
   \global\expandafter\let\csname #1\endcsname\bidi@current@column@status}

\if@twocolumn
\newcommand\DetectColumn[3][1]{%
 \ifx\bidi@firstcolumn@status@write\relax
     \PackageError{bidi}%
      {Option 'DetectColumn' not selected}%
      {\string\DetectColumn\space
       requires the use of the 'DetectColumn'
       option on the package}%
 \fi
 \global\advance\bidi@column@check@number\@ne
 \edef\bidi@column@type{\expandafter\ifx
                \csname bidi@column-\the\bidi@column@check@number\endcsname\relax
                   0\else
                   \csname bidi@column-\the\bidi@column@check@number\endcsname
                \fi}%
 \ifcase \bidi@column@type\relax
     \ifcase #1\or #2\or#3\fi   % 0 not known use first column as default
  \or
     #2%  % 1 First column
  \or
     #3%  % 2 Second (Last column)
```

```
  \else
    \ERROR
  \fi
  \edef\next{\write\@auxout
     {\string\bidi@set@column@status{bidi@column-\the\bidi@column@check@number}%
                                    {\bidi@column@type}}}%
  \next
}

\AtEndDocument{\def\bidi@set@column@status#1#2{%
     \ifnum #2=\bidi@current@column@status\else
       \@tempswatrue
     \fi}%
}
\fi

\def\RTL@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
  \else
    \global\@firstcolumntrue
    \setbox\@outputbox\vbox{%
     \hb@xt@\textwidth{%
       \hskip \columnwidth
       \hfil
       {\normalcolor\vrule \@width\columnseprule}%
       \hfil
        \hb@xt@\columnwidth{%
        \bidi@firstcolumn@status@write%
        \box\@leftcolumn \hss}%
        \hskip -\textwidth
       \hb@xt@\columnwidth{%
       \bidi@lastcolumn@status@write%
       \box\@outputbox \hss}%
       \hskip \columnsep
      \hskip \columnwidth }}%
  \@combinedblfloats
    \@setmarks
```

```
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi{\@outputpage
     \@startdblcolumn}%
    \endgroup
  \fi}%

\def\LTR@outputdblcol{%
  \if@firstcolumn
    \global\@firstcolumnfalse
    \global\setbox\@leftcolumn\copy\@outputbox
    \splitmaxdepth\maxdimen
    \vbadness\maxdimen
     \setbox\@outputbox\vbox{\unvbox\@outputbox\unskip}%
     \setbox\@outputbox\vsplit\@outputbox to\maxdimen
    \toks@\expandafter{\topmark}%
    \xdef\@firstcoltopmark{\the\toks@}%
    \toks@\expandafter{\splitfirstmark}%
    \xdef\@firstcolfirstmark{\the\toks@}%
    \ifx\@firstcolfirstmark\@empty
      \global\let\@setmarks\relax
    \else
      \gdef\@setmarks{%
        \let\firstmark\@firstcolfirstmark
        \let\topmark\@firstcoltopmark}%
    \fi
  \else
    \global\@firstcolumntrue
    \setbox\@outputbox\vbox{%
     \hb@xt@\textwidth{%
        \hb@xt@\columnwidth{%
        \bidi@firstcolumn@status@write%
        \box\@leftcolumn \hss}%
        \hfil
        {\normalcolor\vrule \@width\columnseprule}%
        \hfil
       \hb@xt@\columnwidth{%
       \bidi@lastcolumn@status@write%
       \box\@outputbox \hss}}}%
  \@combinedblfloats
    \@setmarks
    \@outputpage
    \begingroup
      \@dblfloatplacement
      \@startdblcolumn
      \@whilesw\if@fcolmade \fi{\@outputpage
     \@startdblcolumn}%
    \endgroup
  \fi}%


\renewcommand{\@outputdblcol}{\if@RTLmain\RTL@outputdblcol\else\LTR@outputdblcol\fi}
```

```
\newcommand{\RTLdblcol}{\renewcommand{\@outputdblcol}{\RTL@outputdblcol}}
\newcommand{\LTRdblcol}{\renewcommand{\@outputdblcol}{\LTR@outputdblcol}}

\bidi@appto\@outputbox@appendfootnotes{%
  \ifvoid\@bidi@copyins@
  \else
    \@outputbox@append{%
      \vskip \skip\@bidi@copyins@
      \color@begingroup
      \normalcolor
      \unvbox \@bidi@copyins@
      \color@endgroup
    }%
  \fi
}

\def\LTRmarginpar{%
  \ifhmode
    \@bsphack
    \@floatpenalty -\@Mii
  \else
    \@floatpenalty-\@Miii
  \fi
  \ifinner
    \@parmoderr
    \@floatpenalty\z@
  \else
    \@next\@currbox\@freelist{}{}%
    \@next\@marbox\@freelist{\global\count\@marbox\m@ne}%
       {\@floatpenalty\z@
        \@fltovf\def\@currbox{\@tempboxa}\def\@marbox{\@tempboxa}}%
  \fi
  \@ifnextchar [\@LTRxmpar\@LTRympar}
\long\def\@LTRxmpar[#1]#2{%
  \@LTRsavemarbox\@marbox{#1}%
  \@LTRsavemarbox\@currbox{#2}%
  \@xympar}
\long\def\@LTRympar#1{%
  \@LTRsavemarbox\@marbox{#1}%
  \global\setbox\@currbox\copy\@marbox
  \@xympar}
\long\def \@LTRsavemarbox #1#2{%
  \global\setbox #1%
    \color@vbox
      \vtop{%
        \hsize\marginparwidth
        \@parboxrestore
        \@LTRmarginparreset
        #2%
        \@minipagefalse
        \outer@nobreak
        }%
    \color@endbox
}
```

```
\def \@LTRmarginparreset {%
        \reset@font
        \normalsize
        \@minipagetrue
        \everypar{\@minipagefalse\everypar{}\beginL}%
}
\def\RTLmarginpar{%
  \ifhmode
    \@bsphack
    \@floatpenalty -\@Mii
  \else
    \@floatpenalty-\@Miii
  \fi
  \ifinner
    \@parmoderr
    \@floatpenalty\z@
  \else
    \@next\@currbox\@freelist{}{}%
    \@next\@marbox\@freelist{\global\count\@marbox\m@ne}%
       {\@floatpenalty\z@
        \@fltovf\def\@currbox{\@tempboxa}\def\@marbox{\@tempboxa}}%
  \fi
  \@ifnextchar [\@RTLxmpar\@RTLympar}
\long\def\@RTLxmpar[#1]#2{%
  \@RTLsavemarbox\@marbox{#1}%
  \@RTLsavemarbox\@currbox{#2}%
  \@xympar}
\long\def\@RTLympar#1{%
  \@RTLsavemarbox\@marbox{#1}%
  \global\setbox\@currbox\copy\@marbox
  \@xympar}
\long\def \@RTLsavemarbox #1#2{%
  \global\setbox #1%
    \color@vbox
      \vtop{%
        \hsize\marginparwidth
        \@parboxrestore
        \@RTLmarginparreset
        #2%
        \@minipagefalse
        \outer@nobreak
        }%
    \color@endbox
}
\def \@RTLmarginparreset {%
        \reset@font
        \normalsize
        \@minipagetrue
        \everypar{\@minipagefalse\everypar{}\beginR}%
}
\def\@addmarginpar{\@next\@marbox\@currlist{\@cons\@freelist\@marbox
    \@cons\@freelist\@currbox}\@latexbug\@tempcnta\@ne
    \if@twocolumn
        \if@firstcolumn \@tempcnta\m@ne \fi
```

```
    \else
      \if@mparswitch
         \ifodd\c@page \else\@tempcnta\m@ne \fi
      \fi
      \if@reversemargin \@tempcnta -\@tempcnta \fi
    \fi
    \ifnum\@tempcnta <\z@  \global\setbox\@marbox\box\@currbox \fi
    \@tempdima\@mparbottom
    \advance\@tempdima -\@pageht
    \advance\@tempdima\ht\@marbox
    \ifdim\@tempdima >\z@
      \@latex@warning@no@line {Marginpar on page \thepage\space moved}%
    \else
      \@tempdima\z@
    \fi
    \global\@mparbottom\@pageht
    \global\advance\@mparbottom\@tempdima
    \global\advance\@mparbottom\dp\@marbox
    \global\advance\@mparbottom\marginparpush
    \advance\@tempdima -\ht\@marbox
    \global\setbox \@marbox
                   \vbox {\vskip \@tempdima
                          \box \@marbox}%
    \global \ht\@marbox \z@
    \global \dp\@marbox \z@
    \kern -\@pagedp
    \nointerlineskip
    \hb@xt@\columnwidth
      {\if@RTL\if@LTRmarginpar\beginL\else\beginR\fi\else\if@RTLmarginpar\beginR\else\begin
          \hskip\columnwidth \hskip\marginparsep
       \else
          \hskip -\marginparsep \hskip -\marginparwidth
       \fi
       \box\@marbox \hss\if@RTL\if@LTRmarginpar\endL\else\endR\fi\else\if@RTLmarginpar\endR
    \nointerlineskip
    \hbox{\vrule \@height\z@ \@width\z@ \@depth\@pagedp}}
\long\def\@ympar#1{%
  \@savemarbox\@marbox{\if@RTL\if@LTRmarginpar\@RTLfalse\else\@RTLtrue\fi\else\if@RTLmargin
  \global\setbox\@currbox\copy\@marbox
  \@xympar}
\def\setRTLmarginpar{\@RTLmarginpartrue\@LTRmarginparfalse}
\def\setLTRmarginpar{\@LTRmarginpartrue\@RTLmarginparfalse}
\def\setdefaultmarginpar{\@RTLmarginparfalse\@LTRmarginparfalse}
\def\@stopline{\unskip\@stopfield\if@rjfield \global\@rjfieldfalse
   \@tempdima\@totalleftmargin \advance\@tempdima\linewidth
\hbox to\@tempdima{\if@RTL\beginR\fi\@itemfudge\hskip\dimen\@curtabmar
   \box\@curline\hfil\box\@curfield\if@RTL\endR\fi}\else\@addfield
   \hbox to\linewidth{\if@RTL\beginR\fi\@itemfudge
   \hskip\dimen\@curtabmar\box\@curline\hfil\if@RTL\endR\fi}%
\fi}

\newcommand*{\bidi@font@@outputpage}{}

\def\@outputpage{%
```

```
\begingroup           % the \endgroup is put in by \aftergroup
  \let \protect \noexpand
  \@resetactivechars
  \global\let\@@if@newlist\if@newlist
  \global\@newlistfalse
  \@parboxrestore
  \global\let\bidi@BeforeOutputPageShipOut\@firstofone
  \bidi@beforeoutputpageshipouthook
  \shipout \vbox{%
    \set@typeset@protect
    \aftergroup \endgroup
    \aftergroup \set@typeset@protect
                                % correct? or just restore by ending
                                % the group?
  \if@specialpage
    \global\@specialpagefalse\@nameuse{ps@\@specialstyle}%
  \fi
  \if@twoside
    \ifodd\count\z@ \let\@thehead\@oddhead \let\@thefoot\@oddfoot
       \if@RTLmain
          \let\@themargin\evensidemargin
        \else
          \let\@themargin\oddsidemargin
        \fi
    \else \let\@thehead\@evenhead \let\@thefoot\@evenfoot
       \if@RTLmain
         \let\@themargin\oddsidemargin
       \else
         \let\@themargin\evensidemargin
       \fi
    \fi
    \ifx\@thehead\@empty \let\@thehead\hfil \fi
    \ifx\@thefoot\@empty \let\@thefoot\hfil \fi
    \else %% not @twoside
    \ifx\@oddhead\@empty \let\@thehead\hfil \fi
    \ifx\@oddfoot\@empty \let\@thefoot\hfil \fi
  \fi
  \reset@font
  \normalsize
  \bidi@font@@outputpage
  \normalsfcodes
  \let\label\@gobble
  \let\index\@gobble
  \let\glossary\@gobble
  \baselineskip\z@skip \lineskip\z@skip \lineskiplimit\z@
    \@begindvi
    \vskip \topmargin
    \moveright\@themargin \vbox {%
      \global\let\bidi@BeforeHeader\@firstofone
      \bidi@beforeheaderhook
      \setbox\@tempboxa \vbox to\headheight{%
        \vfil
        \color@hbox
          \normalcolor
```

```
          \hb@xt@\textwidth{\if@RTLmain\@RTLtrue\beginR\else\@RTLfalse\beginL\fi\@thehead\i
        \color@endbox
        }%                          %% 22 Feb 87
      \dp\@tempboxa \z@
      \box\@tempboxa
      \vskip \headsep
      \global\let\bidi@BeforeOutputBoxOutputPage\@firstofone
      \bidi@beforeoutputboxoutputpagehook
      \box\@outputbox
      \global\let\bidi@AfterOutputBoxOutputPage\@firstofone
      \bidi@afteroutputboxoutputpagehook
      \global\let\bidi@BeforeFooter\@firstofone
      \bidi@beforefooterhook
      \baselineskip \footskip
      \color@hbox
        \normalcolor
        \hb@xt@\textwidth{\if@RTLmain\@RTLtrue\beginR\else\@RTLfalse\beginL\fi\@thefoot\if@
      \color@endbox
      \global\let\bidi@AfterFooter\@firstofone
      \bidi@afterfooterhook
      }%
    }%
  \global\let\bidi@AfterOutputPageShipOut\@firstofone
  \bidi@afteroutputpageshipouthook
  \global\let\if@newlist\@@if@newlist
  \global \@colht \textheight
  \stepcounter{page}%
  \let\firstmark\botmark
  \global\let\bidi@AtEndOutputPage\@firstofone
  \bidi@atendoutputpagehook
}
\long\def\@makecaption#1#2{%
  \vskip\abovecaptionskip
  \sbox\@tempboxa{#1: #2}%
  \ifdim \wd\@tempboxa >\hsize
    \if@RTL\beginR\fi#1: #2\if@RTL\endR\fi\par
  \else
    \global \@minipagefalse
    \hb@xt@\hsize{\if@RTL\beginR\fi\hfil\box\@tempboxa\hfil\if@RTL\endR\fi}%
  \fi
  \vskip\belowcaptionskip}
\let\bidi@saved@eqno=\eqno
\let\bidi@saved@leqno=\leqno
\def\eqno{\ifnum\predisplaydirection<\z@ \bidi@saved@leqno \else \bidi@saved@eqno \fi}
\def\leqno{\ifnum\predisplaydirection<\z@ \bidi@saved@eqno \else \bidi@saved@leqno \fi}
\ApplyPatchIfPackageLoadedF{amsmath}{
\def\@eqnnum{{\normalfont \normalcolor \if@RTL\beginR\fi(\theequation)\if@RTL\endR\fi}}
}
\input{footnote-xetex-bidi.def}
\if@twocolumn
  \let\autofootnoterule\relax
  \let\leftfootnoterule\relax
  \let\rightfootnoterule\relax
  \textwidthfootnoterule
```

```
\fi
\if@bidi@csundef{@idxitem}{}{%
\renewcommand\@idxitem{\par\hangindent \if@RTL-\fi40\p@}%
}

\ApplyPatchToClassesIfPackageLoadedF{%
  book, %
  report %
}{flowfram}

\ApplyPatchToPackageIfPackageLoadedF{float}{floatrow}

\ApplyPatchToFilesIfPackageLoadedF{amsmath}{%
  fleqn, %
  leqno%
}[clo]

\ApplyPatchToClasses{%
  amsart, %
  amsbook, %
  article, %
  artikel1, %
  artikel2, %
  artikel3, %
  beamer, %
  boek, %
  boek3, %
  bookest, %
  combine, %
  extbook, %
  extletter, %
  extarticle, %
  extreport, %
  imsproc, %
  letter, %
  memoir, %
  rapport1, %
  rapport3, %
  refrep, %
  scrartcl, %
  scrbook, %
  scrreprt %
}

\ApplyPatchToPackages{%
  algorithm2e, %
  amsmath, %
  amstext, %
  amsthm, %
  arydshln, %
  array, %
  beamerbaseauxtemplates, %
  beamerbaseboxes, %
  beamerbasecolor, %
```

```
25158  beamerbasecompatibility, %
25159  beamerbaseframecomponents, %
25160  beamerbaseframesize, %
25161  beamerbaselocalstructure, %
25162  beamerbasemisc, %
25163  beamerbasenavigation, %
25164  beamerbaseoverlay, %
25165  beamerinnerthemecircles, %
25166  beamerinnerthemedefault, %
25167  beamerinnerthemefocus, %
25168  beamerinnerthemeinmargin, %
25169  beamerinnerthememetropolis, %
25170  beamerinnerthemerectangles, %
25171  beamerinnerthemerounded, %
25172  beameroutertheмedefault, %
25173  beameroutertheмefocus, %
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\def\XeTeX{\@ensure@LTR{\@@XeTeX}}
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