

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

The documentation for package `hyperref` consists of several files:

[Manual](#) The **USER MANUAL** (also available as HTML).

[README](#) The **README** file (also available as text file). Here information is collected that is not yet in the manual: new features, package compatibility, limitations, known problems, ...

[ChangeLog](#) This file records the version history (also available as text file).

[Options](#) This file provides a short option summary.

[Bookmark talk, slides](#) Slides for the talk “PDF information and navigation elements with hyperref, pdfTeX and thumbpdf” at EuroT_EX 1999.

[Bookmark talk, paper](#) The paper version of the talk.

Source code documentation:

 [hyperref.dtx](#) This is the source code documentation for hyperref (this file).

[backref.dtx](#) “Back referencing from bibliographical citations”

[nameref.dtx](#) “Section name references in L^AT_EX”

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3 File hycheck.tex

Many commands of L^AT_EX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\checkcommand` that is more powerful than L^AT_EX's `\CheckCommand`, because it takes `\DeclareRobustCommand` and optional parameters better into account.

```
1 \langle*check\rangle
2 \documentclass{article}
3 \makeatletter
```

`\checklatex` Optional argument: release date of L^AT_EX.

```
4 \newcommand*{\checklatex}[1]{}{
5   \typeout{}%
6   \typeout{* Format: 'LaTeX2e' #1}%
7   \typeout{\space\space Loaded: '\fmtname' \fmtversion}%
8 }%
```

`\checkpackage` The argument of `\checkpackage` is the package name without extension optionally followed by a release date.

```
9 \newcommand*{\checkpackage}[1]{%
10  \def\HyC@package{#1}%
11  \let\HyC@date\@empty
12  \@ifnextchar[\HyC@getDate\HyC@checkPackage
13 }
```

`\HyC@getDate` The release date is scanned.

```
14 \def\HyC@getDate[#1]{%
15  \def\HyC@date{#1}%
16  \HyC@checkPackage
17 }
```

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19  \typeout{}%
20  \begingroup
21  \edef\x{\endgroup
22    \noexpand\RequirePackage{\HyC@package}%
23    \ifx\HyC@date\@empty\relax\else\HyC@date\fi%
24  }%
25  \x
26  \typeout{}%
27  \typeout{%
28    * Package '\HyC@package'%
29    \ifx\HyC@date\@empty
30      \else
31        \space\HyC@date
32      \fi
33  }%
34  \@ifundefined{ver@\HyC@package.sty}{%
35  }{%
36    \typeout{%
37      \space\space Loaded: '\HyC@package' %
38      \csname ver@\HyC@package.sty\endcsname
39    }%
```

```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a L^AT_EX definition and compares this definition with the current meaning of that command.

```

42 \newcommand*{\checkcommand}[1]{%
43   \begingroup
44   \ifx\long#1\relax
45     \expandafter\HyC@checklong
46   \else
47     \def\HyC@defcmd{#1}%
48     \expandafter\let\expandafter\HyC@next
49       \csname HyC@\expandafter\@gobble\string#1\endcsname
50     \expandafter\HyC@checkcommand
51   \fi
52 }

```

`\HyC@checklong` The definition command `\def` or `\edef` is read.

```

53 \def\HyC@checklong#1{%
54   \def\HyC@defcmd{\long#1}%
55   \expandafter\let\expandafter\HyC@next
56     \csname HyC@\expandafter\@gobble\string#1\endcsname
57   \HyC@checkcommand
58 }

```

`\HyC@checkcommand` The optional star of L^AT_EX's definitions is parsed.

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{hycheck}{%
62       Unknown command '\expandafter\strip@prefix\meaning\HyC@cmd'%
63     }\@ehd
64     \expandafter\endinput
65   \fi
66   \@ifstar{%
67     \def\HyC@star{*}%
68     \HyC@check
69   }{%
70     \let\HyC@star\@empty
71     \HyC@check
72   }%
73 }

```

`\HyC@check` The macro `\HyC@check` reads the definition command.

```

74 \def\HyC@check#1{%
75   \def\HyC@cmd{#1}%
76   \let\HyC@org@cmd#1%
77   \let#1\relax
78   \let\HyC@param\@empty
79   \HyC@Toks{}%
80   \let\HyC@org@optcmd\HyC@noValue
81   \let\HyC@org@robustcmd\HyC@noValue
82   \let\HyC@org@robustoptcmd\HyC@noValue
83   \HyC@next
84 }

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


`\HyC@newcommand` The code for `\newcommand`.

```
86 \def\HyC@newcommand{%
87   \let\HyC@@cmd\HyC@cmd
88   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
89 }
```

`\HyC@Toks` A register for storing the default value of an optional argument.

```
90 \newtoks\HyC@Toks
```

`\HyC@nc@noopt` This macro `\HyC@nc@noopt` is called, if the parser has reached the definition text.

```
91 \long\def\HyC@nc@noopt#1{%
92   \edef\x{%
93     \expandafter\noexpand\HyC@defcmd
94     \HyC@star
95     \expandafter\noexpand\HyC@cmd
96     \HyC@param\the\HyC@Toks
97   }%
98   \x{#1}%
99   \HyC@doCheck
100 }
```

`\HyC@nc@opt` This macro scans the first optional argument of a L^AT_EX definition (number of arguments).

```
101 \def\HyC@nc@opt[#1]{%
102   \def\HyC@param{{#1}}%
103   \@ifnextchar[\HyC@nc@default\HyC@nc@noopt
104 }
```

`\HyC@nc@default` Macro `\HyC@nc@default` scans the default for an optional argument.

```
105 \def\HyC@nc@default[#1]{%
106   \HyC@Toks={{#1}}%
107   \edef\HyC@optcmd{%
108     \expandafter\noexpand
109     \csname\expandafter\string\HyC@@cmd\endcsname
110   }%
111   \expandafter\let\expandafter\HyC@org@optcmd\HyC@optcmd
112   \HyC@nc@noopt
113 }
```

`\HyC@DeclareRobustCommand` `\DeclareRobustCommand{\cmd}` makes the command `\cmd` robust, that then calls `\cmd␣` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```
114 \def\HyC@DeclareRobustCommand{%
115   \edef\HyC@robustcmd{%
116     \expandafter\noexpand
117     \csname\expandafter\expandafter\expandafter\@gobble
118     \expandafter\string\HyC@cmd\space\endcsname
119   }%
120   \expandafter\let\expandafter\HyC@org@robustcmd\HyC@robustcmd
121   \expandafter\let\HyC@robustcmd\relax
122   \let\HyC@@cmd\HyC@robustcmd
123   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
124 }
```

`\HyC@def` The parameter text of `\def` or `\edef` is stored in the token register `\HyC@Toks`.

`\HyC@edef`

```

125 \def\HyC@def#1#{%
126   \HyC@Toks={#1}%
127   \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

`\HyC@doCheck` This command performs the checks and prints the result.

```

130 \def\HyC@doCheck{%
131   \typeout{* Checking ‘\HyC@string\HyC@cmd’:}%
132   \HyC@checkItem{cmd}%
133   \HyC@checkItem{robustcmd}%
134   \HyC@checkItem{optcmd}%
135   \HyC@checkItem{robustoptcmd}%
136   \endgroup
137 }

```

`\HyC@checkItem` A single check.

```

138 \def\HyC@checkItem#1{%
139   \expandafter\ifx\csname HyC@org@#1\endcsname\HyC@noValue
140   \else
141     \expandafter\expandafter\expandafter\ifx
142     \csname HyC@#1\expandafter\endcsname
143     \csname HyC@org@#1\endcsname
144     \expandafter\HyC@checkOk\csname HyC@#1\endcsname
145   \else
146     \expandafter\HyC@checkFailed
147     \csname HyC@#1\expandafter\endcsname
148     \csname HyC@org@#1\endcsname
149   \fi
150 \fi
151 }

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

152 \def\HyC@string#1{\expandafter\string#1}
153 \def\HyC@meaning#1{\expandafter\meaning#1}

```

`\HyC@checkOk` The result, if the check succeeds.

```

154 \def\HyC@checkOk#1{%
155   \typeout{\space\space‘\HyC@string#1’ ok.}%
156 }

```

`\HyC@checkFailed` The result, if the check fails.

```

157 \def\HyC@checkFailed#1#2{%
158   \typeout{\space\space‘\HyC@string#1’ failed.}%
159   \typeout{\space\space* original: \meaning#2}%
160   \typeout{\space\space* expected: \HyC@meaning#1}%
161 }

162 % *****
163 \</check>
164 \<*/package>

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

First we save the original meaning of ‘ and = in the token register \toks@, because we need the two characters in the macros \Hy@SetCatcodes and \Hy@RestoreCatcodes.

```
165 \begingroup
166 \makeother\‘%
167 \makeother\=%
168 \edef\x{%
169   \edef\noexpand\x{%
170     \endgroup
171     \noexpand\toks@{%
172       \catcode 96=\noexpand\the\catcode'\noexpand'\relax
173       \catcode 61=\noexpand\the\catcode'\noexpand\=\relax
174     }%
175   }%
176   \noexpand\x
177 }%
178 \x
179 \makeother\‘
180 \makeother\=
```

\Hy@SetCatcodes

```
181 \def\Hy@SetCatcodes{%
182   \makeother\‘%
183   \makeother\=%
184   \catcode'\$=3 %
185   \catcode'\&=4 %
186   \catcode'\^=7 %
187   \catcode'\_ =8 %
188   \makeother\| %
189   \makeother\:%
190   \makeother\(%
191   \makeother\)%
192   \makeother\[ %
193   \makeother\] %
194   \makeother\/ %
195   \makeother\! %
196   \makeother\< %
197   \makeother\> %
198   \makeother\.%
199   \makeother\;%
200   \makeother\+ %
201   \makeother\-%
202   \makeother\" %
203   \makeother\' %
204 }
```

\Hy@RestoreCatcodes

```
205 \begingroup
206 \def\x#1{\catcode'\noexpand#1=\the\catcode'#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%
```

```

210 \x\&%
211 \x\^%
212 \x\_%
213 \x\|%
214 \x\:%
215 \x\(%
216 \x\) %
217 \x\[ %
218 \x\] %
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```

231 \Hy@SetCatcodes

```

It needs the December 95 release of L^AT_EX, because it uses `\protected@write`, and it defines commands in options; and the page setup internal code changed at that point. It'll probably break with the later releases!

Use package `hobsub-hyperref` for faster package loading.

```

232 \IfFileExists{hobsub-hyperref.sty}{%
233 \RequirePackage{hobsub-hyperref}[2011/01/30]%
234 }{}

235 \RequirePackage{ltxcmds}[2010/11/12]
236 \RequirePackage{ifpdf}[2006/02/20]
237 \RequirePackage{pdftexcmds}[2009/04/10]
238 \@ifpackagelater{pdftexcmds}{2010/11/04}{%}{%
239 \ltx@ifundefined{pdfdraftmode}{%
240 \let\pdf@ifdraftmode\ltx@secondoftwo
241 }{%
242 \ifpdf
243 \def\pdf@ifdraftmode{%
244 \ifnum\pdfdraftmode=\ltx@one
245 \expandafter\ltx@firstoftwo
246 \else
247 \expandafter\ltx@secondoftwo
248 \fi
249 }%
250 \else
251 \let\pdf@ifdraftmode\ltx@secondoftwo
252 \fi
253 }%
254 }

255 \RequirePackage{infwarerr}[2010/04/08]
256 \RequirePackage{keyval}[1997/11/10]
257 \RequirePackage{kvsetkeys}[2007/09/29]
258 \RequirePackage{pdfescape}[2007/11/11]
259 \RequirePackage{ifvtex}
260 \RequirePackage{ifxetex}[2006/08/21]

```

```

261 \RequirePackage{hycolor}
262 \RequirePackage{letltxmacro}[2008/06/13]
263 \RequirePackage{auxhook}[2009/12/14]
264 \def\Hy@Error{\@PackageError{hyperref}}
265 \def\Hy@Warning{\@PackageWarning{hyperref}}
266 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
267 \def\Hy@Info{\@PackageInfo{hyperref}}
268 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
269 \def\Hy@Message#1{%
270   \GenericWarning{%
271     (hyperref)\@spaces\@spaces\@spaces\@spaces
272   }{%
273     Package hyperref Message: #1\ltx@gobble
274   }%
275 }

```

4.2 Version check

\Hy@VersionChecked

```

276 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

277 \def\Hy@VersionCheck#1{%
278   \begingroup
279   \ltx@ifundefined{ver@hyperref.sty}{%
280     \Hy@Error{%
281       This should not happen!\MessageBreak
282       Missing hyperref version%
283     }\@ehd
284   }{%
285     \ltx@ifundefined{ver@#1}{%
286       \Hy@Error{%
287         This should not happen!\MessageBreak
288         Missing version of '#1'%
289       }\@ehd
290     }{%
291       \def\x##1##2##3{%
292         \expandafter\expandafter\expandafter\Hy@@VersionCheck
293         \expandafter\expandafter\expandafter##2%
294         \csname ver@##3\endcsname##1##1\@nil
295       }%
296       \x{ }\y{hyperref.sty}%
297       \x{ }\z{#1}%
298       \ifx\y\z
299         \else
300         \Hy@Error{%
301           Version mismatch!\MessageBreak
302           * \y: hyperref.sty\MessageBreak
303           * \z: #1%
304         }\@ehd
305       \fi
306     }%
307   }%
308   \endgroup
309   \chardef\Hy@VersionChecked=1 %
310 }

```

\Hy@@VersionCheck

```
311 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
312   \def#1{#2 #3}%
313 }
```

4.3 Checks with regular expressions

```
314 \ltx@ifundefined{pdfmatch}{}%
315   \let\Hy@Match\ltx@gobblefour
316 }{%
317   \def\Hy@Match#1#2{%
318     \begingroup
319     \edef\~{\ltx@backslashchar\string~}%
320     \edef\.{\ltx@backslashchar.}%
321     \edef\[\{\ltx@backslashchar[]}%
322     \edef\$\{\ltx@backslashchar$}%
323     \edef\(\{\ltx@backslashchar(}%
324     \edef\)\{\ltx@backslashchar)}%
325     \edef\|\{\ltx@backslashchar|}%
326     \edef\*\{\ltx@backslashchar*}%
327     \edef\+\{\ltx@backslashchar+}%
328     \edef\?\{\ltx@backslashchar?}%
329     \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
330     \edef\}\{\ltx@rightbracechar}%
331     \edef\\{\ltx@backslashchar\ltx@backslashchar}%
332     \let\ \ltx@space
333     \ifcase\pdfmatch{#2}{#1} %
334       \endgroup
335       \expandafter\ltx@secondoftwo
336     \or
337       \endgroup
338       \expandafter\ltx@firstoftwo
339     \else
340       \Hy@Warning{%
341         Internal error: Wrong pattern!\MessageBreak
342         --> #2 <--\MessageBreak
343         Pattern check ignored%
344       }%
345       \endgroup
346       \expandafter\ltx@firstoftwo
347     \fi
348   }%
349   \ltx@ifpackagelater{ltxcmds}{2010/09/11}{}{}%
350   \begingroup
351     \lccode'0=\{\relax
352   \lowercase{\endgroup
353     \def\ltx@leftbracechar{0}%
354   }%
355   \begingroup
356     \lccode'0=\}\relax
357   \lowercase{\endgroup
358     \def\ltx@rightbracechar{0}%
359   }%
360 }%
361 }
```

4.4 Compatibility with format dumps

`\AfterBeginDocument` For use with pre-compiled formats, created using the `ldump` package, there needs to be 2 hooks for adding material delayed until `\begin{document}`. These are called `\AfterBeginDocument` and `\AtBeginDocument`. If `ldump` is not loaded, then a single hook suffices for normal L^AT_EX processing.

The default definition of `\AfterBeginDocument` cannot be done by `\let` because of problems with `xypic`.

```
362 \@ifundefined{AfterBeginDocument}{%
363   \def\AfterBeginDocument{\AtBeginDocument}%
364 }{}%
```

`\Hy@AtBeginDocument` For the case that package ‘hyperref’ is loaded using `\AtBeginDocument`, we have to wrap the calls of `\AtBeginDocument`/`\AfterBeginDocument` in `\AtEndOfPackage`. However, packages must be loaded in `\AtEndOfPackage` *before* package ‘kvoptions’ has to perform its option cleanup. Therefore we use a hook.

```
365 \def\Hy@AtBeginDocument{%
366   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
367 }
```

`\Hy@AtEndOfPackage`

```
368 \def\Hy@AtEndOfPackage{%
369   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
370 }
```

`\Hy@AtBeginDocumentHook`

```
371 \let\Hy@AtBeginDocumentHook\ltx@empty
```

`\Hy@AtEndOfPackageHook`

```
372 \let\Hy@AtEndOfPackageHook\ltx@empty
```

Install the hook, before package ‘kvoptions’ is loaded.

```
373 \AtEndOfPackage{%
374   \Hy@AtEndOfPackageHook
375   \let\Hy@AtEndOfPackageHook\@undefined
376   \AfterBeginDocument{%
377     \Hy@AtBeginDocumentHook}%
378   \let\Hy@AtBeginDocumentHook\@undefined
379   }%
380 }
```

Package `kvoptions` is used for processing options that are given as key value pairs. The package provides `\ProcessKeyvalOptions`, formerly known as `\ProcessOptionsWithKV`.

```
381 \RequirePackage{kvoptions}[2009/07/21]
```

4.5 Switches

```
382 \newif\ifHy@stoppeearly
383 \newif\ifHy@typexml
384 \newif\ifHy@activeanchor
385 \newif\ifHy@backref
386 \newif\ifHy@bookmarks
387 \newif\ifHy@bookmarksnumbered
388 \newif\ifHy@bookmarksopen
389 \newif\ifHy@breaklinks
```

```

390 \newif\ifHy@pdfcenterwindow
391 \newif\ifHy@CJKbookmarks
392 \newif\ifHy@colorlinks
393 \newif\ifHy@destlabel
394 \newif\ifHy@draft
395 \let\Hy@finaltrue\Hy@draftfalse
396 \let\Hy@finalfalse\Hy@drafttrue
397 \newif\ifHy@pdfescapeform
398 \newif\ifHy@hyperfigures
399 \newif\ifHy@pdffitwindow
400 \newif\ifHy@frenchlinks
401 \newif\ifHy@hyperfootnotes
402 \newif\ifHy@hyperindex
403 \newif\ifHy@hypertextnames
404 \newif\ifHy@implicit
405 \newif\ifHy@linktocpage
406 \newif\ifHy@localanchorname
407 \newif\ifHy@pdfmenubar
408 \newif\ifHy@naturalnames
409 \newif\ifHy@nesting
410 \newif\ifHy@pdfnewwindowset
411 \newif\ifHy@pdfnewwindow
412 \newif\ifHy@ocgcolorlinks
413 \newif\ifHy@pageanchor
414 \newif\ifHy@pdfpagelabels
415 \newif\ifHy@pdfpagehidden
416 \newif\ifHy@pdfstring
417 \newif\ifHy@plainpages
418 \newif\ifHy@psize
419 \newif\ifHy@raiselinks
420 \newif\ifHy@seminarslides
421 \newif\ifHy@setpagesize
422 \newif\ifHy@texht
423 \newif\ifHy@psdextra
424 \newif\ifHy@pdftoolbar
425 \newif\ifHy@unicode
426 \newif\ifHy@pdfusetitle
427 \newif\ifHy@verbose
428 \let\Hy@debugtrue\Hy@verbosetrue
429 \let\Hy@debugfalse\Hy@verbosefalse
430 \newif\ifHy@pdfwindowui
431 \newif\ifHy@pdfdisplaydoctitle
432 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

433 \Hy@backreffalse
434 \Hy@bookmarksnumberedfalse
435 \Hy@bookmarksopenfalse
436 \Hy@bookmarksstrue
437 \Hy@breaklinksfalse
438 \Hy@pdfcenterwindowfalse
439 \Hy@CJKbookmarksfalse
440 \Hy@destlabelfalse
441 \Hy@pdfescapeformfalse
442 \Hy@hyperfiguresfalse
443 \Hy@pdffitwindowfalse
444 \Hy@hyperfootnotetrue
445 \Hy@hyperindextrue

```



```

446 \Hy@hypertextnamestrue
447 \Hy@implicitttrue
448 \Hy@linktocpagefalse
449 \Hy@localanchornamefalse
450 \Hy@pdfmenubartrue
451 \Hy@naturalnamesfalse
452 \Hy@nestingfalse
453 \Hy@pdfnewwindowsetfalse
454 \Hy@pdfnewwindowfalse
455 \Hy@pageanchortrue
456 \Hy@pdfpagelabelstrue
457 \Hy@pdfpagehiddenfalse
458 \Hy@pdfstringfalse
459 \Hy@plainpagesfalse
460 \Hy@raiselinksfalse
461 \Hy@setpagesizetrue
462 \Hy@texhtfalse
463 \Hy@psdextrafalse
464 \Hy@pdftoolbartrue
465 \Hy@typexmlfalse
466 \Hy@unicodefalse
467 \Hy@pdfusetitlefalse
468 \Hy@verbosefalse
469 \Hy@pdfwindowuitrue
470 \Hy@pdfdisplaydoctitlefalse
471 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

472 \def\Hy@StepCount#1{\advance#1 by 1 }%

```

\Hy@GlobalStepCount

```

473 \def\Hy@GlobalStepCount#1{\global\advance#1 by 1 }%

```

```

474 \newdimen\@linkdim
475 \let\Hy@driver\ltx@empty
476 \let\MaybeStopEarly\relax
477 \newcount\Hy@linkcounter
478 \newcount\Hy@pagecounter
479 \Hy@linkcounter0
480 \Hy@pagecounter0

```

5.1 Macros for recursions

```

481 \let\Hy@ReturnEnd\@empty
482 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
483 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

\Hy@safe@activetrue Babel's switch setting commands cannot be used directly, because they can be undefined if babel is not loaded.

\Hy@safe@activesfalse

```

484 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
485 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

At some places numbers in pdf units are expected (eg: FitBH, ...). The following macros perform the transformation from TeX units (pt) to PDF units (bp).

`\hypercalcbp` The user macro `\hypercalcbp` can be used, for example, inside option values:

```
pdfstartview={FitBH \hypercalcbp{\paperheight-\topmargin-1in}}
```

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalcbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalcbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalcbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalcbpdef`. Limitations:
 - Works only in options that use `\hypercalcbpdef` (currently only `pdfstartview`).
 - For calculations package `calc` has to be loaded.
 - The expansion of the argument is done at definition time.

Example (TeX):

```
\usepackage{calc}
\usepackage[...]{hyperref}
\hypersetup{
  pdfstartview={FitBH \hypercalcbp{\paperheight-\topmargin-1in
    -\headheight-\headsep}
}
```

`\hypercalcbp`

```
486 \begingroup\expandafter\expandafter\expandafter\endgroup
487 \expandafter\ifx\csname dimexpr\endcsname\relax
488   \def\hypercalcbpdef#1#2{%
489     \begingroup
490       \toks@{}%
491       \HyCal@scan#2\hypercalcbp\@nil
492     \expandafter\endgroup
493     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
494   }%
495   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
496     \toks@\expandafter{\the\toks@ #1}%
497     \ifx\#2\%
498       \else
499         \ltx@ReturnAfterFi{%
500           \HyCal@do#2\@nil
501         }%
502       \fi
503     }%
504   \def\HyCal@do#1#2\@nil{%
505     \@ifpackageloaded{calc}{%}{%
506       \Hy@Warning{%
507         For calculations \string\hypercalcbp\space needs\MessageBreak
508         package calc or e-TeX%
509       }%
510     }%
```

```

511 \setlength{\dimen@}{#1}%
512 \setlength{\dimen@}{0.99626401\dimen@}%
513 \edef\x{%
514   \toks@{%
515     \the\toks@
516     \strip@pt\dimen@
517   }%
518 } \x
519 \HyCal@scan#2\@nil
520 }%
521 \else
522 \def\hypercalcbp#1{%
523   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
524 }%
525 \def\hypercalcbpdef{\def}%
526 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

Naming convention: All internal commands that are only needed by `\pdfstringdef` are prefixed with `\HyPsd@`.

6.1 Description of PDF strings

The PDF specification defines several places to hold text strings (bookmark names, document information, text annotations, etc.). The PDF strings have following properties:

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <code>ddd</code>
- Strings are stored either in `PDFDocEncoding`, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a legal `PDFDocEncoded` string. Currently the definition is global, but this can be changed in the future.

Important: In `TEX`'s view PDF strings are written to a file and are expanded only in its mouth. Stomach commands that cannot be expanded further aren't executed, they are written verbatim. But the PDF reader that reads such a string isn't a `TEX` interpreter!

The macro `\pdfstringdef` consists of three main parts:

1. Preprocessing. Here the expansion is prepared. The encoding is set and many commands are redefined, so that they work appropriate.

2. Expansion. The \TeX string is expanded the first time to get a PDF string.
3. Postprocessing. The result of the expansion is checked and converted to the final form.

`\pdfstringdef` `\pdfstringdef` works on the tokens in `#2` and converts them to a PDF string as far as possible:

- The result should obey the rules of the PDF specification for strings.
- The string can safely be processed by \TeX , because the tokens have only catcodes 10 until 12.

The result is stored in the command token given in `#1`.

```
527 \def\pdfstringdef#1#2{%
```

Many redefinitions are needed, so all the work is done in a group.

```
528 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (vtex driver, Unicode support).

The escape sequences start with a backslash. By `\string` it will be printed. Therefore it is ensured that the \TeX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard \LaTeX behaviour.

```
529 \escapechar'\%
```

From the view of \TeX an octal sequence consists of the command tokens `\0` until `\3` and two digits. For saving tokens `\0`, `\1`, `\2`, and `\3` are directly used without a preceding `\string` in the glyph definitions. This is done here locally by defining the `\0` until `\3` commands. So the user can use octal escape sequences directly, the disadvantage is that a previous definition of this short commands does not apply.

```
530 \edef\0{\string\0}%
531 \edef\1{\string\1}%
532 \edef\2{\string\2}%
533 \edef\3{\string\3}%
```

Setting font encoding. The unicode encoding uses `\8` and `\9` as marker for the higher byte. `\8` is an abbreviation for the higher bytes 0 until 7 that can be expressed by one digit. `\8` will be converted to `\00`. However `\9` only marks the next three digits as higher byte and will be removed later.

The encoding is set by `\enc@update` for optimizing reasons.

```
534 \ifHy@unicode
535 \edef\8{\string\8}%
536 \edef\9{\string\9}%
```

```

537 \fontencoding{PU}%
538 \HyPsd@UTFviii
539 \def\ifpdfstringunicode##1##2{##1}%
540 \else
541 \fontencoding{PD1}%
542 \def\ifpdfstringunicode##1##2{##2}%
543 \fi
544 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
545 \enc@update

```

Internal encoding commands. `\pdfstringdef` interpretes text strings which are not allowed to contain mathematical stuff. The text glyph commands will produce a warning, if called in math mode. But this warning disturbs while expanding. Therefore we check for math mode here, before `\@inmathwarn` will be disabled (see below).

```

546 \@inmathwarn\pdfstringdef

```

If a glyph is used, that isn't in the PD1/PU encoding there will be an infinite error loop, because the NFSS encoding stuff have to be expanded unprotected (`\edef`), so that the assignments of `\@changed@cmd` don't take place. To patch this behaviour I only found `\@inmathwarn` as a usable hook. While an `\edef` a warning message by `\@inmathwarn` or `\TextSymbolUnavailable` cannot be give out, so `\@inmathwarn` should be disabled. And with the help of it the assignments in `\@changed@cmd` can easily be caught (see below).

```

547 \let\@inmathwarn\HyPsd@inmathwarn

```

Unknown composite characters are built with `\add@accent`, so it is redefined to provide a warning.

```

548 \let\add@accent\HyPsd@add@accent

```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here.

```

549 \let\{\textbraceleft
550 \let\}\textbraceright
551 \let\\\textbackslash
552 \let\#\textnumbersign
553 \let\$\textdollar
554 \let\%\textpercent
555 \let\&\textampersand
556 % \let\~\textasciitilde
557 \let\_ \textunderscore
558 \let\P\textparagraph
559 \let\ldots\textellipsis
560 \let\dots\textellipsis

```

Newline `\newline` or `\\` do not work in bookmarks, in text annotations they should expand to `\r`. In pdf strings `\\` stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: `\pdfstringdefDisableCommands{\let\\\textbackslash}`

new line: `\pdfstringdefDisableCommands{\let\\\textCR}`

disabled: `\pdfstringdefDisableCommands{\let\\\empty}`

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```
561 \def\{\pdfstringdefWarn\}%
562 \def\newline{\pdfstringdefWarn\newline}%
```

Logos. Because the box shifting used in the T_EX logo does not work while writing to a file, the standard T_EX logos are redefined.

```
563 \def\TeX{\TeX}%
564 \def\LaTeX{\LaTeX}%
565 \def\LaTeXe{%
566   \LaTeX2%
567   \ifHy@unicode\textepsilon\else e\fi
568 }%
569 \def\eTeX{%
570   \ifHy@unicode\textepsilon\else e\fi
571   -\TeX%
572 }%
573 \def\SliTeX{\SliTeX}%
574 \def\MF{Metafont}%
575 \def\MP{Metapost}%
```

Standard font commands. Because font changes do not work, the standard font switching commands are disabled.

```
576 \let\fontencoding\@gobble
577 \let\fontfamily\@gobble
578 \let\fontseries\@gobble
579 \let\fontshape\@gobble
580 \let\fontsize\@gobbletwo
581 \let\selectfont\@empty
582 \let\usefont\@gobblefour
583 \let\emph\@firstofone
584 \let\textnormal\@firstofone
585 \let\textrm\@firstofone
586 \let\textsf\@firstofone
587 \let\texttt\@firstofone
588 \let\textbf\@firstofone
589 \let\textmd\@firstofone
590 \let\textit\@firstofone
591 \let\textsc\@firstofone
592 \let\textsl\@firstofone
593 \let\textup\@firstofone
594 \let\normalfont\@empty
595 \let\rmfamily\@empty
596 \let\sffamily\@empty
597 \let\ttfamily\@empty
598 \let\bfseries\@empty
599 \let\mdseries\@empty
600 \let\itshape\@empty
601 \let\scshape\@empty
602 \let\slshape\@empty
603 \let\upshape\@empty
604 \let\em\@empty
605 \let\rm\@empty
606 \let\Huge\@empty
607 \let\LARGE\@empty
608 \let\Large\@empty
```

```

609 \let\footnotesize\@empty
610 \let\huge\@empty
611 \let\large\@empty
612 \let\normalsize\@empty
613 \let\scriptsize\@empty
614 \let\small\@empty
615 \let\tiny\@empty
616 \let\mathversion\@gobble
617 \let\phantom\@gobble
618 \let\vphantom\@gobble
619 \let\hphantom\@gobble

```

Package pifont.

```

620 \let\ding\HyPsd@ding
621 \let\Cube\HyPsd@DieFace
622 %* \HyPsd@DieFace -> \epsdice (epsdice)
623 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

624 \def\begin#1{\csname#1\endcsname}%
625 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

626 \def\textcolor##1##{\@secondoftwo}%

```

Upper- and lowercase.

```

627 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
628 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

Support of math commands without prefix text. This is controlled by option “psdextra” and only activated with Unicode PDF strings.

```

629 \ifHy@psdextra
630 \ifHy@unicode
631 \csname psdmapshortnames\endcsname
632 \csname psdaliasnames\endcsname
633 \fi
634 \fi

```

Package babel. Whereever “naturalnames” is used, disable \textlatin (from Babel 3.6k). Thanks to Felix Neubauer (Email: Felix.Neubauer@gmx.net).

```

635 \let\foreignlanguage\@secondoftwo
636 \let\textlatin\@firstofone
637 \ltx@ifundefined{language@group}{\}%
638 \csname HyPsd@babel@language@group\endcsname
639 }%
640 \HyPsd@GreekPatch
641 \HyPsd@SpanishPatch
642 \HyPsd@RussianPatch
643 \HyPsd@BabelPatch
644 \let\@safe@activetrue\relax
645 \let\@safe@activesfalse\relax

```

Disable `\cyr`, used in `russianb.ldf`.
646 `\let\cyr\relax`
Redefine `\es@roman`, used in `spanish.ldf`.
647 `\let\es@roman\@Roman`

Package `german`.

648 `\let\glqq\textglqq`
649 `\let\grqq\textgrqq`
650 `\let\glq\textglq`
651 `\let\grq\textgrq`
652 `\let\flqq\textflqq`
653 `\let\frqq\textfrqq`
654 `\let\flq\textflq`
655 `\let\frq\textfrq`

Package `french`. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package `FrenchPro`. This package uses:

`\if@mid@expandable{not fully expandable code}{fully expandable code}`
656 `\let\if@mid@expandable\@firstoftwo`

AMS classes.

657 `\HyPsd@AMSclassfix`

Redefinition of `\hspace` `\hspace` don't work in bookmarks, the following fix tries to set a space if the argument is a positive length.

658 `\let\hspace\HyPsd@hspace`

Commands of referencing and indexing systems. Some \LaTeX commands that are legal in `\section` commands have to be disabled here.

659 `\let\label\@gobble`
660 `\let\index\@gobble`
661 `\let\glossary\@gobble`
662 `\let\href\HyPsd@href`
663 `\let\@mkboth\@gobbletwo`

The `\ref` and `\pageref` is much more complicate because of their star form.

664 `\let\ref\HyPsd@ref`
665 `\let\pageref\HyPsd@pageref`
666 `\let\nameref\HyPsd@nameref`
667 `\let\autoref\HyPsd@autoref`

Miscellaneous commands.

668 `\let\leavevmode\@empty`
669 `\let\mbox\@empty`

`\halign` causes error messages because of the template character `#`.

670 `\def\halign{\pdfstringdefWarn\halign\@gobble}%`
671 `\let\ignorespaces\HyPsd@ignorespaces`
672 `\let\Hy@SectionAnchorHref\@gobble`
673 `\let\ensuremath\@firstofone`

Patch for cjk bookmarks.

```
674 \HyPsd@CJKhook
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typesetted within \TeX 's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in `#2` additional redefinitions can be added by the hook `\pdfstringdefPreHook`.

The position in the middle of the redefinitions is a compromise: The user should be able to provide his own (perhaps better) redefinitions, but some commands should have their original meaning, because they can be used in the hook (`\bgroup`, or `\@protected@testopt`, and `\@ifnextchar` for `\renewcommand`).

```
675 \Hy@pdfstringtrue
676 \pdfstringdefPreHook
```

Spaces. For checking the token of the string, spaces must be masked, because they cannot be caught by undelimited arguments.

```
677 \HyPsd@LetUnexpandableSpace\space
678 \HyPsd@LetUnexpandableSpace\ %
679 \HyPsd@LetUnexpandableSpace-%
680 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
681 \ltx@ifundefined{@xspace}{%
682 \let\xspace\HyPsd@ITALCORR
683 }{%
684 \let\xspace\HyPsd@XSPACE
685 }%
686 \let\/\HyPsd@ITALCORR
687 \let\bgroup\/%
688 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
689 \let\discretionary\@gobbletwo
```

`\@ifstar` is defined in \LaTeX as follows:

```
\def\@ifstar#1{\@ifnextchar *{\@firstoftwo{#1}}}
```

`\@ifnextchar` doesn't work, because it uses stomach commands like `\let` and `\futurelet`. But it doesn't break. Whereas `\@firstoftwo{#1}` gives an error message because `\@firstoftwo` misses its second argument.

A mimicry of `\@ifnextchar` only with expandable commands would be very extensive and the result would be only an approximation. So here a cheaper solution follows in order to get rid of the error message at least:

```
690 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
691 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
692 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
693 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'args':

```
694 \let\@protected@testopt@xargs\HyPsd@protected@testopt
```

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

\protected@edef : The weakest form isn't usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

\csname : First the string is expanded within a \csname and \endcsname . Then the command name is converted to characters with catcode 12 by \string and the first escape character removed by \@gobble . This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by \TeX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. \TeX provides no way to catch the error caused by \csname or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option **\exactdef** in previous versions less or equal 6.50.

\edef This version uses this standard form for expansion. It is stronger than \LaTeX 's \protected@edef . So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of \LaTeX doesn't work within an \edef , there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see \texorpdfstring). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with \csname . However a PDF reader isn't \TeX , so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

Generic messages. While expanding via \xdef the \Generic... messages don't work and causes problems (error messages, invalid .out file). So they are disabled while expanding and removed silently, because a user warning would be too expensive (memory and runtime, \pdfstringdef is slow enough).

```
695 \begingroup
696 \let\GenericError\@gobblefour
697 \let\GenericWarning\@gobbletwo
698 \let\GenericInfo\@gobbletwo
```

Package french. This fix only works, if \GenericError is disabled.

```
699 \ifx\nofrenchguillemets\@undefined
700 \else
701 \nofrenchguillemets
702 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.12). The original meaning of \xdef is saved in \Hy@temp .

```
703 \let\Hy@temp\xdef
```

```

704 \let\def\HyPsd@DefCommand
705 \let\gdef\HyPsd@DefCommand
706 \let\edef\HyPsd@DefCommand
707 \let\xdef\HyPsd@DefCommand
708 \let\futurelet\HyPsd@LetCommand
709 \let\let\HyPsd@LetCommand
710 \Hy@temp#1{#2}%
711 \endgroup

```

6.2.3 Postprocessing

If the string is empty time can be saved by omitting the postprocessing process.

```

712 \ifx#1\@empty
713 \else

```

Protecting spaces and removing grouping characters. In order to check the tokens we must separate them. This will be done with \TeX 's argument parsing. With this method we must take the following item into account, that makes things a little more complicate:

- \TeX does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't found by \TeX 's argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by a marker for the xspace support.
- \TeX silently removes the outermost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

First the top level spaces are protected by replacing. Then the string is scanned to detect token groups. Each token group will now be space protected and again scanned for another token groups.

```

714 \HyPsd@ProtectSpaces#1%
715 \let\HyPsd@String\@empty
716 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
717 \global\let#1\HyPsd@String

```

Check tokens. After removing the spaces and the grouping characters the string now should only consist of the following tokens/catcodes:

- 0 command names with start with an escape character.
- 3 math shift
- 4 alignment tabs
- 6 parameter, but this is unlikely.
- 7 superscript
- 8 subscript
- 11 letter
- 12 other
- 13 commands that are active characters.

After `\HyPsd@CheckCatcodes` the command `\HyPsd@RemoveMask` is reused to remove the group protection character `|`. This character is needed to ensure that the string at least consists of one token if `\HyPsd@CheckCatcodes` is called.

Because of internal local assignments and tabulars group braces are used.

```

718 \let\HyPsd@SPACEOPTI\relax
719 {%
720 \let\HyPsd@String\@empty
721 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
722 \global\let#1\HyPsd@String
723 }%
724 \expandafter\HyPsd@RemoveMask\expandafter
725 |\expandafter\@empty#1\HyPsd@End#1%
```

`\HyPsd@CheckCatcodes` should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

```

726 \expandafter
727 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
728 \let\HyPsd@String\@empty
729 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
730 \global\let#1\HyPsd@String
```

Backslash. The double backslash disturbs parsing octal sequences, for example in an string like `abc\\051` the sequence `\051` is detected although the second `\` belongs to the first backslash.

```
731 \HyPsd@StringSubst{\}{\textbackslash}#1%
```

Spaces. All spaces have already the form `\040`. The last postprocessing step will be an optimizing of the spaces, so we already introduce already the necessary command `\HyPsd@SPACEOPTI`. But first it is defined to be `\relax` in order to prevent a too early expansion by an `\edef`. Secondly a `\relax` serves as a marker for a token that is detected by `\xspace`.

The code of `frenchb.lda` can produce an additional space before `\guillemotright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```

732 \ifHy@unicode
733 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
734 \HyPsd@SPACEOPTI#1%
735 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
736 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
737 {\HyPsd@SPACEOPTI\80\273}#1%
738 \else
739 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
740 \expandafter\HyPsd@Subst\expandafter{%
741 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
742 \string\273}{\HyPsd@SPACEOPTI\273}#1%
743 \fi
```

Right parenthesis. Also `\xspace` detects a right parenthesis. For the `\xspace` support and the following parenthesis check the different parenthesis notations `)`, `\)`, and `\051` are converted to one type `\)` and before `\HyPsd@empty` with the meaning of `\relax` is introduced for `\xspace`. By redefining to `\@empty` `\HyPsd@empty` can easily be removed later.

```

744 \ifHy@unicode
745 \HyPsd@StringSubst{\)}{\80\051}#1%
746 \HyPsd@Subst){\80\051}#1%
747 \let\HyPsd@empty\relax
748 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
749 {\HyPsd@empty\80\051}#1%
750 \else
751 \HyPsd@StringSubst{\)}{\051}#1%
752 \HyPsd@Subst){\051}#1%
753 \let\HyPsd@empty\relax
754 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
755 \fi

```

Support for package `xspace`. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\/` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace` comes last. Because `\HyPsd@Subst` with several equal tokens (`--`) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

756 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
757 \ltx@ifundefined{@xspace}{%
758 }{%
759 \let\HyPsd@xspace\relax
760 \expandafter\HyPsd@Subst\expandafter
761 {\HyPsd@XSPACE}\HyPsd@xspace#1%
762 \let\HyPsd@xspace\HyPsd@doxspace
763 }%
764 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The PDFDocEncoding contains some ligatures, but the current version 3 of the AcrobatReader lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the AcrobatReader is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

Since newer AcrobatReader versions now show the `en-` and `emdash` in a correct way (AR7/Linux, AR8/Linux), the substitution code for them is enabled starting with version 6.78l.

```

765 \HyPsd@Subst{---}\textemdash#1%
766 \HyPsd@Subst{--}\textendash#1%

```

```

767 %    \HyPsd@Subst{fi}\textfi#1%
768 %    \HyPsd@Subst{fi}\textfi#1%
769 \HyPsd@Subst{!}\textexclamdown#1%
770 \HyPsd@Subst{?}\textquestiondown#1%

```

With the next `\edef` we get rid of the token `\HyPsd@empty`.

```

771 \let\HyPsd@empty\@empty

```

Left parentheses. Left parentheses are now converted to safe forms to avoid problems with unmatched ones (`\(` with `PDFDocEncoding`, the octal sequence with `Unicode`).

An optimization is possible. Matched parentheses can be replaced by a `()` pair. But this code is removed to save `TeX` memory and time.

```

772 \ifHy@unicode
773 \HyPsd@StringSubst\(\textparenleft#1%
774 \HyPsd@Subst(\textparenleft#1%
775 \else
776 \HyPsd@StringSubst\({\050}#1%
777 \HyPsd@Subst({\050}#1%
778 \HyPsd@StringSubst{\050}{\string\}#1%
779 \fi

```

Optimizing spaces. Spaces are often used, but they have a very long form `\040`. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the `.out` file, but if the entries are read back, several spaces are merged to a single one.

With `Unicode` the spaces are replaced by their octal sequences.

```

780 \ifHy@unicode
781 \edef\HyPsd@SPACEOPTI{\80\040}%
782 \else
783 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
784 \fi
785 \xdef#1{#1\@empty}%
786 \fi

```

Converting to Unicode. At last the eight bit letters have to be converted to `Unicode`, the masks `\8` and `\9` are removed and the `Unicode` marker is added.

```

787 \endgroup
788 \begingroup
789 \ifHy@unicode
790 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to `PDFDocEncoding`.

```

791 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
792 \ltx@ifundefined{StringEncodingConvertTest}{%
793 }{%
794 \EdefUnescapeString\HyPsd@temp#1%
795 \ifxetex
796 \let\HyPsd@UnescapedString\HyPsd@temp
797 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
798 {\utf16be}{\asci-print}{%
799 \EdefEscapeString\HyPsd@temp\HyPsd@temp
800 \global\let#1\HyPsd@temp
801 \HyPsd@EscapeTeX#1%
802 \Hy@unicodedefalse

```

```

803     }{%
804     \HyPsd@ToBigChars#1%
805     }%
806   \else
807     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
808     {utf16be}{pdfdoc}{%
809     \EdefEscapeString\HyPsd@temp\HyPsd@temp
810     \global\let#1\HyPsd@temp
811     \HyPsd@EscapeTeX#1%
812     \Hy@unicodedefalse
813     }{%}%
814   \fi
815   }%
816 \fi
817 \fi
818 \HyPsd@XeTeXBigCharsfalse

```

User hook. The hook `\pdfstringdefPostHook` can be used for the purpose to postprocess the string further.

```

819   \pdfstringdefPostHook#1%
820 \endgroup
821 }

```

`\Hy@pdfstringdef`

```

822 \def\Hy@pdfstringdef#1#2{%
823   \pdfstringdef\Hy@gtemp{#2}%
824   \let#1\Hy@gtemp
825 }

```

6.3 Encodings

6.3.1 XeTeX

```

826 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
827 \catcode\z@=12 %
828 \ifxetex
829   \expandafter\@firstofone
830 \else
831   \let\HyPsd@XeTeXBigCharstrue\@empty
832   \let\HyPsd@XeTeXBigCharsfalse\@empty
833   \expandafter\@gobble
834 \fi
835 {%
836   \newif\ifHyPsd@XeTeXBigChars
837   \def\HyPsd@XeTeXBigCharsfalse{%
838     \global\let\ifHyPsd@XeTeXBigChars\iffalse
839   }%
840   \def\HyPsd@XeTeXBigCharstrue{%
841     \global\let\ifHyPsd@XeTeXBigChars\iftrue
842   }%
843   \def\HyPsd@ToBigChars#1{%
844     \ifHyPsd@XeTeXBigChars
845       \EdefEscapeHex\HyPsd@UnescapedString{%
846         \expandafter\@gobbletwo\HyPsd@UnescapedString
847       }%
848     \begingroup
849     \toks@{}%

```

```

850 \escapechar=92\relax
851 \let\x\HyPsd@ToBigChar
852 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
853 \relax\relax\relax\relax\relax\relax\relax
854 \edef\x{%
855 \endgroup
856 \gdef\noexpand#1{\the\toks@}%
857 }%
858 \x
859 \fi
860 }%
861 \def\HyPsd@ToBigChar#1#2#3#4{%
862 \ifx\relax#1\relax
863 \let\x\relax
864 \else
865 \count@=#1#2#3#4\relax
866 \let\y\@empty
867 \lccode\z@=\count@
868 \ifnum\count@=40 % (
869 \let\y\@backslashchar
870 \else
871 \ifnum\count@=41 % )
872 \let\y\@backslashchar
873 \else
874 \ifnum\count@=92 % backslash
875 \let\y\@backslashchar
876 \else
877 \ifnum\count@=10 % newline
878 \edef\y##1{\string\n}%
879 \else
880 \ifnum\count@=13 % carriage return
881 \edef\y##1{\string\r}%
882 \fi
883 \fi
884 \fi
885 \fi
886 \fi
887 \lowercase{%
888 \toks@\expandafter{%
889 \the\expandafter\toks@
890 \y
891 ^^@%
892 }%
893 }%
894 \fi
895 \x
896 }%
897 }
898 \Hy@temp

```

6.3.2 Workaround for package linguex

```

899 \@ifpackageloaded{linguex}{%
900 \let\HyLinguex@OrgB\b
901 \let\HyLinguex@OrgC\c
902 \let\HyLinguex@OrgD\d
903 \def\HyLinguex@Restore{%
904 \let\b\HyLinguex@OrgB

```



```

905 \let\c\HyLinguex@OrgC
906 \let\d\HyLinguex@OrgD
907 }%
908 \Hy@AtEndOfPackage{%
909 \pdfstringdefDisableCommands{%
910 \ltx@ifundefined{oldb}{\let\b\oldb}%
911 \ltx@ifundefined{oldc}{\let\c\oldc}%
912 \ltx@ifundefined{oldd}{\let\d\oldd}%
913 }%
914 }%
915 }{%
916 \let\HyLinguex@Restore\relax
917 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

918 \def\Hy@SaveCatcodeSettings#1{%
919 \expandafter\edef\csname Hy@cat@#1\endcsname{%
920 \endlinechar=\the\endlinechar\relax
921 \catcode32 \the\catcode32\relax % (space)
922 \catcode34 \the\catcode34\relax % "
923 \catcode35 \the\catcode35\relax % #
924 \catcode37 \the\catcode37\relax % (percent)
925 \catcode40 \the\catcode40\relax % (
926 \catcode41 \the\catcode41\relax % )
927 \catcode42 \the\catcode42\relax % *
928 \catcode46 \the\catcode46\relax % .
929 \catcode58 \the\catcode58\relax % :
930 \catcode60 \the\catcode60\relax % <
931 \catcode61 \the\catcode61\relax % =
932 \catcode62 \the\catcode62\relax % >
933 \catcode64 \the\catcode64\relax % @
934 \catcode91 \the\catcode91\relax % [
935 \catcode92 \the\catcode92\relax % \
936 \catcode93 \the\catcode93\relax % ]
937 \catcode123 \the\catcode123\relax % {
938 \catcode124 \the\catcode124\relax % |
939 \catcode125 \the\catcode125\relax % }
940 }%
941 \endlinechar=-1 %
942 \catcode32 10 % (space)
943 \catcode34 12 % "
944 \catcode35 6 % #
945 \catcode37 14 % (percent)
946 \catcode40 12 % (
947 \catcode41 12 % )
948 \catcode42 12 % *
949 \catcode46 12 % .
950 \catcode58 12 % :
951 \catcode60 12 % <
952 \catcode61 12 % =
953 \catcode62 12 % >
954 \catcode91 12 % [
955 \catcode92 0 % \
956 \catcode93 12 % ]
957 \catcode123 1 % {
958 \catcode124 12 % |

```

```

959 \catcode125 2 % }
960 \makeatletter
961 }

```

`\Hy@RestoreCatcodeSettings`

```

962 \def\Hy@RestoreCatcodeSettings#1{%
963   \csname Hy@cat@#1\endcsname
964   \expandafter\let\csname Hy@cat@#1\endcsname\relax
965 }

```

6.3.4 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for interpreting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

The PD1 encoding can be specified as an option of the 'fontenc' package or loaded here. It does not matter what font family is selected, as T_EX does not process it anyway. So use CM.

```

966 \@ifundefined{T@PD1}{%
967   \Hy@SaveCatcodeSettings{pd1}%
968   \input{pd1enc.def}%
969   \Hy@RestoreCatcodeSettings{pd1}%
970   \HyLinguex@Restore
971 }{}
972 \DeclareFontFamily{PD1}{pdf}{}
973 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
974 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

The PU encoding implements the Unicode encoding for use with L^AT_EX's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option `unicode` is specified as package option.

`\HyPsd@LoadUnicode` Because the file `puenc.def` takes a lot of memory, the loading is defined in the macro `\HyPsd@LoadUnicode` called by the package option `unicode`.

```

975 \def\HyPsd@LoadUnicode{%
976   \@ifundefined{T@PU}{%
977     \Hy@SaveCatcodeSettings{pu}%
978     \input{puenc.def}%
979     \Hy@RestoreCatcodeSettings{pu}%
980     \HyLinguex@Restore
981   }{}%
982   \DeclareFontFamily{PU}{pdf}{}%
983   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
984   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
985   \HyPsd@LoadExtra
986   \let\HyPsd@LoadUnicode\relax
987 }

```

`\HyPsd@LoadExtra`

```

988 \def\HyPsd@LoadExtra{%
989   \ifHy@psdextra
990     \ltx@iffileloaded{puenc.def}{%
991       \Hy@SaveCatcodeSettings{psdextra}%

```

```

992 \input{psdextra.def}%
993 \Hy@RestoreCatcodeSettings{psdextra}%
994 \let\HyPsd@LoadExtra\relax
995 }{}%
996 \fi
997 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by \TeX 's stomach, the second contains the replacement for PDF strings.

```

998 \def\texorpdfstring{%
999 \ifHy@pdfstring
1000 \expandafter\@secondoftwo
1001 \else
1002 \expandafter\@firstoftwo
1003 \fi
1004 }

```

6.4.2 Hooks for `\pdfstringdef`

`\pdfstringdefPreHook` Default definition of the hooks for `\pdfstringdef`. The construct `\@ifundefined`
`\pdfstringdefPostHook` with `\let` is a little bit faster than `\providecommand`.

```

1005 \@ifundefined{pdfstringdefPreHook}{%
1006 \let\pdfstringdefPreHook\@empty
1007 }{}
1008 \@ifundefined{pdfstringdefPostHook}{%
1009 \let\pdfstringdefPostHook\@gobble
1010 }{}

```

`\pdfstringdefDisableCommands` In `\pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\pdfstringdef`, is expanded. So replacements for problematic macros can be given. The code in `\pdfstringdefPreHook` should not be replaced perhaps by an `\renewcommand`, because a previous meaning gets lost.

Macro `\pdfstringdefDisableCommands` avoids this, because it reuses the old meaning of the hook and appends the new code to `\pdfstringdefPreHook`, e.g.:

```

\pdfstringdefDisableCommands{%
\let~\textasciitilde
\def\url{\pdfstringdefWarn\url}%
\let\textcolor\@gobble
}%

```

In the argument of `\pdfstringdefDisableCommands` the character `@` can be used in command names. So it is easy to use useful \LaTeX commands like `\@gobble` or `\@firstofone`.

```

1011 \def\pdfstringdefDisableCommands{%
1012 \begingroup
1013 \makeatletter
1014 \HyPsd@DisableCommands
1015 }

```

`\HyPsd@DisableCommands`

```
1016 \long\def\HyPsd@DisableCommands#1{%
1017   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1018   \endgroup
1019 }
```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<>`- is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

`\pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\HyPsd@ifnextchar` or `\HyPsd@protected@testopt`.

```
1020 \def\pdfstringdefWarn#1{%
1021   \expandafter\noexpand\csname<>-string#1\endcsname
1022 }
```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little, In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```
1023 \begingroup
1024   \catcode0=12 %
1025   \def\x{\endgroup
1026     \def\HyPsd@ignorespaces{%
1027       \romannumeral\expandafter'\expandafter^^@%
1028       \romannumeral'^^@%
1029     }%
1030   }%
1031   \x
```

6.5.2 Babel languages

Since version 2008/03/16 v3.8j babel uses inside `\AtBeginDocument`:

```
\pdfstringdefDisableCommands{%
  \languageshorthands\system}%
}
```

As consequence the shorthands are shown in the bookmarks, not its result. Therefore `\languageshorthands` is disabled before the user hook. If there is a need to use the command, then `\HyOrg@languageshorthands` can be used inside `\pdfstringdefDisableCommands`.

```
1032 \def\HyPsd@BabelPatch{%
1033   \let\HyOrg@languageshorthands\languageshorthands
1034   \let\languageshorthands\HyPsd@LanguageShorthands
1035 }
1036 \begingroup\expandafter\expandafter\expandafter\endgroup
1037 \expandafter\ifx\csname pdf@stricmp\endcsname\relax
```

```

1038 \let\HyPsd@langshort@system@empty
1039 \def\HyPsd@LanguageShorthands#1{%
1040   \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1041     \HyPsd@langshort@system
1042   \expandafter\@gobble
1043   \else
1044     \expandafter\@firstofone
1045   \fi
1046   {%
1047     \HyOrg@languageshorthands{#1}%
1048   }%
1049 }%
1050 \else
1051 \def\HyPsd@LanguageShorthands#1{%
1052   \ifnum\pdf@stricmp{#1}{system}=\z@
1053     \expandafter\@gobble
1054   \else
1055     \expandafter\@firstofone
1056   \fi
1057   {%
1058     \HyOrg@languageshorthands{#1}%
1059   }%
1060 }%
1061 \fi
1062 \def\Hy@temp{%
1063   \@ifpackageloaded{babel}{%
1064     \@ifpackagelater{babel}{2008/03/16}{%
1065       \let\Hy@temp@empty
1066     }{%
1067       \def\HyPsd@BabelPatch{%
1068         \let\HyOrg@languageshorthands\languageshorthands
1069       }%
1070     }%
1071   }{}%
1072 }
1073 \Hy@temp
1074 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1075 \newif\ifHy@next

  Nothing to do for english.
1076 \ltx@ifundefined{danish@sh@}{}{}%
1077 \def\HyPsd@babel@danish{%
1078   \declare@shorthand{danish}{"}{}%
1079   \declare@shorthand{danish}{"}~{}-%
1080 }%
1081 }
1082 \ltx@ifundefined{dutch@sh@}{}{}%
1083 \def\HyPsd@babel@dutch{%
1084   \declare@shorthand{dutch}{"}{}%
1085   \declare@shorthand{dutch}{"}~{}-%
1086 }%
1087 }
1088 \ltx@ifundefined{finnish@sh@}{}{}%
1089 \def\HyPsd@babel@finnish{%
1090   \declare@shorthand{finnish}{"}{}%
1091 }%
1092 }

```

```

1093 \ltx@ifundefined{french@sh@:@sel}{-}{-}%
1094 \def\HyPsd@babel@frenchb{%
1095   \def\guill@spacing{ }%
1096 }%
1097 }
1098 \ltx@ifundefined{german@sh@"@sel}{-}{-}%
1099 \def\HyPsd@babel@german{%
1100   \declare@shorthand{german}{"}{f}{f}%
1101   \declare@shorthand{german}{"}{|}{|}%
1102   \declare@shorthand{german}{"}~}{-}%
1103 }%
1104 }
1105 \ltx@ifundefined{macedonian@sh@"@sel}{-}{-}%
1106 \def\HyPsd@babel@macedonian{%
1107   \declare@shorthand{macedonian}{"}{|}{|}%
1108   \declare@shorthand{macedonian}{"}~}{-}%
1109 }%
1110 }{}
1111 \ltx@ifundefined{ngerman@sh@"@sel}{-}{-}%
1112 \def\HyPsd@babel@ngerman{%
1113   \declare@shorthand{ngerman}{"}{|}{|}%
1114   \declare@shorthand{ngerman}{"}~}{-}%
1115 }%
1116 }
1117 \ltx@ifundefined{portuges@sh@"@sel}{-}{-}%
1118 \def\HyPsd@babel@portuges{%
1119   \declare@shorthand{portuges}{"}{|}{|}%
1120 }%
1121 }
1122 \ltx@ifundefined{russian@sh@"@sel}{-}{-}%
1123 \def\HyPsd@babel@russian{%
1124   \declare@shorthand{russian}{"}{|}{|}%
1125   \declare@shorthand{russian}{"}~}{-}%
1126 }%
1127 }
1128 \ltx@ifundefined{slovene@sh@"@sel}{-}{-}%
1129 \def\HyPsd@babel@slovene{%
1130   \declare@shorthand{slovene}{"}{|}{|}%
1131 }%
1132 }

```

Nested quoting environments are not supported (<<, >>).

```

1133 \ltx@ifundefined{spanish@sh@>@sel}{-}{-}%
1134 \def\HyPsd@babel@spanish{%
1135   \declare@shorthand{spanish}{<<}{\guillemotleft}%
1136   \declare@shorthand{spanish}{>>}{\guillemotright}%
1137   \declare@shorthand{spanish}{"}={}{-}%
1138   \declare@shorthand{spanish}{"}~}{-}%
1139   \declare@shorthand{spanish}{"}!}{\textexclamdown}%
1140   \declare@shorthand{spanish}{"}?}{\textquestiondown}%
1141 }%
1142 }
1143 \ltx@ifundefined{swedish@sh@"@sel}{-}{-}%
1144 \def\HyPsd@babel@swedish{%
1145   \declare@shorthand{swedish}{"}{|}{|}%
1146   \declare@shorthand{swedish}{"}~}{-}%
1147 }%
1148 }

```

```

1149 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
1150   \def\HyPsd@babel@ukrainian{%
1151     \declare@shorthand{ukrainian}{~}{-}%
1152     \declare@shorthand{ukrainian}{~}{-}%
1153   }%
1154 }
1155 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
1156   \def\HyPsd@babel@usorbian{%
1157     \declare@shorthand{usorbian}{f}{f}%
1158     \declare@shorthand{usorbian}{f}{f}%
1159   }%
1160 }

1161 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
1162   \let\HyPsd@GreekPatch\@empty
1163 }{%
1164   \def\HyPsd@GreekPatch{%
1165     \let\greeknumeral\HyPsd@greeknumeral
1166     \let\Greeknnumeral\HyPsd@Greeknnumeral
1167   }%
1168 }
1169 \def\HyPsd@greeknumeral#1{%
1170   \HyPsd@GreekNum\@firstoftwo{#1}%
1171 }
1172 \def\HyPsd@Greeknnumeral#1{%
1173   \HyPsd@GreekNum\@secondoftwo{#1}%
1174 }
1175 \def\HyPsd@GreekNum#1#2{%
1176   \ifHy@unicode
1177     \ifnum#2<\@one
1178       \@arabic{#2}%
1179     \else
1180       \ifnum#2<1000000 %
1181         \HyPsd@@GreekNum#1{#2}%
1182       \else
1183         \@arabic{#2}%
1184       \fi
1185     \fi
1186   \else
1187     \@arabic{#2}%
1188   \fi
1189 }
1190 \def\HyPsd@@GreekNum#1#2{%
1191   \ifnum#2<\@m
1192     \ifnum#2<10 %
1193       \expandafter\HyPsd@GreekNumI
1194       \expandafter\@gobble\expandafter#1\number#2%
1195     \else
1196       \ifnum#2<100 %
1197         \expandafter\HyPsd@GreekNumII
1198         \expandafter\@gobble\expandafter#1\number#2%
1199       \else
1200         \expandafter\HyPsd@GreekNumIII
1201         \expandafter\@gobble\expandafter#1\number#2%
1202       \fi
1203     \fi
1204   \ifnum#2>\z@
1205     \textnumeralsigngreek

```

```

1206 \fi
1207 \else
1208 \ifnum#2<\@M
1209 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1210 \else
1211 \ifnum#2<100000 %
1212 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1213 \else
1214 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1215 \fi
1216 \fi
1217 \fi
1218 }
1219 \def\HyPsd@GreekNumI#1#2#3{%
1220 #1{%
1221 \ifnum#3>\z@
1222 \textnumeralsignlowergreek
1223 \fi
1224 }%
1225 \expandafter#2%
1226 \ifcase#3 %
1227 {}{}%
1228 \or\textalpha\textAlpha
1229 \or\textbeta\textBeta
1230 \or\textgamma\textGamma
1231 \or\textdelta\textDelta
1232 \or\textepsilon\textEpsilon
1233 \or\textstigmagreek\textStigmagreek
1234 \or\textzeta\textZeta
1235 \or\texteta\textEta
1236 \or\texttheta\textTheta
1237 \else
1238 {}{}%
1239 \fi
1240 }
1241 \def\HyPsd@GreekNumII#1#2#3#4{%
1242 #1{%
1243 \ifnum#3>\z@
1244 \textnumeralsignlowergreek
1245 \fi
1246 }%
1247 \expandafter#2%
1248 \ifcase#3 %
1249 {}{}%
1250 \or\textiota\textIota
1251 \or\textkappa\textKappa
1252 \or\textlambda\textLambda
1253 \or\textmu\textMu
1254 \or\textnu\textNu
1255 \or\textxi\textXi
1256 \or\textomicron\textOmicron
1257 \or\textpi\textPi
1258 \or\textkoppagreek\textKoppagreek
1259 \else
1260 {}{}%
1261 \fi
1262 \HyPsd@GreekNumI#1#2#4%

```



```

1263 }
1264 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1265   #1{%
1266     \ifnum#3>\z@
1267       \textnumeralsignlowergreek
1268     \fi
1269   }%
1270   \expandafter#2%
1271   \ifcase#3 %
1272     {}{}%
1273   \or\textrho\textRho
1274   \or\textsigma\textSigma
1275   \or\texttau\textTau
1276   \or\textupsilon\textUpsilon
1277   \or\textphi\textPhi
1278   \or\textchi\textChi
1279   \or\textpsi\textPsi
1280   \or\textomega\textOmega
1281   \or\textsampigreek\textSampigreek
1282   \else
1283     {}{}%
1284   \fi
1285   \HyPsd@GreekNumII#1#2#4#5%
1286 }
1287 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1288   \HyPsd@GreekNumI\@firstofone#1#2%
1289   \HyPsd@@@GreekNum#1{#3#4#5}%
1290 }
1291 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1292   \HyPsd@GreekNumII\@firstofone#1#2#3%
1293   \HyPsd@@@GreekNum#1{#4#5#6}%
1294 }
1295 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1296   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1297   \HyPsd@@@GreekNum#1{#5#6#7}%
1298 }
1299 \def\HyPsd@SpanishPatch{%
1300   \ltx@ifundefined{es@save@dot}{%
1301     }{%
1302       \let\.\es@save@dot
1303     }%
1304 }

```

Shorthand "- of 'russianb.ldf' is not expandable, therefore it is disabled and replaced by -.

```

1305 \def\HyPsd@RussianPatch{%
1306   \ltx@ifundefined{russian@sh@"@-@}{%
1307     }{%
1308       \@namedef{russian@sh@"@-@}{-}%
1309     }%
1310 }

```

6.5.3 CJK patch

```

1311 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1312 \def\HyPsd@CJKhook{%
1313   \ltx@ifpackageloaded{CJK}{%
1314     \let\CJK@kern\relax
1315     \let\CJKkern\relax
1316     \let\CJK@CJK\relax
1317     \ifHy@CJKbookmarks
1318       \HyPsd@CJKhook@bookmarks
1319     \fi
1320     \HyPsd@CJKhook@unicode
1321   }{%
1322 }

```

6.5.4 CJK bookmarks

\HyPsd@CJKhook Some internal commands of package cjk are redefined to avoid error messages. For a rudimental support of CJK bookmarks the active characters are redefined so that they print themselves.

After preprocessing of Big5 encoded data the following string for a double-byte character is emitted:

```
^^7f<arg1>^^7f<arg2>^^7f
```

<arg1> is the first byte in the range (always > 0x80); <arg2> is the second byte in decimal notation ($\geq 0x40$).

```

1323 \begingroup
1324   \catcode"7F=\active
1325   \toks@{%
1326     \let\CJK@ignorespaces\empty
1327     \def\CJK@char#1{\@gobbletwo}%
1328     \let\CJK@charx\@gobblefour
1329     \let\CJK@punctchar\@gobblefour
1330     \def\CJK@punctcharx#1{\@gobblefour}%
1331     \catcode"7F=\active
1332     \def^^7f#1^^7f#2^^7f{%
1333       \string #1\HyPsd@DecimalToOctal{#2}%
1334     }%
1335     % ... ?
1336     \ifHy@unicode
1337       \def\Hy@cjkpu{\80}%
1338     \else
1339       \let\Hy@cjkpu\@empty
1340     \fi
1341     \HyPsd@CJKActiveChars
1342   }%
1343   \count@=127 %
1344   \@whilenum\count@<255 \do{%
1345     \advance\count@ by 1 %
1346     \lccode'\~=\count@
1347     \lowercase{%
1348       \toks@\expandafter{\the\toks@ ~}%
1349     }%
1350   }%
1351   \toks@\expandafter{\the\toks@ !}%
1352   \xdef\HyPsd@CJKhook@bookmarks{%
1353     \the\toks@
1354   }%
1355 \endgroup

```

`\HyPsd@CJKActiveChars` The macro `\HyPsd@CJKActiveChars` is only defined to limit the memory consumption of `\HyPsd@CJKhook`.

```
1356 \def\HyPsd@CJKActiveChars#1{%
1357   \ifx#1!%
1358     \let\HyPsd@CJKActiveChars\relax
1359   \else
1360     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1361   \fi
1362   \HyPsd@CJKActiveChars
1363 }
```

`\HyPsd@DecimalToOctal` A character, given by the decimal number is converted to a PDF character.

```
1364 \def\HyPsd@DecimalToOctal#1{%
1365   \ifcase #1 %
1366     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1367     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1368     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1369     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1370     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1371     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1372     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1373     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1374     \or @\or A\or B\or C\or D\or E\or F\or G%
1375     \or H\or I\or J\or K\or L\or M\or N\or O%
1376     \or P\or Q\or R\or S\or T\or U\or V\or W%
1377     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1378     \or \140\or a\or b\or c\or d\or e\or f\or g%
1379     \or h\or i\or j\or k\or l\or m\or n\or o%
1380     \or p\or q\or r\or s\or t\or u\or v\or w%
1381     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1382     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1383     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1384     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1385     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1386     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1387     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1388     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1389     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1390     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1391     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1392     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1393     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1394     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1395     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1396     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1397     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1398   \fi
1399 }
```

6.5.5 CJK unicode

`\HyPsd@CJKhook@unicode`

```
1400 \def\HyPsd@CJKhook@unicode{%
1401   \let\Unicode\HyPsd@CJK@Unicode
1402   \let\CJKnumber\HyPsd@CJKnumber
1403   \let\CJKdigits\HyPsd@CJKdigits
1404 }
```

\HyPsd@CJK@Unicode

```
1405 \def\HyPsd@CJK@Unicode#1#2{%
1406   \ifnum#1<256 %
1407     \HyPsd@DecimalToOctalFirst{#1}%
1408     \HyPsd@DecimalToOctalSecond{#2}%
1409   \else
1410     \933%
1411     \expandafter\expandafter\expandafter\HyPsd@HighA
1412     \intcalcDiv{#1}{4}!%
1413     \933%
1414     \ifcase\intcalcMod{#1}{4} %
1415       4\or 5\or 6\or 7%
1416     \fi
1417     \HyPsd@DecimalToOctalSecond{#2}%
1418   \fi
1419 }

1420 \def\HyPsd@HighA#1!{%
1421   \expandafter\expandafter\expandafter\HyPsd@HighB
1422   \IntCalcDiv#1!64!!%
1423   \expandafter\expandafter\expandafter\HyPsd@HighD
1424   \IntCalcMod#1!64!!%
1425 }

1426 \def\HyPsd@HighB#1!{%
1427   \expandafter\expandafter\expandafter\HyPsd@HighC
1428   \IntCalcDec#1!!%
1429 }

1430 \def\HyPsd@HighC#1!{%
1431   \IntCalcDiv#1!4!%
1432   \@backslashchar
1433   \IntCalcMod#1!4!%
1434 }

1435 \def\HyPsd@HighD#1!{%
1436   \ifcase\IntCalcDiv#1!8! %
1437     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1438   \fi
1439   \ifcase\IntCalcMod#1!8! %
1440     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1441   \fi
1442 }

1443 \def\HyPsd@DecimalToOctalFirst#1{%
1444   \9%
1445   \ifcase#1 %
1446     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1447     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1448     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1449     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1450     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1451     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1452     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1453     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1454     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1455     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1456     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1457     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1458     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1459     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1460     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
```

```

1461 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1462 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1463 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1464 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1465 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1466 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1467 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1468 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1469 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1470 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1471 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1472 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1473 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1474 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1475 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1476 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1477 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1478 \fi
1479 }
1480 \def\HyPsd@DecimalToOctalSecond#1{%
1481 \ifcase #1 %
1482 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1483 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1484 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1485 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1486 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1487 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1488 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1489 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1490 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1491 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1492 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1493 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1494 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1495 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1496 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1497 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1498 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1499 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1500 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1501 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1502 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1503 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1504 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1505 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1506 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1507 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1508 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1509 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1510 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1511 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1512 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1513 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1514 \fi
1515 }
1516 \def\HyPsd@CJKnumber#1{%
1517 \ifnum#1<\z@

```

```

1518 \CJK@minus
1519 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1520 \else
1521 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1522 \fi
1523 }
1524 \def\HyPsd@@CJKnumber#1{%
1525 \ifcase#1 %
1526 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1527 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1528 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1529 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1530 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1531 \CJK@ten\CJK@nine
1532 \else
1533 \ifnum#1<10000 %
1534 \HyPsd@CJKnumberFour#1!\@empty{20}%
1535 \@empty
1536 \else
1537 \ifnum#1<100000000 %
1538 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1539 \IntCalcDiv#1!10000!%
1540 !\{20}%
1541 \CJK@tenthousand
1542 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1543 \IntCalcMod#1!10000!%
1544 !\CJK@zero{10}%
1545 \@empty
1546 \else
1547 \expandafter\HyPsd@CJKnumberLarge
1548 \number\IntCalcDiv#1!100000000!\expandafter!%
1549 \number\IntCalcMod#1!100000000!!%
1550 \fi
1551 \fi
1552 \fi
1553 }
1554 \def\HyPsd@CJKnumberLarge#1!#2!{%
1555 \HyPsd@CJKnumberFour#1!\{20}%
1556 \CJK@hundredmillion
1557 \ifnum#2=\z@
1558 \else
1559 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1560 \IntCalcDiv#2!10000!%
1561 !\CJK@zero{10}%
1562 \CJK@tenthousand
1563 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1564 \IntCalcMod#2!10000!%
1565 !\CJK@zero{10}%
1566 \@empty
1567 \fi
1568 }
1569 \def\HyPsd@CJKnumberFour#1!#2#3{%
1570 \ifnum#1=\z@
1571 \expandafter\@gobble
1572 \else
1573 \ifnum#1<1000 %
1574 #2%

```

```

1575 \HyPsd@CJKnumberThree#1!#{#3}%
1576 \else
1577 \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1578 \CJK@thousand
1579 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1580 \IntCalcMod#1!1000!%
1581 !\CJK@zero{10}%
1582 \fi
1583 \fi
1584 }
1585 \def\HyPsd@CJKnumberThree#1!#2#3{%
1586 \ifnum#1=\z@
1587 \else
1588 \ifnum#1<100 %
1589 #2%
1590 \HyPsd@CJKnumberTwo#1!#{#3}%
1591 \else
1592 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1593 \CJK@hundred
1594 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1595 \IntCalcMod#1!100!%
1596 !\CJK@zero{10}%
1597 \fi
1598 \fi
1599 }
1600 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1601 \ifnum#1=\z@
1602 \else
1603 \ifnum#1<#3 %
1604 #2%
1605 \HyPsd@@CJKnumber{#1}%
1606 \else
1607 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1608 \CJK@ten
1609 \ifnum\IntCalcMod#1!10!=\z@
1610 \else
1611 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1612 \fi
1613 \fi
1614 \fi
1615 }
1616 \def\HyPsd@CJKdigits#1{%
1617 \ifx*#1\relax
1618 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1619 \else
1620 \HyPsd@@CJKdigits\CJK@null{#1}%
1621 \fi
1622 }
1623 \def\HyPsd@@CJKdigits#1#2{%
1624 \ifx\#2\%
1625 \else
1626 \HyPsd@@@CJKdigits#1#2\@nil
1627 \fi
1628 }%
1629 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1630 \HyPsd@CJKdigit#1{#2}%
1631 \ifx\#3\%

```

```

1632 \expandafter\@gobble
1633 \else
1634 \expandafter\@firstofone
1635 \fi
1636 {%
1637 \HyPsd@@@CJKdigits#1#3\@nil
1638 }%
1639 }
1640 \def\HyPsd@CJKdigit#1#2{%
1641 \ifcase#2 %
1642 #1\or
1643 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1644 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1645 \fi
1646 }

```

6.5.6 \@inmathwarn-Patch

`\HyPsd@inmathwarn` The patch of `\@inmathwarn` is needed to get rid of the infinite error loop with glyphs of other encodings (see the explanation above). Potentially the patch is dangerous, if the code in `ltoutenc.dtx` changes. Checked with \LaTeX 2_ε versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

To understand the patch easier, the original code of `\@current@cmd` and `\@changed@cmd` follows (\LaTeX 2_ε release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@typeset-protect` (`=\relax`).

```

\def\@current@cmd#1{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
    \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
      \expandafter\ifx\csname?\string#1\endcsname\relax
        \expandafter\def\csname?\string#1\endcsname{%
          \TextSymbolUnavailable#1%
        }%
      \fi
      \global\expandafter\let
        \csname\cf@encoding\string#1\expandafter\endcsname
        \csname?\string#1\endcsname
    \fi
    \csname\cf@encoding\string#1%
      \expandafter\endcsname
  \else
    \noexpand#1%
  \fi}
\gdef\TextSymbolUnavailable#1{%
  \@latex@error{%
    Command \protect#1 unavailable in encoding \cf@encoding%
  }\@eha}
\def\@inmathwarn#1{%

```



```

\ifmmode
  \@latex@warning{Command \protect#1 invalid in math mode}%
\fi}

1647 \def\HyPsd@inmathwarn#1#2{%
1648   \ifx#2\expandafter
1649     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1650       \HyPsd@GLYPHERR
1651       \expandafter\@gobble\string#1%
1652       >%
1653       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1654       \else
1655       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1656       \fi
1657     \else
1658     \expandafter#2%
1659     \fi
1660 }
1661 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1662 \def\HyPsd@EndWithElse#1\else\else{}

\HyPsd@add@accent

1663 \def\HyPsd@add@accent#1#2{%
1664   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1665   #2%
1666 }%

```

6.5.7 Unexpandable spaces

`\HyPsd@LetUnexpandableSpace` In `\HyPsd@@ProtectSpaces` the space tokens are replaced by not expandable commands, that work like spaces:

- So they can be caught by undelimited arguments.
- And they work in number, dimension, and skip assignments.

These properties are used in `\HyPsd@CheckCatcodes`.

```

1667 \def\HyPsd@LetUnexpandableSpace#1{%
1668   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1669 }

```

`\HyPsd@UnexpandableSpace` `\HyPsd@UnexpandableSpace` is used in `\HyPsd@@ProtectSpaces`. In `\HyPsd@@ProtectSpaces` the space tokens are replaced by unexpandable commands `\HyPsd@UnexpandableSpace`, but that have the effect of spaces.

```

1670 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

`\HyPsd@XSPACE` Some commands and informations cannot be utilized before the string expansion and the checking process. Command names are filtered out, so we need another way to transport the information: An unusual `#` with catcode 12 marks the beginning of the extra information.

```

1671 \edef\HyPsd@XSPACE{\string#\string X}
1672 \edef\HyPsd@ITALCORR{\string#\string I}
1673 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```
1674 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

\HyPsd@@hspace \HyPsd@@hspace checks whether \hspace is called in its star form.

```
1675 \def\HyPsd@@hspace#1*#2\END{%
1676   \ifx\#2\%
1677     \HyPsd@hspacetest{#1}%
1678   \else
1679     \expandafter\HyPsd@hspacetest
1680   \fi
1681 }
```

\HyPsd@hspacetest \HyPsd@hspacetest replaces the \hspace by a space, if the length is greater than zero.

```
1682 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1683 \ltx@ifundefined{tocsection}{%
1684   \let\HyPsd@AMSclassfix\relax
1685 }{%
1686   \def\HyPsd@AMSclassfix{%
1687     \let\tocpart\HyPsd@tocsection
1688     \let\tocchapter\HyPsd@tocsection
1689     \let\tocappendix\HyPsd@tocsection
1690     \let\tocsection\HyPsd@tocsection
1691     \let\tocsubsection\HyPsd@tocsection
1692     \let\tocsubsubsection\HyPsd@tocsection
1693     \let\tocparagraph\HyPsd@tocsection
1694   }%
1695   \def\HyPsd@tocsection#1#2#3{%
1696     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1697     #3%
1698   }%
1699 }
```

6.5.11 Reference commands

\HyPsd@href

```
1700 \def\HyPsd@href#1#-{\@secondoftwo}
```

\HyPsd@ref Macro \HyPsd@ref calls the macro \HyPsd@@ref for star checking. The same methods like in \HyPsd@hspace is used.

```
1701 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

\HyPsd@@ref Macro \HyPsd@@ref checks if a star is present.

```
1702 \def\HyPsd@@ref#1*#2\END{%
1703   \ifx\#2\%
1704     \HyPsd@@@ref{#1}%
1705   \else
1706     \expandafter\HyPsd@@@ref
1707   \fi
1708 }
```

`\HyPsd@@@ref` `\HyPsd@@@ref` does the work and extracts the first argument.

```
1709 \def\HyPsd@@@ref#1{%
1710   \expandafter\ifx\csname r@#1\endcsname\relax
1711     ??%
1712   \else
1713     \expandafter\expandafter\expandafter
1714     \@car\csname r@#1\endcsname\@nil
1715   \fi
1716 }
```

`\HyPsd@pageref` Macro `\HyPsd@pageref` calls the macro `\HyPsd@@pageref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```
1717 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

`\HyPsd@@pageref` Macro `\HyPsd@@pageref` checks if a star is present.

```
1718 \def\HyPsd@@pageref#1*#2\END{%
1719   \ifx\#2\%
1720     \HyPsd@@@pageref{#1}%
1721   \else
1722     \expandafter\HyPsd@@@pageref
1723   \fi
1724 }
```

`\HyPsd@@@pageref` `\HyPsd@@@pageref` does the work and extracts the second argument.

```
1725 \def\HyPsd@@@pageref#1{%
1726   \expandafter\ifx\csname r@#1\endcsname\relax
1727     ??%
1728   \else
1729     \expandafter\expandafter\expandafter\expandafter
1730     \expandafter\expandafter\expandafter\@car
1731     \expandafter\expandafter\expandafter\@gobble
1732     \csname r@#1\endcsname{}\@nil
1733   \fi
1734 }
```

`\HyPsd@nameref` Macro `\HyPsd@nameref` calls the macro `\HyPsd@@nameref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```
1735 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

`\HyPsd@@nameref` Macro `\HyPsd@@nameref` checks if a star is present.

```
1736 \def\HyPsd@@nameref#1*#2\END{%
1737   \ifx\#2\%
1738     \HyPsd@@@nameref{#1}%
1739   \else
1740     \expandafter\HyPsd@@@nameref
1741   \fi
1742 }
```

`\HyPsd@@@nameref` `\HyPsd@@@nameref` does the work and extracts the third argument.

```
1743 \def\HyPsd@@@nameref#1{%
1744   \expandafter\ifx\csname r@#1\endcsname\relax
1745     ??%
1746   \else
1747     \expandafter\expandafter\expandafter\expandafter
1748     \expandafter\expandafter\expandafter\@car
1749     \expandafter\expandafter\expandafter\@gobbletwo
```

```

1750 \csname r@#1\endcsname{}\}\@nil
1751 \fi
1752 }

```

`\HyPsd@autoref` Macro `\HyPsd@autoref` calls the macro `\HyPsd@@autoref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1753 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

`\HyPsd@@autoref` Macro `\HyPsd@@autoref` checks if a star is present.

```

1754 \def\HyPsd@@autoref#1*#2\END{%
1755 \ifx\#2\%
1756 \HyPsd@@@autoref{#1}%
1757 \else
1758 \expandafter\HyPsd@@@autoref
1759 \fi
1760 }

```

`\HyPsd@@@autoref` `\HyPsd@@@autoref` does the work and extracts the second argument.

```

1761 \def\HyPsd@@@autoref#1{%
1762 \expandafter\ifx\csname r@#1\endcsname\relax
1763 ??%
1764 \else
1765 \expandafter\expandafter\expandafter\HyPsd@autorefname
1766 \csname r@#1\endcsname{}\}\}\@nil
1767 \expandafter\expandafter\expandafter
1768 \@car\csname r@#1\endcsname\@nil
1769 \fi
1770 }

```

`\HyPsd@autorefname` At least a basic definition for getting the `\autoref` name.

```

1771 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1772 \ifx\#4\%
1773 \else
1774 \HyPsd@@autorefname#4.\@nil
1775 \fi
1776 }

```

`\HyPsd@@autorefname`

```

1777 \def\HyPsd@@autorefname#1.#2\@nil{%
1778 \ltx@ifundefined{#1autorefname}{%
1779 \ltx@ifundefined{#1name}{%
1780 }{%
1781 \csname#1name\endcsname\space
1782 }%
1783 }{%
1784 \csname#1autorefname\endcsname\space
1785 }%
1786 }

```

6.5.12 Redefining the defining commands

Definitions aren't allowed, because they aren't executed in an only expanding context. So the command to be defined isn't defined and can perhaps be undefined. This would causes TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

`\HyPsd@DefCommand` and `\HyPsd@LetCommand` expands to the commands `\<def>-command` and `\<let>-command` with the meaning of `\def` and `\let`. So it is detected by `\HyPsd@CheckCatcodes` and the command name `\<def>-command` or `\<let>-command` should indicate a forbidden definition command.

The command to be defined is converted to a string and back to a command name with the help of `\csname`. If the command is already defined, `\noexpand` prevents a further expansion, even though the command would expand to legal stuff. If the command don't have the meaning of `\relax`, `\HyPsd@CheckCatcodes` will produce a warning. (The command itself can be legal, but the warning is legitimate because of the position after a defining command.)

The difference between `\HyPsd@DefCommand` and `\HyPsd@LetCommand` is that the first one also cancels this arguments, the parameter and definition text. The right side of the `\let` commands cannot be canceled with an undelimited parameter because of a possible space token after `\futurelet`.

To avoid unmatched `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```
\HyPsd@DefCommand
\HyPsd@LetCommand 1787 \begingroup
1788   \def\x#1#2{%
1789     \endgroup
1790     \let#1\def
1791     \def\HyPsd@DefCommand##1##2###{%
1792       #1%
1793       \expandafter\noexpand
1794       \csname\expandafter\@gobble\string##1\@empty\endcsname
1795       \@gobble
1796     }%
1797     \let#2\let
1798     \def\HyPsd@@LetCommand##1{%
1799       \expandafter\ifx\csname##1\expandafter\endcsname
1800         \csname iftrue\endcsname
1801         \pdfstringdefWarn\let
1802         \expandafter\@gobble
1803       \else
1804         \expandafter\ifx\csname##1\expandafter\endcsname
1805           \csname iffalse\endcsname
1806         \pdfstringdefWarn\let
1807         \expandafter\expandafter\expandafter\@gobble
1808       \else
1809         #2%
1810         \expandafter\noexpand
1811         \csname##1\expandafter\expandafter\expandafter\endcsname
1812       \fi
1813     \fi
1814   }%
1815 }%
1816 \expandafter\x\csname <def>-command\expandafter\endcsname
1817       \csname <let>-command\endcsname
```

```

1818 \def\HyPsd@LetCommand#1{%
1819   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1820   \expandafter\expandafter\expandafter{%
1821     \expandafter\@gobble\string#1\@empty
1822   }%
1823 }

```

6.5.13 \ifnextchar

`\HyPsd@ifnextchar` In `\pdfstringdef \@ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\@ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\@ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report latex/3662).

```

1824 \def\HyPsd@ifnextchar#1{%
1825   \pdfstringdefWarn#1%
1826   \expandafter\@gobbletwo\@gobble
1827 }

```

6.5.14 \@protected@testoptifnextchar

`\HyPsd@protected@testopt` Macros with optional arguments doesn't work properly, because they call `\@ifnextchar` to detect the optional argument (see the explanation of `\HyPsd@ifnextchar`). But a warning, that `\@ifnextchar` doesn't work, doesn't help the user very much. Therefore `\@protected@testopt` is also disabled, because its first argument is the problematic macro with the optional argument and it is called before `\@ifnextchar`.

```

1828 \def\HyPsd@protected@testopt#1{%
1829   \pdfstringdefWarn#1%
1830   \@gobbletwo
1831 }

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

`\HyPsd@Warning` For several reasons `\space` is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```

1832 \def\HyPsd@Warning#1{%
1833   \begingroup
1834     \let\space\ltx@space
1835     \Hy@Warning{#1}%
1836   \endgroup
1837 }

```

6.6.2 Protecting spaces

```

1838 \RequirePackage{etexcmds}[2007/09/09]
1839 \ifetex@unexpanded
1840   \expandafter\@secondoftwo

```

```

1841 \else
1842 \expandafter\@firstoftwo
1843 \fi
1844 {%

```

`\HyPsd@ProtectSpaces` `\HyPsd@ProtectSpaces` calls with the expanded string `\HyPsd@@ProtectSpacesFi`. The expanded string is protected by `|` at the beginning and end of the expanded string. Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of `\HyPsd@@ProtectSpacesFi`.

```

1845 \def\HyPsd@ProtectSpaces#1{%
1846 \iftrue
1847 \expandafter\HyPsd@@ProtectSpacesFi
1848 \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1849 \fi
1850 }%

```

`\HyPsd@@ProtectSpacesFi` The string can contain command tokens, so it is better to use an `\def` instead of an `\edef`.

```

1851 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1852 \fi
1853 \ifx\scrollmode#2\scrollmode
1854 \HyPsd@RemoveMask#1\HyPsd@End#3%
1855 \else
1856 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1857 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1858 \fi
1859 }%

```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting `|`. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```

1860 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1861 \toks@\expandafter{#1}%
1862 \xdef#2{\the\toks@}%
1863 }%

1864 }{%
1865 \let\HyPsd@fi\fi
1866 \def\HyPsd@ProtectSpaces#1{%
1867 \xdef#1{%
1868 \iftrue
1869 \expandafter\HyPsd@@ProtectSpacesFi
1870 \expandafter|\expandafter\@empty#1| %
1871 \HyPsd@fi
1872 }%
1873 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1874 }%
1875 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1876 \fi
1877 \etex@unexpanded{#1}%
1878 \ifx\scrollmode#2\scrollmode
1879 \else
1880 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1881 \HyPsd@fi

```

```

1882 }%
1883 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1884   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1885 }%
1886 }

```

6.6.3 Remove grouping braces

`\HyPsd@RemoveBraces` #1 contains the expanded string, the result will be locally written in command `\HyPsd@String`.

```

1887 \def\HyPsd@RemoveBraces#1{%
1888   \ifx\scrollmode#1\scrollmode
1889   \else
1890     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1891   \fi
1892 }

```

`\HyPsd@@RemoveBraces` `\HyPsd@@RemoveBraces` is called with the expanded string, the end marked by `\HyPsd@End`, the expanded string again, but enclosed in braces and the string command. The first expanded string is scanned by the parameter text #1#2. By a comparison with the original form in #3 we can decide whether #1 is a single token or a group. To avoid the case that #2 is a group, the string is extended by a | before.

While removing the grouping braces an italic correction marker is inserted for supporting package `xspace` and letting ligatures broken.

Because the string is already expanded, the `\if` commands should disappeared. So we can move some parts out of the argument of `\ltx@ReturnAfterFi`.

```

1893 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1894   \fi
1895   \def\Hy@temp@A{#1#2}%
1896   \def\Hy@temp@B{#3}%
1897   \ifx\Hy@temp@A\Hy@temp@B
1898     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1899       \HyPsd@String#1%
1900     }%
1901     \ifx\scrollmode#2\scrollmode
1902     \else
1903       \Hy@ReturnAfterFiFiEnd{%
1904         \HyPsd@RemoveBraces{#2}%
1905       }%
1906     \fi
1907   \else
1908     \def\Hy@temp@A{#1}%
1909     \HyPsd@AppendItalcrr\HyPsd@String
1910     \ifx\Hy@temp@A\@empty
1911       \Hy@ReturnAfterElseFiFiEnd{%
1912         \HyPsd@RemoveBraces{#2}%
1913       }%
1914     \else
1915       \HyPsd@ProtectSpaces\Hy@temp@A
1916       \HyPsd@AppendItalcrr\Hy@temp@A
1917       \Hy@ReturnAfterFiFiEnd{%
1918         \expandafter\HyPsd@RemoveBraces\expandafter
1919         {\Hy@temp@A#2}%
1920       }%
1921     \fi

```



```

1922 \fi
1923 \Hy@ReturnEnd
1924 }

```

`\HyPsd@AppendItalcorr` The string can contain commands yet, so it is better to use `\def` instead of a shorter `\edef`. The two help macros limit the count of `\expandafter`.

```

1925 \def\HyPsd@AppendItalcorr#1{%
1926 \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1927 }
1928 \def\HyPsd@@AppendItalcorr#1#2{%
1929 \expandafter\def\expandafter#2\expandafter{#2#1}%
1930 }

```

6.6.4 Catcode check

Workaround for LuaTeX. `\HyPsd@CheckCatcodes` might trigger a bug of LuaTeX (0.60.2, 0.70.1, 0.70.2, ...) in the comparison with `\ifcat`, see <http://tracker.luatex.org/view.php?id=773>.

```

1931 \ltx@ifundefined{directlua}{%
1932 }{%
1933 \expandafter\ifx\csname\endcsname\relax\fi
1934 }

```

Check catcodes.

`\HyPsd@CheckCatcodes` Because `\ifcat` expands its arguments, this is prevented by `\noexpand`. In case of command tokens and active characters `\ifcat` now sees a `\relax`. After protecting spaces and removing braces `#1` should be a single token, no group of several tokens, nor an empty group. (So the `\expandafter\relax` between `\ifcat` and `\noexpand` is only for safety and it should be possible to remove it.)

`\protect` and `\relax` should be removed silently. But it is too dangerous and breaks some code giving them the meaning of `\@empty`. So commands with the meaning of `\protect` are removed here. (`\protect` should have the meaning of `\@typeset@protect` that is equal to `\relax`).

For the comparison with active characters, `~` cannot be used because it has the meaning of a blank space here. And active characters need to be checked, if they have been defined using `\protected`.

```

1935 \begingroup
1936 \catcode'\Q=\active
1937 \let Q\ltx@empty
1938 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1939 \global\let\HyPsd@Rest\relax
1940 \ifcat\relax\noexpand#1\relax
1941 \ifx#1\protect
1942 \else
1943 \ifx#1\penalty
1944 \setbox\z@=\hbox{%
1945 \afterassignment\HyPsd@AfterCountRemove
1946 \count@=#2\HyPsd@End
1947 }%
1948 \else
1949 \ifx#1\kern
1950 \setbox\z@=\hbox{%
1951 \afterassignment\HyPsd@AfterDimenRemove
1952 \dimen@=#2\HyPsd@End

```

```

1953     }%
1954   \else
1955     \ifx#1\hskip
1956       \setbox\z@=\hbox{%
1957         \afterassignment\HyPsd@AfterSkipRemove
1958         \skip@=#2\HyPsd@end
1959       }%
1960     \else
1961       \HyPsd@CatcodeWarning{#1}%
1962     \fi
1963   \fi
1964 \fi
1965 \fi
1966 \else
1967   \ifcat\noexpand#1\noexpandQ% active character
1968     \expandafter\expandafter\expandafter\def
1969     \expandafter\expandafter\expandafter\HyPsd@String
1970     \expandafter\expandafter\expandafter{%
1971       \expandafter\HyPsd@String\string#1%
1972     }%
1973   \else
1974     \ifcat#1A% letter
1975       \expandafter\def\expandafter\HyPsd@String\expandafter{%
1976         \HyPsd@String#1%
1977       }%
1978     \else
1979       \ifcat#1 % SPACE
1980         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1981           \HyPsd@String\HyPsd@SPACEOPTI
1982         }%
1983       \else
1984         \ifcat$#1%
1985           \HyPsd@CatcodeWarning{math shift}%
1986         \else
1987           \ifcat&#1%
1988             \HyPsd@CatcodeWarning{alignment tab}%
1989           \else
1990             \ifcat^#1%
1991               \HyPsd@CatcodeWarning{superscript}%
1992             \else
1993               \ifcat_#1%
1994                 \HyPsd@CatcodeWarning{subscript}%
1995               \else
1996                 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1997                   \HyPsd@String#1%
1998                 }%
1999               \fi
2000             \fi
2001           \fi
2002         \fi
2003       \fi
2004     \fi
2005   \fi
2006 \fi
2007 \ifx\HyPsd@Rest\relax
2008   \ifx\scrollmode#2\scrollmode
2009     \else

```

```

2010 \Hy@ReturnAfterFiFiEnd{%
2011 \HyPsd@CheckCatcodes#2\HyPsd@End
2012 }%
2013 \fi
2014 \else
2015 \ifx\HyPsd@Rest\@empty
2016 \else
2017 \Hy@ReturnAfterFiFiEnd{%
2018 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2019 }%
2020 \fi
2021 \fi
2022 \Hy@ReturnEnd
2023 }%
2024 \endgroup

```

Remove counts, dimens, skips.

`\HyPsd@AfterCountRemove` Counts like `\penalty` are removed silently.

```

2025 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2026 \gdef\HyPsd@Rest{#1}%
2027 }

```

`\HyPsd@AfterDimenRemove` If the value of the `dimen` (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

2028 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
2029 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2030 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2031 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2032 \else
2033 \ifdim\dimen@=\z@
2034 \else
2035 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2036 \fi
2037 \gdef\HyPsd@Rest{#1}%
2038 \fi
2039 }

```

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

2040 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
2041 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2042 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2043 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2044 \else
2045 \ifdim\skip@=\z@
2046 \else
2047 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2048 \fi
2049 \gdef\HyPsd@Rest{#1}%
2050 \fi
2051 }

```

Catcode warnings.

\HyPsd@CatcodeWarning \HyPsd@CatcodeWarning produces a warning for the user.

```
2052 \def\HyPsd@CatcodeWarning#1{%
2053   \HyPsd@Warning{%
2054     Token not allowed in a PDF string (%)
2055     \ifHy@unicode
2056       Unicode%
2057     \else
2058       PDFDocEncoding%
2059     \fi
2060   }:%
2061   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
2062 }%
2063 }
2064 \begingroup
2065   \catcode'\|=0 %
2066   \catcode'\|=12 %
2067   \gdef\HyPsd@RemoveCmdPrefix#1{%
2068     \expandafter\HyPsd@@RemoveCmdPrefix
2069     \string#1\@empty\<>-|\@empty|\@empty
2070   }%
2071   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
2072 \endgroup
```

\HyPsd@RemoveSpaceWarning

```
2073 \def\HyPsd@RemoveSpaceWarning#1{%
2074   \HyPsd@Warning{%
2075     Token not allowed in a PDF string (%)
2076     \ifHy@unicode
2077       Unicode%
2078     \else
2079       PDFDocEncoding%
2080     \fi
2081   }:%
2082   \MessageBreak #1\MessageBreak
2083   removed%
2084 }%
2085 }
```

\HyPsd@ReplaceSpaceWarning

```
2086 \def\HyPsd@ReplaceSpaceWarning#1{%
2087   \HyPsd@Warning{%
2088     Token not allowed in a PDF string (%)
2089     \ifHy@unicode
2090       Unicode%
2091     \else
2092       PDFDocEncoding%
2093     \fi
2094   }:%
2095   \MessageBreak #1\MessageBreak
2096   replaced by space%
2097 }%
2098 }
```

6.6.5 Check for wrong glyphs

A wrong glyph is marked with `\relax`, the glyph name follows, delimited by `>`. `\@empty` ends the string.

```
2099 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2100   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2101     \HyPsd@String#1%
2102   }%
2103   \ifx\\#2\\%
2104   \else
2105     \ltx@ReturnAfterFi{%
2106       \HyPsd@GlyphProcessWarning#2\@empty
2107     }%
2108   \fi
2109 }
2110 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2111   \HyPsd@@@GlyphProcessWarning#1++>%
2112   \HyPsd@GlyphProcess#2\@empty
2113 }
2114 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2115   \ifx\\#2\\%
2116     \HyPsd@Warning{%
2117       Glyph not defined in %
2118       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2119       removing '@backslashchar#1'%
2120     }%
2121   \else
2122     \HyPsd@Warning{%
2123       Composite letter '@backslashchar#1+#2'\MessageBreak
2124       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2125       \MessageBreak
2126       removing '@backslashchar#1'%
2127     }%
2128   \fi
2129 }
```

Spaces.

`\HyPsd@spaceopti` In the string the spaces are represented by `\HyPsd@spaceopti` tokens. Within an `\edef` it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next `\HyPsd@spaceopti` by an protected space `\040`.

```
2130 \def\HyPsd@spaceopti#1{ % first space
2131   \ifx\HyPsd@spaceopti#1%
2132     \040%
2133   \else
2134     #1%
2135   \fi
2136 }
```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is an wrapper for the command `\HyPsd@Subst` that does all the work: In string stored in command `#3` it replaces the tokens `#1` with `#2`.

```

#1 Exact the tokens that should be replaced.
#2 The replacement (don't need to be expanded).
#3 Command with the string.
2137 \def\HyPsd@Subst#1#2#3{%
2138 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2139 \fi
2140 ##1%
2141 \ifx\scrollmode##2\scrollmode
2142 \else
2143 #2%
2144 \HyPsd@@ReplaceFi##2\END
2145 \fi
2146 }%
2147 \xdef#3{%
2148 \iftrue
2149 \expandafter\HyPsd@@ReplaceFi#3#1\END
2150 \fi
2151 }%
2152 }

```

`\HyPsd@StringSubst` To save tokens in `\pdfstringdef \HyPsd@StringSubst` is a wrapper, that expands argument #1 before calling `\HyPsd@Subst`.

```

2153 \def\HyPsd@StringSubst#1{%
2154 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2155 }

```

`\HyPsd@EscapeTeX`

```

2156 \begingroup
2157 \lccode'\!='\%%
2158 \lccode'\|='\%%
2159 \lccode'\(='\{%
2160 \lccode'\)='\}%
2161 \lccode'0=\ltx@zero
2162 \lccode'1=\ltx@zero
2163 \lccode'3=\ltx@zero
2164 \lccode'4=\ltx@zero
2165 \lccode'5=\ltx@zero
2166 \lccode'7=\ltx@zero
2167 \lowercase{\endgroup
2168 \def\HyPsd@EscapeTeX#1{%
2169 \HyPsd@Subst!{|045}#1%
2170 \HyPsd@Subst({|173}#1%
2171 \HyPsd@Subst){|175}#1%
2172 }%
2173 }

```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in \TeX 's mouth. So this implementation uses an argument to examine the next token. In a previous version I reused `\@xspace`, but this version is shorter and easier to understand.

```

2174 \def\HyPsd@doxspace#1{%
2175 \ifx#1\relax\else
2176 \ifx#1.\else
2177 \ifx#1:\else

```

```

2178 \ifx#1,\else
2179 \ifx#1;\else
2180 \ifx#1!\else
2181 \ifx#1?\else
2182 \ifx#1/\else
2183 \ifx#1-\else
2184 \ifx#1'\else
2185 \HyPsd@SPACEOPTI
2186 \fi
2187 \fi
2188 \fi
2189 \fi
2190 \fi
2191 \fi
2192 \fi
2193 \fi
2194 \fi
2195 \fi
2196 #1%
2197 }%

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, \8 is replaced by \00, and \9 is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

2198 \beginngroup
2199 \catcode'\|=0 %
2200 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

2201 |gdef|HyPsd@ConvertToUnicode#1{%
2202 |xdef#1{%
2203 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2204 }%
2205 |ifx#1|@empty
2206 |else
2207 |xdef#1{%
2208 \376\377%
2209 #1%
2210 }%
2211 |fi
2212 }%

```

\HyPsd@DoConvert

```

2213 |gdef|HyPsd@DoConvert#1{%
2214 |ifx#1|@empty
2215 |else
2216 |ltx@ReturnAfterFi{%
2217 |ifx#1\%%
2218 \%%
2219 |expandafter|HyPsd@DoEscape
2220 |else
2221 |HyPsd@Char{#1}%
2222 |expandafter|HyPsd@DoConvert
2223 |fi
2224 }%

```

```

2225     |fi
2226 }%

\HyPsd@DoEscape
2227 |gdef|HyPsd@DoEscape#1{%
2228     |ifx#19%
2229         |expandafter|HyPsd@GetTwoBytes
2230     |else
2231         |ltx@ReturnAfterFi{%
2232         |ifx#18%
2233             00%
2234         |expandafter|HyPsd@GetTwoBytes
2235     |else
2236         #1%
2237         |expandafter|HyPsd@GetOneByte
2238     |fi
2239 }%
2240 |fi
2241 }%

\HyPsd@GetTwoBytes
2242 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2243     #1\#2#3#4%
2244     |HyPsd@DoConvert
2245 }%

\HyPsd@GetOneByte
2246 |gdef|HyPsd@GetOneByte#1#2{%
2247     #1#2%
2248     |HyPsd@DoConvert
2249 }%
2250 |endgroup

\HyPsd@@GetNextTwoTokens TeX does only allow nine parameters, so we need another macro to get more
arguments.
2251 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2252     \xdef#4{#4#1#2}%
2253     \HyPsd@@ConvertToUnicode#3\END#4%
2254 }

\HyPsd@Char
2255 \begingroup
2256 \catcode0=9 %
2257 \catcode'\^=7 %
2258 \catcode'\^^=12 %
2259 \def\x{^^^^0000}%
2260 \expandafter\endgroup
2261 \ifx\x\@empty
2262     \def\HyPsd@Char#1{%
2263         \ifnum'#1<128 %
2264             \@backslashchar 000#1%
2265         \else
2266             \ifnum'#1<65536 %
2267                 \expandafter\HyPsd@CharTwoByte\number'#1!%
2268             \else
2269                 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2270                 \intcalcSub{'#1}{65536}!%

```



```

2271 \fi
2272 \fi
2273 }%
2274 \def\HyPsd@CharTwoByte#1!{%
2275 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2276 \IntCalcDiv#1!256!!%
2277 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2278 \IntCalcMod#1!256!!%
2279 }%
2280 \def\HyPsd@CharOctByte#1!{%
2281 \@backslashchar
2282 \IntCalcDiv#1!64!%
2283 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2284 \IntCalcMod#1!8!%
2285 }%
2286 \def\HyPsd@CharSurrogate#1!{%
2287 \@backslashchar 33%
2288 \IntCalcDiv#1!262144!%
2289 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2290 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2291 \@backslashchar 33%
2292 \expandafter\expandafter\expandafter\IntCalcAdd
2293 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2294 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2295 \IntCalcMod#1!256!!%
2296 }%
2297 \else
2298 \def\HyPsd@Char#1{%
2299 \@backslashchar 000#1%
2300 }%
2301 \fi

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

`\numexpr 123/4\relax` is replaced by
`\number\dimexpr.25\dimexpr 123sp\relax\relax`

```

2302 \begingroup\expandafter\expandafter\expandafter\endgroup
2303 \expandafter\ifx\csname numexpr\endcsname\relax
2304 \let\HyPsd@UTFviii\relax
2305 \else
2306 \begingroup
2307 \lccode'\~='^f4\relax
2308 \lowercase{\endgroup
2309 \def\HyPsd@UTFviii{%
2310 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2311 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2312 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2313 \ifx~\HyPsd@UTFviii@ccxliv@undef

```

```

2314 \let~\HyPsd@UTFviii@ccxliv@def
2315 \fi
2316 \let\unichar\HyPsd@unichar
2317 }%
2318 }%
2319 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2320 \edef\HyPsd@UTFviii@ccxliv@def{%
2321 \noexpand\UTFviii@four@octets\string ^^f4%
2322 }%

```

The two octet form of UTF-8 110aaabb (A) and 10cccd (B) must be converted into octal numbers 00a and bcd. The result is \8a\bcd (with a, b, c, d as octal numbers). The conversion equations.

$$a := A/4 - 48 \quad (1)$$

$$b := A - 4 * (A/4) \quad (2)$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \quad (3)$$

$$d := B - 8 * (B/8) \quad (4)$$

$$(5)$$

```

2323 \def\HyPsd@UTFviii@two#1#2{%
2324 \expandafter\HyPsd@UTFviii@two
2325 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
2326 \number'#1\expandafter|
2327 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
2328 \number'#2 \@nil
2329 }%
2330 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2331 \expandafter\8%
2332 \number\numexpr #1-48\expandafter\relax
2333 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2334 \number\numexpr #3-8*%
2335 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2336 \number\numexpr #4-8*#3\relax
2337 }%

```

Three octet form: 1110aabb (A), 10bccdd (B), and 10eeefff (C). The result is \9abc\def (with a, ..., f as octal numbers). The conversion equations:

$$a := A/4 - 56 \quad (6)$$

$$b := 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) \quad (7)$$

$$c := B/4 - 32 - ((B - 128 < 32)?0 : 8) \quad (8)$$

$$d := B - 4 * (B/4) \quad (9)$$

$$e := C/8 - 16 \quad (10)$$

$$f := C - 8 * (C/8) \quad (11)$$

$$(12)$$

```

2338 \def\HyPsd@UTFviii@three#1#2#3{%
2339 \expandafter\HyPsd@UTFviii@@three
2340 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
2341 \number'#1\expandafter|
2342 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
2343 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
2344 \number'#2\expandafter|
2345 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|

```

```

2346 \number'#3 \@nil
2347 }%
2348 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7@nil{%
2349 \expandafter\9%
2350 \number\numexpr #1-56\expandafter\relax
2351 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2352 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2353 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2354 \number\numexpr #6-16\expandafter\relax
2355 \number\numexpr #7-8*#6\relax
2356 }%

```

Surrogates: 4 octets in UTF-8, a surrogate pair in UTF-16. High surrogate range: U+D800–U+DBFF, low surrogate range: U+DC00–U+DFFF.

```

UTF-8: 11110uuu 10uuzzzz 10yyyyyy 10xxxxxx
www = uuuu - 1
UTF-16: 110110ww wwzzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

2357 \def\HyPsd@UTFviii@four#1#2{%
2358 \expandafter\HyPsd@@UTFviii@four\number
2359 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2360 \expandafter|\number
2361 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2362 }%
2363 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2364 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2365 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2366 \ifodd#2 %
2367 \number\numexpr(#2-1)/2\relax
2368 \else
2369 \number\numexpr#2/2\relax
2370 \fi
2371 \number\numexpr\ifodd#2 4+\fi
2372 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2373 \933%
2374 \expandafter\HyPsd@@@UTFviii@four\number
2375 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2376 }%
2377 \def\HyPsd@@@UTFviii@four#1|#2{%
2378 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2379 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2380 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2381 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2382 }%

```

Input encoding utf8x of package ucs uses macro \unichar. Values greater than "FFFF are not supported.

```

2383 \def\HyPsd@unichar#1{%
2384 \ifHy@unicode
2385 \ifnum#1>"10FFFF %
2386 \HyPsd@UnicodeReplacementCharacter % illegal
2387 \else
2388 \ifnum#1>"FFFF %

```

High-surrogate code point. ("D800 = 55296, \p@ = 1pt = 65536sp)

```

2389 \expandafter\HyPsd@unichar\expandafter{%
2390 \number\numexpr 55296+%

```

```

2391         \dimexpr.0009765625\dimexpr\number#1sp-\p@
2392         \relax\relax\relax
2393     }%

```

Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)

```

2394     \expandafter\HyPsd@unichar\expandafter{%
2395     \number\numexpr#1-9216%
2396     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2397     \relax\relax\relax
2398 }%
2399 \else
2400     \ifnum#1>"7FF %
2401     \9%
2402     \expandafter\HyPsd@unichar@first@byte\expandafter{%
2403     \number
2404     \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2405     }%
2406     \else
2407     \8%
2408     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2409     \fi
2410     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2411     \number
2412     \numexpr#1-256*\number
2413     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2414     }%
2415     \fi
2416     \fi
2417     \else
2418     .% unsupported (Unicode -> PDF Doc Encoding)
2419     \fi
2420 }%
2421 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2422 \def\HyPsd@unichar@first@byte#1{%
2423     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2424     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2425     \number
2426     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2427     \relax\relax\relax
2428     }%
2429 }%
2430 \def\HyPsd@unichar@second@byte#1{%
2431     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2432     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2433     \number
2434     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2435     \relax\relax\relax
2436     }%
2437 }%
2438 \def\HyPsd@unichar@octtwo#1{%
2439     \number\dimexpr.125\dimexpr#1sp\relax\relax
2440     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2441     \relax\relax\relax
2442     }%
2443 \fi

```

\HyPsd@utf@viii@undeferr \utf@viii@undeferr comes from file utf8x.def from package ucs.

```

2444 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2445   \ifx\@gobble#1%
2446   \else
2447     [Please insert \textbackslash PrerenderUnicode%
2448     \textbraceleft#1\textbraceright\space
2449     into preamble]%
2450   \fi
2451 }%

```

6.6.10 Support for die faces (ifsym et. al.)

\HyPsd@DieFace Die faces are provided by

Package	Macro
ifsym	\Cube
epsdice	\epsdice
hhcount	\fcdice

\Cube and \epsdice restrict the range to the numbers one to six. \fcdice generates for larger numbers several dice faces with the sum matching the number. The implementation for the PDF strings follows \fcdice.

```

2452 \def\HyPsd@DieFace#1{%
2453   \ifHy@unicode
2454     \ifnum#1<1 %
2455       \HyPsd@UnicodeReplacementCharacter
2456     \else
2457       \ifnum#1>6 %
2458         \9046\205%
2459         \expandafter\expandafter\expandafter
2460         \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2461       \else
2462         \9046\20\intcalcDec{#1}%
2463       \fi
2464     \fi
2465   \else
2466     .% Die faces are not part of PDFDocEncoding
2467   \fi
2468 }

```

\HyPsd@DieFaceLarge

```

2469 \def\HyPsd@DieFaceLarge#1!{%
2470   \ifnum#1>6 %
2471     \expandafter\ltx@firstoftwo
2472   \else
2473     \expandafter\ltx@secondoftwo
2474   \fi
2475   {%
2476     \9046\205%
2477     \expandafter\expandafter\expandafter
2478     \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2479   }{%
2480     \9046\20\IntCalcDec#1!%
2481   }%
2482 }

```

6.6.11 Support for moon phases of package china2e

```

2483 \def\HyPsd@MoonPha#1{%
2484   \ifcase\intcalcNum{#1} %
2485     \HyPsd@UnicodeReplacementCharacter
2486   \or % 1
2487   % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2488     \9330\074\9337\032%
2489   \or % 2
2490     \HyPsd@UnicodeReplacementCharacter
2491   \or % 3
2492   % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2493     \9330\074\9337\035%
2494   \or % 4
2495   % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2496     \9330\074\9337\034%
2497   \else
2498     \HyPsd@UnicodeReplacementCharacter
2499   \fi
2500 }
2501 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2502 \def\HyPsd@ding#1{%
2503   \ifHy@unicode
2504     \ifnum#1<32 %
2505       \HyPsd@UnicodeReplacementCharacter
2506     \else
2507       \ifnum#1>254 %
2508         \HyPsd@UnicodeReplacementCharacter
2509       \else
2510         \ifnum#1<127 %
2511           \expandafter\expandafter\expandafter
2512             \HyPsd@@ding\intcalcNum{#1}!%
2513         \else
2514           \ifnum#1>160 %
2515             \expandafter\expandafter\expandafter
2516               \HyPsd@@ding\intcalcNum{#1}!%
2517           \else
2518             \HyPsd@UnicodeReplacementCharacter
2519           \fi
2520         \fi
2521       \fi
2522     \fi
2523   \else
2524     .% Dingbats are not part of PDFDocEncoding
2525   \fi
2526 }

```

\HyPsd@@ding

```

2527 \def\HyPsd@@ding#1!{%
2528   \ltx@ifundefined{HyPsd@ding@#1}{%
2529     \ifnum#1<127 %
2530       \9047%
2531       \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2532     \else
2533       \ifnum#1<168 %
2534         \9047\14\IntCalcSub#1!160!%

```

```

2535 \else
2536 \ifnum#1>181 %
2537 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2538 \else
2539 % 172..181 -> U+2460..U+2469
2540 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2541 \fi
2542 \fi
2543 \fi
2544 }{%
2545 \csname HyPsd@ding@#1\endcsname
2546 }%
2547 }

2548 \@namedef{HyPsd@ding@32}{\space}
2549 % U+260E BLACK TELEPHONE
2550 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2551 % U+261B BLACK RIGHT POINTING INDEX
2552 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2553 % U+261E WHITE RIGHT POINTING INDEX
2554 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2555 % U+2605 BLACK STAR
2556 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2557 % U+25CF BLACK CIRCLE
2558 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2559 % U+25A0 BLACK SQUARE
2560 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2561 % U+25B2 BLACK UP-POINTING TRIANGLE
2562 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2563 % U+25BC BLACK DOWN-POINTING TRIANGLE
2564 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2565 % U+25C6 BLACK DIAMOND
2566 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2567 % U+25D7 RIGHT HALF BLACK CIRCLE
2568 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2569 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2570 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2571 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2572 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2573 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2574 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2575 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2576 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2577 \@ifclassloaded{memoir}{%
2578 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2579 }{}

```

7.2 Package subfigure

Added fix for version 2.1. Here `\sub@label` is defined.

```

2580 \@ifpackageloaded{subfigure}{%
2581 \ltx@ifundefined{sub@label}{%

```

```

2582 \Hy@hypertextnamesfalse
2583 }{%
2584 \renewcommand*{\sub@label}[1]{%
2585 \@bsphack
2586 \subfig@oldlabel{#1}%
2587 \if@filesw
2588 \begingroup
2589 \edef\@currentlabstr{%
2590 \expandafter\strip@prefix\meaning\@currentlabelname
2591 }%
2592 \protected@write\@auxout{}\@auxout{%
2593 \string\newlabel{sub@#1}{%
2594 {\@nameuse{@@thesub\@capttype}}%
2595 {\thepage}%
2596 }%
2597 \expandafter\strip@period\@currentlabstr
2598 \relax.\relax\@@@%
2599 }%
2600 {\@currentHref}%
2601 {}%
2602 }%
2603 }%
2604 \endgroup
2605 \fi
2606 \@esphack
2607 }%
2608 \@ifpackagelater{subfigure}{2002/03/26}{\@auxout}{%
2609 \providecommand*\toclevel@subfigure{1}%
2610 \providecommand*\toclevel@subtable{1}%
2611 }%
2612 }%
2613 }{}

```

7.3 Package xr and xr-hyper

The beta version of xr that supports `\XR@addURL` is called **xr-hyper**. Therefore we test for the macro itself and not for the package name:

```

2614 \ltx@ifundefined{XR@addURL}{%
2615 }{%

```

If reading external aux files check whether they have a non zero fourth field in `\newlabel` and if so, add the URL as the fifth field.

```

2616 \def\xr@addURL#1{\xr@dURL#1}{\@auxout}{\@auxout}%
2617 \def\xr@dURL#1#2#3#4#5\@auxout{%
2618 {#1}{#2}%
2619 \if!#4!%
2620 \else
2621 {#3}{#4}{\xr@URL}%
2622 \fi
2623 }%
2624 }

2625 \def\Hy@true{true}
2626 \def\Hy@false{false}

```

Providing dummy definitions.

```

2627 \let\literalps@out\@gobble
2628 \newcommand\pdfbookmark[3]{}

```



```

2629 \def\Acrobatmenu#1#2{\leavevmode#2}
2630 \def\Hy@writebookmark#1#2#3#4#5{}%

```

8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

```

2631 \let\HyperRaiseLinkHook\@empty
2632 \def\HyperRaiseLinkDefault{\baselineskip}

```

`\HyperRaiseLinkHook` allows the user to reassign `\HyperRaiseLinkLength`.

```

2633 \newcount\Hy@SavedSpaceFactor
2634 \def\Hy@SaveSpaceFactor{%
2635   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@fi
2636 }
2637 \def\Hy@RestoreSpaceFactor{%
2638   \relax
2639   \ifhmode
2640     \ifnum\Hy@SavedSpaceFactor>\z@
2641       \spacefactor=\Hy@SavedSpaceFactor
2642     \fi
2643   \fi
2644 }
2645 \def\Hy@SaveSavedSpaceFactor{%
2646   \edef\Hy@RestoreSavedSpaceFactor{%
2647     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2648   }%
2649 }
2650 \def\Hy@raisedlink#1{%
2651   \ifvmode
2652     #1%
2653   \else
2654     \Hy@SaveSpaceFactor
2655     \penalty\@M
2656     \smash{%
2657       \begingroup
2658         \let\HyperRaiseLinkLength\@tempdima
2659         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2660         \HyperRaiseLinkHook
2661       \expandafter\endgroup
2662       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2663         \Hy@RestoreSpaceFactor
2664         #1%
2665       \Hy@SaveSpaceFactor
2666     }%
2667   }%

```

```

2668 \Hy@RestoreSpaceFactor
2669 \fi
2670 }

```

\Hy@SaveLastskip Inserting a \special command to set a destination destroys the \lastskip value.
\Hy@RestoreLastskip

```

2671 \def\Hy@SaveLastskip{%
2672 \let\Hy@RestoreLastskip\relax
2673 \ifvmode
2674 \ifdim\lastskip=\z@
2675 \let\Hy@RestoreLastskip\nobreak
2676 \else
2677 \begingroup
2678 \skip@=-\lastskip
2679 \edef\x{%
2680 \endgroup
2681 \def\noexpand\Hy@RestoreLastskip{%
2682 \noexpand\ifvmode
2683 \noexpand\nobreak
2684 \vskip\the\skip@
2685 \vskip\the\lastskip\relax
2686 \noexpand\fi
2687 }%
2688 }%
2689 \x
2690 \fi
2691 \else
2692 \ifhmode
2693 \ifdim\lastskip=\z@
2694 \let\Hy@RestoreLastskip\nobreak
2695 \else
2696 \begingroup
2697 \skip@=-\lastskip
2698 \edef\x{%
2699 \endgroup
2700 \def\noexpand\Hy@RestoreLastskip{%
2701 \noexpand\ifhmode
2702 \noexpand\nobreak
2703 \hskip\the\skip@
2704 \hskip\the\lastskip\relax
2705 \noexpand\fi
2706 }%
2707 }%
2708 \x
2709 \fi
2710 \fi
2711 \fi
2712 }%

```

9 Options

```

2713 \SetupKeyvalOptions{%
2714 family=Hyp,%
2715 prefix=HyOpt%
2716 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```
2717 \def\IfHyperBooleanExists#1{%
2718   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2719     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2720   }%
2721 }

2722 \@namedef{KV@Hyp@stoppeearly@default}{}
```

`\IfHyperBoolean`

```
2723 \def\IfHyperBoolean#1{%
2724   \IfHyperBooleanExists{#1}{%
2725     \csname ifHy@#1\endcsname
2726     \expandafter\ltx@firstoftwo
2727   \else
2728     \expandafter\ltx@secondoftwo
2729   \fi
2730 } \ltx@secondoftwo
2731 }
```

`\Hy@boolkey`

```
2732 \def\Hy@boolkey#1#2{%
2733   \edef\Hy@tempa{#2}%
2734   \lowercase\expandafter{%
2735     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2736   }%
2737   \ifx\Hy@tempa\@empty
2738     \let\Hy@tempa\Hy@true
2739   \fi
2740   \ifx\Hy@tempa\Hy@true
2741   \else
2742     \ifx\Hy@tempa\Hy@false
2743     \else
2744       \let\Hy@tempa\relax
2745     \fi
2746   \fi
2747   \ifx\Hy@tempa\relax
2748     \Hy@WarnOptionValue{#2}{#1}{‘true’ or ‘false’}%
2749   \else
2750     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2751     \csname Hy@#1\Hy@tempa\endcsname
2752   \fi
2753 }
```

`\Hy@WarnOptionValue`

```
2754 \def\Hy@WarnOptionValue#1#2#3{%
2755   \Hy@Warning{%
2756     Unexpected value ‘#1’\MessageBreak
2757     of option ‘#2’ instead of\MessageBreak
2758     #3%
2759   }%
2760 }
```

`\Hy@DisableOption`

```
2761 \def\Hy@DisableOption#1{%
```

```

2762 \ltx@ifundefined{KV@Hyp@#1@default}{%
2763   \define@key{Hyp}{#1}%
2764 }{%
2765   \define@key{Hyp}{#1}[]%
2766 }%
2767 {\Hy@WarnOptionDisabled{#1}}%
2768 }

```

`\Hy@WarnOptionDisabled`

```

2769 \def\Hy@WarnOptionDisabled#1{%
2770   \Hy@Warning{%
2771     Option ‘#1’ has already been used,\MessageBreak
2772     setting the option has no effect%
2773   }%
2774 }

```

`\Hy@CheckOptionValue` Some options take a string value out of a limited set of values. Macro `\Hy@CheckOptionValue` checks whether the given value `#1` for option `#2` is a member of the value list `#3`.

```

2775 \def\Hy@CheckOptionValue#1#2#3{%
2776   \begingroup
2777   \edef\x{#1}%
2778   \@onelevel@sanitize\x
2779   \let\y=y%
2780   \def\do##1##2{%
2781     \def\z{##1}%
2782     \@onelevel@sanitize\z
2783     \ifx\x\z
2784       \let\y=n%
2785       \let\do\@gobbletwo
2786     \fi
2787   }%
2788   #3%
2789   \ifx\y y%
2790     \def\do##1##2{%
2791       * ‘##1’%
2792       \ifx\\##2\\\else\space(##2)\fi
2793       \MessageBreak
2794     }%
2795     \Hy@Warning{%
2796       Values of option ‘#2’:\MessageBreak
2797       #3%
2798       * An empty value disables the option.\MessageBreak
2799       Unknown value ‘\x’%
2800     }%
2801   \fi
2802   \endgroup
2803 }

```

`\Hy@DefNameKey` **#1:** option name
#2: `\do` list with known values, first argument of `\do` is value, second argument is a comment.

```

2804 \def\Hy@DefNameKey#1{%
2805   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2806 }

```

```

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
2807 \def\Hy@@DefNameKey#1#2#3{%
2808   \define@key{Hyp}{#2}{%
2809     \edef#1{##1}%
2810     \ifx#1\@empty
2811       \else
2812         \Hy@CheckOptionValue{##1}{#2}{#3}%
2813       \fi
2814     }%
2815   \let#1\@empty
2816 }

```

```

\Hy@UseNameKey
2817 \def\Hy@UseNameKey#1#2{%
2818   \ifx#2\@empty
2819     \else
2820       /#1/#2%
2821     \fi
2822 }

```

9.2 Defining the options

```

2823 \define@key{Hyp}{implicit}[true]{%
2824   \Hy@boolkey{implicit}{#1}%
2825 }
2826 \define@key{Hyp}{draft}[true]{%
2827   \Hy@boolkey{draft}{#1}%
2828 }
2829 \define@key{Hyp}{final}[true]{%
2830   \Hy@boolkey{final}{#1}%
2831 }
2832 \let\KV@Hyp@nolinks\KV@Hyp@draft
2833 \def\Hy@ObsoletePaperOption#1{%
2834   \Hy@WarningNoLine{%
2835     Option ‘#1’ is no longer used%
2836   }%
2837   \define@key{Hyp}{#1}[true]{}%
2838 }
2839 \def\Hy@temp#1{%
2840   \define@key{Hyp}{#1}[true]{%
2841     \Hy@ObsoletePaperOption{#1}%
2842   }%
2843 }
2844 \Hy@temp{a4paper}
2845 \Hy@temp{a5paper}
2846 \Hy@temp{b5paper}
2847 \Hy@temp{letterpaper}
2848 \Hy@temp{legalpaper}
2849 \Hy@temp{executivepaper}
2850 \define@key{Hyp}{setpagesize}[true]{%
2851   \Hy@boolkey{setpagesize}{#1}%
2852 }
2853 \define@key{Hyp}{debug}[true]{%
2854   \Hy@boolkey{debug}{#1}%

```

```

2855 }
2856 \define@key{Hyp}{linktocpage}[true]{%
2857   \Hy@boolkey{linktocpage}{#1}%
2858   \ifHy@linktocpage
2859     \let\Hy@linktoc\Hy@linktoc@page
2860   \else
2861     \let\Hy@linktoc\Hy@linktoc@section
2862   \fi
2863 }
2864 \chardef\Hy@linktoc@none=0 %
2865 \chardef\Hy@linktoc@section=1 %
2866 \chardef\Hy@linktoc@page=2 %
2867 \chardef\Hy@linktoc@all=3 %
2868 \ifHy@linktocpage
2869   \let\Hy@linktoc\Hy@linktoc@page
2870 \else
2871   \let\Hy@linktoc\Hy@linktoc@section
2872 \fi
2873 \define@key{Hyp}{linktoc}{%
2874   \@ifundefined{Hy@linktoc@#1}{%
2875     \Hy@Warning{%
2876       Unexpected value '#1' of\MessageBreak
2877       option 'linktoc' instead of 'none',\MessageBreak
2878       'section', 'page' or 'all'%
2879     }%
2880   }{%
2881     \expandafter\let\expandafter\Hy@linktoc
2882     \csname Hy@linktoc@#1\endcsname
2883   }%
2884 }
2885 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2886 \let\XR@ext\relax
2887 \define@key{Hyp}{verbose}[true]{%
2888   \Hy@boolkey{verbose}{#1}%
2889 }
2890 \define@key{Hyp}{typexml}[true]{%
2891   \Hy@boolkey{typexml}{#1}%
2892 }

```

If we are going to PDF via HyperTeX \special commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing \special. If we use this option, the \special is raised up by the right amount, to fool the dvi processor.

```

2893 \define@key{Hyp}{raiselinks}[true]{%
2894   \Hy@boolkey{raiselinks}{#1}%
2895 }

```

Most PDF-creating drivers do not allow links to be broken

```

2896 \def\Hy@setbreaklinks#1{%
2897   \csname breaklinks#1\endcsname
2898 }
2899 \def\Hy@breaklinks@unsupported{%
2900   \ifx\Hy@setbreaklinks\@gobble
2901     \ifHy@breaklinks
2902       \Hy@WarningNoLine{%
2903         You have enabled option 'breaklinks'\MessageBreak
2904         But driver '\Hy@driver.def' does not support this.\MessageBreak
2905         Expect trouble with the link areas of broken links%

```

```

2906     }%
2907   \fi
2908 \fi
2909 }

2910 \define@key{Hyp}{breaklinks}[true]{%
2911   \Hy@boolkey{breaklinks}{#1}%
2912   \let\Hy@setbreaklinks\@gobble
2913 }

2914 \define@key{Hyp}{localanchorname}[true]{%
2915   \Hy@boolkey{localanchorname}{#1}%
2916 }

```

Determines whether an automatic anchor is put on each page

```

2917 \define@key{Hyp}{pageanchor}[true]{%
2918   \Hy@boolkey{pageanchor}{#1}%
2919 }

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like `\textbf` or the like.

```

2920 \define@key{Hyp}{plainpages}[true]{%
2921   \Hy@boolkey{plainpages}{#1}%
2922 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what L^AT_EX provides?

```

2923 \define@key{Hyp}{naturalnames}[true]{%
2924   \Hy@boolkey{naturalnames}{#1}%
2925 }

```

Completely ignore the names as per the HyperTeX system, and use unique counters.

```

2926 \define@key{Hyp}{hypertexnames}[true]{%
2927   \Hy@boolkey{hypertexnames}{#1}%
2928 }

```

Currently, dvips doesn't allow anchors nested within targets, so this option tries to stop that happening. Other processors may be able to cope.

```

2929 \define@key{Hyp}{nesting}[true]{%
2930   \Hy@boolkey{nesting}{#1}%
2931 }

```

```

2932 \define@key{Hyp}{destlabel}[true]{%
2933   \Hy@boolkey{destlabel}{#1}%
2934 }

```

```

2935 \define@key{Hyp}{unicode}[true]{%
2936   \Hy@boolkey{unicode}{#1}%
2937   \ifHy@unicode
2938     \def\HyPsd@pdfencoding{unicode}%
2939     \HyPsd@LoadUnicode
2940   \else
2941     \def\HyPsd@pdfencoding{pdfdoc}%
2942   \fi
2943 }

```

```

2944 \Hy@AtBeginDocument{%
2945   \ifx\HyPsd@LoadUnicode\relax
2946   \else
2947     \def\HyPsd@LoadUnicode{%
2948       \Hy@Error{%
2949         Unicode support for bookmarks is not available.\MessageBreak
2950         Activate unicode support by using one of the options\MessageBreak

```

```

2951     'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2952     in the preamble%
2953 } \@ehc
2954 \global\let\HyPsd@LoadUnicode\relax
2955 \global\Hy@unicodedefalse
2956 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2957 }%
2958 \fi
2959 }

2960 \define@key{Hyp}{pdfencoding}{%
2961   \edef\HyPsd@temp{#1}%
2962   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2963     \let\HyPsd@pdfencoding\HyPsd@temp
2964     \Hy@unicodedefalse
2965   \else
2966     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2967       \z@
2968     \else
2969       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2970         \z@
2971       \else
2972         \@ne
2973       \fi
2974     \fi
2975     \let\HyPsd@pdfencoding\HyPsd@temp
2976     \hypersetup{unicode}%
2977     \ifHy@unicode
2978       \def\HyPsd@pdfencoding{#1}%
2979       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2980         \HyPsd@LoadStringEncoding
2981       \fi
2982     \else
2983       \Hy@Warning{Cannot switch to unicode bookmarks}%
2984       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2985     \fi
2986   \else
2987     \@onelevel@sanitize\HyPsd@temp
2988     \Hy@Warning{%
2989       Values of option 'pdfencoding':\MessageBreak
2990       'pdfdoc', 'unicode', 'auto'.\MessageBreak
2991       Ignoring unknown value '\HyPsd@temp'%
2992     }%
2993   \fi
2994 \fi
2995 }

2996 \def\HyPsd@pdfencoding@auto{auto}
2997 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2998 \def\HyPsd@pdfencoding@unicode{unicode}
2999 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3000 \def\HyPsd@LoadStringEncoding{%
3001   \RequirePackage{stringenc}[2009/12/15]%
3002   \let\HyPsd@LoadStringEncoding\relax
3003 }

3004 \Hy@AtBeginDocument{%
3005   \@ifpackageloaded{stringenc}{%
3006     \let\HyPsd@LoadStringEncoding\relax
3007   }{%

```



```

3008 \def\HyPsd@LoadStringEnc{%
3009 \Hy@WarningNoLine{%
3010 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
3011 in the preamble or load the package there%
3012 }%
3013 }%
3014 }%
3015 }

3016 \define@key{Hyp}{psdextra}[true]{%
3017 \Hy@boolkey{psdextra}{#1}%
3018 \HyPsd@LoadExtra
3019 }

3020 \def\hypersetup{\kvsetkeys{Hyp}}

3021 \newif\ifHy@setpdfversion
3022 \define@key{Hyp}{pdfversion}{%
3023 \ifundefined{Hy@pdfversion@#1}{%
3024 \PackageWarning{hyperref}{%
3025 Unsupported PDF version '#1'.\MessageBreak
3026 Valid values: 1.2 until 1.9%
3027 }%
3028 }{%
3029 \Hy@setpdfversiontrue
3030 \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3031 }%
3032 }
3033 \@namedef{Hy@pdfversion@1.2}{2}%
3034 \@namedef{Hy@pdfversion@1.3}{3}%
3035 \@namedef{Hy@pdfversion@1.4}{4}%
3036 \@namedef{Hy@pdfversion@1.5}{5}%
3037 \@namedef{Hy@pdfversion@1.6}{6}%
3038 \@namedef{Hy@pdfversion@1.7}{7}%
3039 \@namedef{Hy@pdfversion@1.8}{8}%
3040 \@namedef{Hy@pdfversion@1.9}{9}%
3041 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

3042 \newif\ifHy@DviMode
3043 \let\Hy@DviErrMsg\ltx@empty
3044 \ifpdf
3045 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3046 \else
3047 \ifxetex
3048 \def\Hy@DviErrMsg{XeTeX is running}%
3049 \else
3050 \ifvtex
3051 \ifvtexdvi
3052 \Hy@DviModetrue
3053 \else
3054 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3055 \fi
3056 \else
3057 \Hy@DviModetrue
3058 \fi
3059 \fi
3060 \fi

```

```

3061 \def\HyOpt@CheckDvi#1{%
3062   \ifHy@DviMode
3063     \expandafter\ltx@firstofone
3064   \else
3065     \Hy@Error{%
3066       Wrong DVI mode driver option '#1',\MessageBreak
3067       because \Hy@DviErrMsg
3068     }\@ehc
3069   \expandafter\ltx@gobble
3070 \fi
3071 }

3072 \DeclareVoidOption{tex4ht}{%
3073   \Hy@texhttrue
3074   \kvsetkeys{Hyp}{colorlinks=true}%
3075   \def\BeforeTeXIVht{\RequirePackage{color}}}%
3076   \def\Hy@driver{htex4ht}%
3077   \def\MaybeStopEarly{%
3078     \Hy@Message{Stopped early}%
3079   \Hy@AtBeginDocument{%
3080     \PDF@FinishDoc
3081     \gdef\PDF@FinishDoc{}}%
3082   }%
3083   \endinput
3084 }%
3085 }

3086 \DeclareVoidOption{pdftex}{%
3087   \ifpdf
3088     \def\Hy@driver{hpdftex}%
3089   \else
3090     \Hy@Error{%
3091       Wrong driver option 'pdftex',\MessageBreak
3092       because pdfTeX in PDF mode is not detected%
3093     }\@ehc
3094   \fi
3095 }

3096 \DeclareVoidOption{nativepdf}{%
3097   \HyOpt@CheckDvi{nativepdf}{%
3098     \def\Hy@driver{hdvips}%
3099   }%
3100 }

3101 \DeclareVoidOption{dvipdfm}{%
3102   \HyOpt@CheckDvi{dvipdfm}{%
3103     \def\Hy@driver{hdvipdfm}%
3104   }%
3105 }

3106 \DeclareVoidOption{dvipdfmx}{%
3107   \HyOpt@CheckDvi{dvipdfmx}{%
3108     \def\Hy@driver{hdvipdfm}%
3109   }%
3110 }

3111 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3112   \expandafter\ifx\csname if#1\expandafter\endcsname
3113     \csname iftrue\endcsname
3114   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3115 \else
3116   \chardef\SpecialDvipdfmxOutlineOpen\z@
3117 \fi

```

```

3118 }
3119 \DeclareVoidOption{xetex}{%
3120   \ifxetex
3121     \def\Hy@driver{hxtex}%
3122   \else
3123     \Hy@Error{%
3124       Wrong driver option 'xetex',\MessageBreak
3125       because XeTeX is not detected%
3126     }\@ehc
3127   \fi
3128 }
3129 \DeclareVoidOption{pdfmark}{%
3130   \HyOpt@CheckDvi{pdfmark}{%
3131     \def\Hy@driver{hdvips}%
3132   }%
3133 }
3134 \DeclareVoidOption{dvips}{%
3135   \HyOpt@CheckDvi{dvips}{%
3136     \def\Hy@driver{hdvips}%
3137   }%
3138 }
3139 \DeclareVoidOption{hypertex}{%
3140   \HyOpt@CheckDvi{hypertex}{%
3141     \def\Hy@driver{hypertex}%
3142   }%
3143 }
3144 \let\Hy@MaybeStopNow\relax
3145 \DeclareVoidOption{vtex}{%
3146   \ifvtex
3147     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3148     \def\Hy@driver{hvtex}%
3149   \else
3150     \ifnum\OpMode=10\relax
3151       \def\Hy@driver{hvtexhtm}%
3152       \def\MaybeStopEarly{%
3153         \Hy@Message{Stopped early}%
3154         \Hy@AtBeginDocument{%
3155           \PDF@FinishDoc
3156           \gdef\PDF@FinishDoc{}%
3157         }%
3158       \endinput
3159     }%
3160   \else
3161     \Hy@Error{%
3162       Wrong driver option 'vtex',\MessageBreak
3163       because of wrong OpMode (\the\OpMode)%
3164     }\@ehc
3165   \fi
3166 }
3167 \else
3168   \Hy@Error{%
3169     Wrong driver option 'vtex',\MessageBreak
3170     because VTeX is not running%
3171   }\@ehc
3172 }
3173 }
3174 \DeclareVoidOption{vtexpdfmark}{%

```

```

3175 \ifvtex
3176   \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3177   \def\Hy@driver{hvtexmrk}%
3178   \else
3179   \Hy@Error{%
3180     Wrong driver option 'vtexpdfmark',\MessageBreak
3181     because of wrong OpMode (\the\OpMode)%
3182   }\@ehc
3183   \fi
3184   \else
3185   \Hy@Error{%
3186     Wrong driver option 'vtexpdfmark',\MessageBreak
3187     because VTeX is not running%
3188   }\@ehc
3189   \fi
3190 }
3191 \DeclareVoidOption{dviwindo}{}%
3192 \HyOpt@CheckDvi{dviwindo}{}%
3193 \def\Hy@driver{hdviwind}%
3194 \kvsetkeys{Hyp}{colorlinks}%
3195 \PassOptionsToPackage{dviwindo}{color}%
3196 }%
3197 }
3198 \DeclareVoidOption{dvipsone}{}%
3199 \HyOpt@CheckDvi{dvipsone}{}%
3200 \def\Hy@driver{hdvipson}%
3201 }%
3202 }
3203 \DeclareVoidOption{textures}{}%
3204 \HyOpt@CheckDvi{textures}{}%
3205 \def\Hy@driver{htexture}%
3206 }%
3207 }
3208 \DeclareVoidOption{latex2html}{}%
3209 \HyOpt@CheckDvi{latex2html}{}%
3210 \Hy@AtBeginDocument{\@@@latextohtmlX}%
3211 }%
3212 }

```

No more special treatment for ps2pdf. Let it sink or swim.

```

3213 \DeclareVoidOption{ps2pdf}{}%
3214 \HyOpt@CheckDvi{ps2pdf}{}%
3215 \def\Hy@driver{hdvips}%
3216 }%
3217 }
3218 \let\HyOpt@DriverFallback\ltx@empty
3219 \define@key{Hyp}{driverfallback}{}%
3220 \ifHy@DviMode
3221   \def\HyOpt@DriverFallback{#1}%
3222   \Hy@Match\HyOpt@DriverFallback{%
3223     ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3224     latex2html|tex4ht)$%
3225   }{}{%
3226     \let\HyOpt@DriverFallback\ltx@empty
3227   }%
3228   \fi
3229 }

```

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

```
3230 \define@key{Hyp}{hyperfigures}[true]{%
3231   \Hy@boolkey{hyperfigures}{#1}%
3232 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
3233 \define@key{Hyp}{hyperfootnotes}[true]{%
3234   \Hy@boolkey{hyperfootnotes}{#1}%
3235 }
```

Set up back-referencing to be hyper links, by page, slide or section number,

```
3236 \def\back@none{none}
3237 \def\back@section{section}
3238 \def\back@page{page}
3239 \def\back@slide{slide}
3240 \define@key{Hyp}{backref}[section]{%
3241   \lowercase{\def\Hy@tempa{#1}}%
3242   \ifx\Hy@tempa\@empty
3243     \let\Hy@tempa\back@section
3244   \fi
3245   \ifx\Hy@tempa\Hy@false
3246     \let\Hy@tempa\back@none
3247   \fi
3248   \ifx\Hy@tempa\back@slide
3249     \let\Hy@tempa\back@section
3250   \fi
3251   \ifx\Hy@tempa\back@page
3252     \PassOptionsToPackage{hyperpageref}{backref}%
3253     \Hy@backreftrue
3254   \else
3255     \ifx\Hy@tempa\back@section
3256       \PassOptionsToPackage{hyperref}{backref}%
3257       \Hy@backreftrue
3258     \else
3259       \ifx\Hy@tempa\back@none
3260         \Hy@backreffalse
3261       \else
3262         \Hy@WarnOptionValue{#1}{backref}{%
3263           'section', 'slide', 'page', 'none', \MessageBreak
3264           or 'false'}%
3265       \fi
3266     \fi
3267   \fi
3268 }
3269 \define@key{Hyp}{pagebackref}[true]{%
3270   \edef\Hy@tempa{#1}%
3271   \lowercase\expandafter{%
3272     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3273   }%
3274   \ifx\Hy@tempa\@empty
3275     \let\Hy@tempa\Hy@true
3276   \fi
3277   \ifx\Hy@tempa\Hy@true
3278     \PassOptionsToPackage{hyperpageref}{backref}%
3279     \Hy@backreftrue
```

```

3280 \else
3281   \ifx\Hy@tempa\Hy@false
3282     \Hy@backreffalse
3283   \else
3284     \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
3285   \fi
3286 \fi
3287 }

```

Make index entries be links back to the relevant pages. By default this is turned on, but may be stopped.

```

3288 \define@key{Hyp}{hyperindex}[true]{%
3289   \Hy@boolkey{hyperindex}{#1}%
3290 }

```

Configuration of encap char.

```

3291 \define@key{Hyp}{encap}[|]{%
3292   \def\HyInd@EncapChar{#1}%
3293 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3294 \def\HyLang@afrikaans{%
3295   \def\equationautorefname{Vergelyking}%
3296   \def\footnoteautorefname{Voetnota}%
3297   \def\itemautorefname{Item}%
3298   \def\figureautorefname{Figuur}%
3299   \def\tableautorefname{Tabel}%
3300   \def\partautorefname{Deel}%
3301   \def\appendixautorefname{Bylae}%
3302   \def\chapterautorefname{Hoofstuk}%
3303   \def\sectionautorefname{Afdeling}%
3304   \def\subsectionautorefname{Subafdeling}%
3305   \def\subsubsectionautorefname{Subsubafdeling}%
3306   \def\paragraphautorefname{Paragraaf}%
3307   \def\subparagraphautorefname{Subparagraaf}%
3308   \def\FancyVerbLineautorefname{Lyn}%
3309   \def\theoremautorefname{Teorema}%
3310   \def\pageautorefname{Bladsy}%
3311 }
3312 \def\HyLang@english{%
3313   \def\equationautorefname{Equation}%
3314   \def\footnoteautorefname{footnote}%
3315   \def\itemautorefname{item}%
3316   \def\figureautorefname{Figure}%
3317   \def\tableautorefname{Table}%
3318   \def\partautorefname{Part}%
3319   \def\appendixautorefname{Appendix}%
3320   \def\chapterautorefname{chapter}%
3321   \def\sectionautorefname{section}%
3322   \def\subsectionautorefname{subsection}%
3323   \def\subsubsectionautorefname{subsubsection}%
3324   \def\paragraphautorefname{paragraph}%
3325   \def\subparagraphautorefname{subparagraph}%
3326   \def\FancyVerbLineautorefname{line}%
3327   \def\theoremautorefname{Theorem}%

```

```

3328 \def\pageautorefname{page}%
3329 }
3330 \def\HyLang@french{%
3331 \def\equationautorefname{'Equation}%
3332 \def\footnoteautorefname{note}%
3333 \def\itemautorefname{item}%
3334 \def\figureautorefname{Figure}%
3335 \def\tableautorefname{Tableau}%
3336 \def\partautorefname{Partie}%
3337 \def\appendixautorefname{Appendice}%
3338 \def\chapterautorefname{chapitre}%
3339 \def\sectionautorefname{section}%
3340 \def\subsectionautorefname{sous-section}%
3341 \def\subsubsectionautorefname{sous-sous-section}%
3342 \def\paragraphautorefname{paragraphe}%
3343 \def\subparagraphautorefname{sous-paragraphe}%
3344 \def\FancyVerbLineautorefname{ligne}%
3345 \def\theoremautorefname{Th\'eor\'eme}%
3346 \def\pageautorefname{page}%
3347 }
3348 \def\HyLang@german{%
3349 \def\equationautorefname{Gleichung}%
3350 \def\footnoteautorefname{Fu\ss note}%
3351 \def\itemautorefname{Punkt}%
3352 \def\figureautorefname{Abbildung}%
3353 \def\tableautorefname{Tabelle}%
3354 \def\partautorefname{Teil}%
3355 \def\appendixautorefname{Anhang}%
3356 \def\chapterautorefname{Kapitel}%
3357 \def\sectionautorefname{Abschnitt}%
3358 \def\subsectionautorefname{Unterabschnitt}%
3359 \def\subsubsectionautorefname{Unterunterabschnitt}%
3360 \def\paragraphautorefname{Absatz}%
3361 \def\subparagraphautorefname{Unterabsatz}%
3362 \def\FancyVerbLineautorefname{Zeile}%
3363 \def\theoremautorefname{Theorem}%
3364 \def\pageautorefname{Seite}%
3365 }
3366 \def\HyLang@italian{%
3367 \def\equationautorefname{Equazione}%
3368 \def\footnoteautorefname{nota}%
3369 \def\itemautorefname{punto}%
3370 \def\figureautorefname{Figura}%
3371 \def\tableautorefname{Tabella}%
3372 \def\partautorefname{Parte}%
3373 \def\appendixautorefname{Appendice}%
3374 \def\chapterautorefname{Capitolo}%
3375 \def\sectionautorefname{sezione}%
3376 \def\subsectionautorefname{sottosezione}%
3377 \def\subsubsectionautorefname{sottosottosezione}%
3378 \def\paragraphautorefname{paragrafo}%
3379 \def\subparagraphautorefname{sottoparagrafo}%
3380 \def\FancyVerbLineautorefname{linea}%
3381 \def\theoremautorefname{Teorema}%
3382 \def\pageautorefname{Pag.\@}%
3383 }
3384 \def\HyLang@magyar{%

```

```

3385 \def\equationautorefname{Egyenlet}%
3386 \def\footnoteautorefname{l\'abjegyzet}%
3387 \def\itemautorefname{Elem}%
3388 \def\figureautorefname{\'Abra}%
3389 \def\tableautorefname{T\'abl\'azat}%
3390 \def\partautorefname{R\'esz}%
3391 \def\appendixautorefname{F\'uggel\'ek}%
3392 \def\chapterautorefname{fejezet}%
3393 \def\sectionautorefname{szakasz}%
3394 \def\subsectionautorefname{alszakasz}%
3395 \def\subsubsectionautorefname{alalszakasz}%
3396 \def\paragraphautorefname{bekezd\'es}%
3397 \def\subparagraphautorefname{albekezd\'es}%
3398 \def\FancyVerbLineautorefname{sor}%
3399 \def\theoremautorefname{T\'etel}%
3400 \def\pageautorefname{oldal}%
3401 }
3402 \def\HyLang@portuges{%
3403 \def\equationautorefname{Equa\c c\~ao}%
3404 \def\footnoteautorefname{Nota de rodap\'e}%
3405 \def\itemautorefname{Item}%
3406 \def\figureautorefname{Figura}%
3407 \def\tableautorefname{Tabela}%
3408 \def\partautorefname{Parte}%
3409 \def\appendixautorefname{Ap\^endice}%
3410 \def\chapterautorefname{Cap\'itulo}%
3411 \def\sectionautorefname{Se\c c\~ao}%
3412 \def\subsectionautorefname{Subse\c c\~ao}%
3413 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3414 \def\paragraphautorefname{par\'agrafo}%
3415 \def\subparagraphautorefname{subpar\'agrafo}%
3416 \def\FancyVerbLineautorefname{linha}%
3417 \def\theoremautorefname{Teorema}%
3418 \def\pageautorefname{P\'agina}%
3419 }

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```

3420 \def\HyLang@russian{%

```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```

3421 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

The name of the equation reference has common form for both nominative and accusative but changes in other forms, like “of `\auto\ref{auto}`” etc. The full name must follow full name of the `\theoremautorefname`.

```

3422 % \def\equationautorefname{%
3423 % \cyr\cyrv\cyrery\cyr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3424 % }%

```

The variant of footnote has abbreviation form of the synonym of the word “footnote”. This variant of abbreviated synonym has alternative status (maybe

obsolete?).

```
3425 \def\footnoteautorefname{%  
3426 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%  
3427 }%
```

Commented form of the full synonym for “footnote”. It has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}”

```
3428 % \def\footnoteautorefname{%  
3429 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %  
3430 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre  
3431 % }%
```

Commented forms of the “footnote”: have different forms, the same is for the nominative and accusative. (The others needed?)

```
3432 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%  
3433 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%
```

Name of the list item, can be confused with the paragraph reference name, but reader could understand meaning from context(?). Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
3434 \def\itemautorefname{\cyr\cyrp.}%  
3435 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3436 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%  
3437 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%
```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3438 \def\partautorefname{\cyr\cyrch.}%  
3439 \def\chapterautorefname{\cyr\cyrg\cyrl.}%  
3440 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

Name of the appendix can use this abbreviation, but it is not standard for books, i.e, not for “the good face of the book”. Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
3441 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%  
3442 % \def\appendixautorefname{%  
3443 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre  
3444 % }%
```

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

```
3445 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%  
3446 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

```
3447 \def\paragraphautorefname{\cyr\cyrp.}%  
3448 \def\subparagraphautorefname{\cyr\cyrp.}%
```

Commented variant can be used in books but since it has common form for both nominative and accusative but it changes in other forms, like “of \autoref{auto}” etc.

3449 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
 3450 % \def\subparagraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

3451 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

Commented names of the “verbatim line”: have different forms, also the nominative and accusative.

3452 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
 3453 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

The alternative, ve-e-e-ery professional abbreviation, was used in typography markup for typesetters.

3454 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But ...

3455 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

Commented forms of the “theorem”: have different forms, also the nominative and accusative.

3456 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
 3457 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

Name of the page stable (standard) abbreviation form. No problem.

3458 \def\pageautorefname{\cyr\cyrs.}%
 3459 }

3460 \def\HyLang@spanish{%
 3461 \def\equationautorefname{Ecuaci'on}%
 3462 \def\footnoteautorefname{Nota a pie de p'agina}%
 3463 \def\itemautorefname{Elemento}%
 3464 \def\figureautorefname{Figura}%
 3465 \def\tableautorefname{Tabla}%
 3466 \def\partautorefname{Parte}%
 3467 \def\appendixautorefname{Ap'endice}%
 3468 \def\chapterautorefname{Cap'itulo}%
 3469 \def\sectionautorefname{Secci'on}%
 3470 \def\subsectionautorefname{Subsecci'on}%
 3471 \def\subsubsectionautorefname{Subsubsecci'on}%
 3472 \def\paragraphautorefname{P'arrafo}%
 3473 \def\subparagraphautorefname{Subp'arrafo}%
 3474 \def\FancyVerbLineautorefname{L'inea}%
 3475 \def\theoremautorefname{Teorema}%
 3476 \def\pageautorefname{P'agina}%
 3477 }

3478 \def\HyLang@vietnamese{%
 3479 \def\equationautorefname{Ph\uhorn{}\ohorn{}ng tr'inh}%
 3480 \def\footnoteautorefname{Ch'u th'ich}%
 3481 \def\itemautorefname{m\d{u}c}%
 3482 \def\figureautorefname{H'inh}%
 3483 \def\tableautorefname{B'h{a}ng}%
 3484 \def\partautorefname{Ph'\acircumflex{}n}%
 3485 \def\appendixautorefname{Ph\d{u}l\d{u}c}%
 3486 \def\chapterautorefname{ch\uhorn{}\ohorn{}ng}%
 3487 \def\sectionautorefname{m\d{u}c}%
 3488 \def\subsectionautorefname{m\d{u}c}%

```

3489 \def\subsubsectionautorefname{m\d{u}c}%
3490 \def\paragraphautorefname{dj{o\d{a}n}%
3491 \def\subparagraphautorefname{dj{o\d{a}n}%
3492 \def\FancyVerbLineautorefname{d'ong}%
3493 \def\theoremautorefname{DJ{d{i}nh l'y}%
3494 \def\pageautorefname{Trang}%
3495 }

```

Instead of package babel's definition of `\addto` the implementation of package `varioref` is used. Additionally argument `#1` is checked for `\relax`.

```

3496 \def\HyLang@addto#1#2{%
3497   #2%
3498   \@temptokena{#2}%
3499   \ifx#1\relax
3500     \let#1\@empty
3501   \fi
3502   \ifx#1\@undefined
3503     \edef#1{\the\@temptokena}%
3504   \else
3505     \toks@\expandafter{#1}%
3506     \edef#1{\the\toks@\the\@temptokena}%
3507   \fi
3508   \@temptokena{}\toks@\@temptokena
3509 }

3510 \def\HyLang@DeclareLang#1#2#3{%
3511   \ifpackagewith{babel}{#1}{%
3512     \expandafter\HyLang@addto
3513       \csname extras#1\expandafter\endcsname
3514       \csname HyLang@#2\endcsname
3515     \begingroup
3516       \edef\x{\endgroup
3517         #3%
3518       }%
3519     \x
3520     \@namedef{HyLang@#1@done}{}%
3521   }{}%
3522   \begingroup
3523     \edef\x##1#2{%
3524       \noexpand\ifx##2\relax
3525         \errmessage{No definitions for language #2' found!}%
3526       \noexpand\fi
3527     \endgroup
3528     \noexpand\define@key{Hyp}{#1}[]{%
3529       \noexpand\@ifundefined{HyLang@#1@done}{%
3530         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3531         #3%
3532         \noexpand\@namedef{HyLang@#1@done}{}%
3533       }{}%
3534     }%
3535   }%
3536   \expandafter\x\csname extras#1\expandafter\endcsname
3537     \csname HyLang@#2\endcsname
3538 }

3539 \HyLang@DeclareLang{english}{english}{}
3540 \HyLang@DeclareLang{UKenglish}{english}{}
3541 \HyLang@DeclareLang{british}{english}{}
3542 \HyLang@DeclareLang{USenglish}{english}{}

```

```

3543 \HyLang@DeclareLang{american}{english}{}
3544 \HyLang@DeclareLang{german}{german}{}
3545 \HyLang@DeclareLang{austrian}{german}{}
3546 \HyLang@DeclareLang{ngerman}{german}{}
3547 \HyLang@DeclareLang{naustrian}{german}{}
3548 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3549 \HyLang@DeclareLang{brazil}{portuges}{}
3550 \HyLang@DeclareLang{brazilian}{portuges}{}
3551 \HyLang@DeclareLang{portuguese}{portuges}{}
3552 \HyLang@DeclareLang{spanish}{spanish}{}
3553 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3554 \HyLang@DeclareLang{french}{french}{}
3555 \HyLang@DeclareLang{frenchb}{french}{}
3556 \HyLang@DeclareLang{francais}{french}{}
3557 \HyLang@DeclareLang{acadian}{french}{}
3558 \HyLang@DeclareLang{canadien}{french}{}
3559 \HyLang@DeclareLang{italian}{italian}{}
3560 \HyLang@DeclareLang{magyar}{magyar}{}
3561 \HyLang@DeclareLang{hungarian}{magyar}{}

```

More work is needed in case of options `vietnamese` and `vietnam`.

```

3562 \DeclareVoidOption{vietnamese}{%
3563   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3564   \Hy@AtEndOfPackage{%
3565     \@ifundefined{T@PU}{}{}%
3566     \input{puvnenc.def}%
3567   }%
3568 }%
3569 }
3570 \DeclareVoidOption{vietnam}{%
3571   \HyLang@addto\extrasvietnam\HyLang@vietnamese
3572   \Hy@AtEndOfPackage{%
3573     \@ifundefined{T@PU}{}{}%
3574     \input{puvnenc.def}%
3575   }%
3576 }%
3577 }

```

Similar for option `arabic` that just loads the additions to PU encoding for Arabi.

```

3578 \DeclareVoidOption{arabic}{%
3579   \Hy@AtEndOfPackage{%
3580     \@ifundefined{T@PU}{}{}%
3581     \input{puarenc.def}%
3582   }%
3583 }%
3584 }

```

13 Options to change appearance of links

Colouring links at the L^AT_EX level is useful for debugging, perhaps.

```

3585 \define@key{Hyp}{colorlinks}[true]{%
3586   \Hy@boolkey{colorlinks}{#1}%
3587 }
3588 \DeclareVoidOption{hidelinks}{%
3589   \Hy@colorlinksfalse
3590   \Hy@ocgcolorlinksfalse
3591   \Hy@frenchlinksfalse

```

```

3592 \def\Hy@colorlink##1{\begingroup}%
3593 \def\Hy@endcolorlink{\endgroup}%
3594 \def\@pdfborder{0 0 0}%
3595 \let\@pdfborderstyle\ltx@empty
3596 }
3597 \define@key{Hyp}{ocgcolorlinks}[true]{%
3598 \Hy@boolkey{ocgcolorlinks}{#1}%
3599 }
3600 \Hy@AtBeginDocument{%
3601 \begingroup
3602 \@ifundefined{OBJ@OCG@view}{%
3603 \ifHy@ocgcolorlinks
3604 \Hy@Warning{%
3605 Driver does not support 'ocgcolorlinks',\MessageBreak
3606 using 'colorlinks' instead%
3607 }%
3608 \fi
3609 }{}%
3610 \endgroup
3611 }
3612 \define@key{Hyp}{frenchlinks}[true]{%
3613 \Hy@boolkey{frenchlinks}{#1}%
3614 }

```

14 Bookmarking

```

3615 \begingroup\expandafter\expandafter\expandafter\endgroup
3616 \expandafter\ifx\csname chapter\endcsname\relax
3617 \def\toclevel@part{0}%
3618 \else
3619 \def\toclevel@part{-1}%
3620 \fi
3621 \def\toclevel@chapter{0}
3622 \def\toclevel@section{1}
3623 \def\toclevel@subsection{2}
3624 \def\toclevel@subsubsection{3}
3625 \def\toclevel@paragraph{4}
3626 \def\toclevel@subparagraph{5}
3627 \def\toclevel@figure{0}
3628 \def\toclevel@table{0}
3629 \@ifpackageloaded{listings}{%
3630 \providecommand*\theHlstlisting{\thelstlisting}%
3631 \providecommand*\toclevel@lstlisting{0}%
3632 }{}
3633 \@ifpackageloaded{listing}{%
3634 \providecommand*\theHlisting{\thelisting}%
3635 \providecommand*\toclevel@listing{0}%
3636 }{}
3637 \define@key{Hyp}{bookmarks}[true]{%
3638 \Hy@boolkey{bookmarks}{#1}%
3639 }
3640 \define@key{Hyp}{bookmarksopen}[true]{%
3641 \Hy@boolkey{bookmarksopen}{#1}%
3642 }

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

3643 \let\Hy@bookmarksdepth\c@tocdepth
3644 \define@key{Hyp}{bookmarksdepth}[]{%
3645   \begingroup
3646   \edef\x{#1}%
3647   \ifx\x\empty
3648     \global\let\Hy@bookmarksdepth\c@tocdepth
3649   \else
3650     \@ifundefined{toclevel@\x}{%
3651       \@onelevel@sanitize\x
3652       \edef\y{\expandafter\@car\x\@nil}%
3653       \ifcase 0\expandafter\ifx\y-1\fi
3654         \expandafter\ifnum\expandafter'\y>47 %
3655           \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3656       \Hy@Warning{Unknown document division name (\x)}%
3657     \else
3658       \setbox\z@=\hbox{%
3659         \count@=\x
3660         \xdef\Hy@bookmarksdepth{\the\count@}%
3661       }%
3662     \fi
3663   }{%
3664     \setbox\z@=\hbox{%
3665       \count@=\csname toclevel@\x\endcsname
3666       \xdef\Hy@bookmarksdepth{\the\count@}%
3667     }%
3668   }%
3669   \fi
3670 \endgroup
3671 }

```

‘bookmarksopenlevel’ to specify the open level. From Heiko Oberdiek.

```

3672 \define@key{Hyp}{bookmarksopenlevel}{%
3673   \def\@bookmarksopenlevel{#1}%
3674 }
3675 \def\@bookmarksopenlevel{\maxdimen}
3676 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3677 \define@key{Hyp}{bookmarkstype}{%
3678   \def\Hy@bookmarkstype{#1}%
3679 }
3680 \def\Hy@bookmarkstype{toc}

```

Richard Curnow <richard@curnow.demon.co.uk> suggested this functionality. It adds section numbers etc to bookmarks.

```

3681 \define@key{Hyp}{bookmarksnumbered}[true]{%
3682   \Hy@boolkey{bookmarksnumbered}{#1}%
3683 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3684 \define@key{Hyp}{CJKbookmarks}[true]{%
3685   \Hy@boolkey{CJKbookmarks}{#1}%
3686 }

3687 \def\Hy@temp#1{%
3688   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3689 }
3690 \def\Hy@@temp#1#2#3{%
3691   \define@key{Hyp}{#2color}{%
3692     \HyColor@HyperrefColor{##1}#1%
3693   }%
3694   \def#1{#3}%
3695 }
3696 \Hy@temp{link}{red}
3697 \Hy@temp{anchor}{black}
3698 \Hy@temp{cite}{green}
3699 \Hy@temp{file}{cyan}
3700 \Hy@temp{url}{magenta}
3701 \Hy@temp{menu}{red}
3702 \Hy@temp{run}{\@filecolor}
3703 \define@key{Hyp}{pagecolor}{%
3704   \Hy@WarningPageColor
3705 }
3706 \def\Hy@WarningPageColor{%
3707   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3708   \global\let\Hy@WarningPageColor\relax
3709 }
3710 \define@key{Hyp}{allcolors}{%
3711   \HyColor@HyperrefColor{#1}\@linkcolor
3712   \HyColor@HyperrefColor{#1}\@anchorcolor
3713   \HyColor@HyperrefColor{#1}\@citecolor
3714   \HyColor@HyperrefColor{#1}\@filecolor
3715   \HyColor@HyperrefColor{#1}\@urlcolor
3716   \HyColor@HyperrefColor{#1}\@menucolor
3717   \HyColor@HyperrefColor{#1}\@runcolor
3718 }

3719 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3720 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3721 \let\@baseurl\@empty
3722 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3723 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3724 \hyperlinkfileprefix{file:}

```

15 PDF-specific options

`\@pdfpagetransition` The value of option `pdfpagetransition` is stored in `\@pdfpagetransition`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

3725 \let\@pdfpagetransition\relax
3726 \define@key{Hyp}{pdfpagetransition}{%
3727   \def\@pdfpagetransition{#1}%
3728 }

```

`\@pdfpageduration` The value of option `pdfpageduration` is stored in `\@pdfpageduration`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option

and an option with an empty value.

```

3729 \let\@pdfpageduration\relax
3730 \define@key{Hyp}{pdfpageduration}{%
3731   \def\@pdfpageduration{#1}%
3732   \Hy@Match\@pdfpageduration{%
3733     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3734   }{}{%
3735     \Hy@Warning{%
3736       Invalid value '\@pdfpageduration'\MessageBreak
3737       of option 'pdfpageduration'\MessageBreak
3738       is replaced by an empty value%
3739     }%
3740     \let\@pdfpageduration\ltx@empty
3741   }%
3742 }
```

The entry for the /Hid key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the /Hid key is not written to the pdf page object in order not to enlarge the pdf file.

```

3743 \newif\ifHy@useHidKey
3744 \Hy@useHidKeyfalse
3745 \define@key{Hyp}{pdfpagehidden}[true]{%
3746   \Hy@boolkey{pdfpagehidden}{#1}%
3747   \ifHy@pdfpagehidden
3748     \global\Hy@useHidKeytrue
3749   \fi
3750 }
```

The value of the bordercolor options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package xcolor provides \XC@bordercolor since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package xcolor by using \XC@bordercolor (since xcolor 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

3751 \def\Hy@ColorList{cite,file,link,menu,run,url}
3752 \@for\Hy@temp:=\Hy@ColorList\do{%
3753   \edef\Hy@temp{%
3754     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3755       \noexpand\Hy@Color@HyperrefBorderColor
3756       {##1}%
3757       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3758       {hyperref}%
3759       {\Hy@temp bordercolor}%
3760     }%
3761   }%
3762   \Hy@temp
3763 }
3764 \define@key{Hyp}{pagebordercolor}{%
3765   \Hy@WarningPageBorderColor
3766 }
3767 \def\Hy@WarningPageBorderColor{%
3768   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3769   \global\let\Hy@WarningPageBorderColor\relax
3770 }
3771 \define@key{Hyp}{allbordercolors}{%
```



```

3772 \def\Hy@temp##1##2{%
3773   \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3774 }%
3775 \Hy@temp\@citebordercolor{cite}%
3776 \Hy@temp\@filebordercolor{file}%
3777 \Hy@temp\@linkbordercolor{link}%
3778 \Hy@temp\@menubordercolor{menu}%
3779 \Hy@temp\@runbordercolor{run}%
3780 \Hy@temp\@urlbordercolor{url}%
3781 }

3782 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3783 \Hy@DefNameKey{pdfhighlight}{%
3784   \do{/I}{Invert}%
3785   \do{/N}{None}%
3786   \do{/O}{Outline}%
3787   \do{/P}{Push}%
3788 }
3789 \define@key{Hyp}{pdfborder}{%
3790   \let\Hy@temp\@pdfborder
3791   \def\@pdfborder{#1}%
3792   \Hy@Match\@pdfborder{%
3793     ~\HyPat@NonNegativeReal/ %
3794     \HyPat@NonNegativeReal/ %
3795     \HyPat@NonNegativeReal/%
3796     ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*\])?%%
3797   }{}{%
3798     \Hy@Warning{%
3799       Invalid value '\@pdfborder'\MessageBreak
3800       for option 'pdfborder'.\MessageBreak
3801       Option setting is ignored%
3802     }%
3803     \let\@pdfborder\Hy@temp
3804   }%
3805 }
3806 \define@key{Hyp}{pdfborderstyle}{%
3807   \let\Hy@temp\@pdfborderstyle
3808   \def\@pdfborderstyle{#1}%
3809   \Hy@Match\@pdfborderstyle{%
3810     ~%
3811     ( */Type */Border%
3812     | */W +\HyPat@NonNegativeReal/%
3813     | */S */[SDBIU]%
3814     | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?)%
3815     )* *$%
3816   }{}{%
3817     \Hy@Warning{%
3818       Invalid value '\@pdfborderstyle'\MessageBreak
3819       for option 'pdfborderstyle'.\MessageBreak
3820       Option setting is ignored%
3821     }%
3822     \let\@pdfborderstyle\Hy@temp
3823   }%
3824 }
3825 \def\Hy@setpdfborder{%
3826   \ifx\@pdfborder\@empty
3827   \else
3828     /Border[\@pdfborder]%

```

```

3829 \fi
3830 \ifx\@pdfborderstyle\@empty
3831 \else
3832 /BS<<\@pdfborderstyle>>%
3833 \fi
3834 }
3835 \Hy@DefNameKey{pdfpagemode}{%
3836 \do{UseNone}{}%
3837 \do{UseOutlines}{}%
3838 \do{UseThumbs}{}%
3839 \do{FullScreen}{}%
3840 \do{UseOC}{PDF 1.5}%
3841 \do{UseAttachments}{PDF 1.6}%
3842 }
3843 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3844 \do{UseNone}{}%
3845 \do{UseOutlines}{}%
3846 \do{UseThumbs}{}%
3847 \do{FullScreen}{}%
3848 \do{UseOC}{PDF 1.5}%
3849 \do{UseAttachments}{PDF 1.6}%
3850 }
3851 \Hy@DefNameKey{pdfdirection}{%
3852 \do{L2R}{Left to right}%
3853 \do{R2L}{Right to left}%
3854 }
3855 \Hy@DefNameKey{pdfviewarea}{%
3856 \do{MediaBox}{}%
3857 \do{CropBox}{}%
3858 \do{BleedBox}{}%
3859 \do{TrimBox}{}%
3860 \do{ArtBox}{}%
3861 }
3862 \Hy@DefNameKey{pdfviewclip}{%
3863 \do{MediaBox}{}%
3864 \do{CropBox}{}%
3865 \do{BleedBox}{}%
3866 \do{TrimBox}{}%
3867 \do{ArtBox}{}%
3868 }
3869 \Hy@DefNameKey{pdfprintarea}{%
3870 \do{MediaBox}{}%
3871 \do{CropBox}{}%
3872 \do{BleedBox}{}%
3873 \do{TrimBox}{}%
3874 \do{ArtBox}{}%
3875 }
3876 \Hy@DefNameKey{pdfprintclip}{%
3877 \do{MediaBox}{}%
3878 \do{CropBox}{}%
3879 \do{BleedBox}{}%
3880 \do{TrimBox}{}%
3881 \do{ArtBox}{}%
3882 }
3883 \Hy@DefNameKey{pdfprintscaling}{%
3884 \do{AppDefault}{}%
3885 \do{None}{}%

```

```

3886 }
3887 \Hy@DefNameKey{pdfduplex}{%
3888   \do{Simplex}{}%
3889   \do{DuplexFlipShortEdge}{}%
3890   \do{DuplexFlipLongEdge}{}%
3891 }
3892 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3893   \do{true}{}%
3894   \do{false}{}%
3895 }
3896 \define@key{Hyp}{pdfprintpagerange}{%
3897   \def\@pdfprintpagerange{#1}%
3898 }
3899 \Hy@DefNameKey{pdfnumcopies}{%
3900   \do{2}{two copies}%
3901   \do{3}{three copies}%
3902   \do{4}{four copies}%
3903   \do{5}{five copies}%
3904 }
3905 \define@key{Hyp}{pdfusetitle}[true]{%
3906   \Hy@boolkey{pdfusetitle}{#1}%
3907 }
3908 \def\HyXeTeX@CheckUnicode{%
3909   \ifxetex
3910     \ifHy@unicode
3911     \else
3912       \Hy@WarningNoLine{%
3913         XeTeX driver only supports unicode.\MessageBreak
3914         Enabling option 'unicode'%
3915       }%
3916       \kvsetkeys{Hyp}{unicode}%
3917     \fi
3918   \else
3919     \let\HyXeTeX@CheckUnicode\relax
3920   \fi
3921 }
3922 \def\HyPsd@PrerenderUnicode#1{%
3923   \begingroup
3924     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3925     \else
3926       \sbox0{%
3927         \let\GenericInfo\@gobbletwo
3928         \let\GenericWarning\@gobbletwo
3929         \let\GenericError\@gobblefour
3930         \PrerenderUnicode{#1}%
3931       }%
3932     \fi
3933   \endgroup
3934 }
3935 \define@key{Hyp}{pdftitle}{%
3936   \HyXeTeX@CheckUnicode
3937   \HyPsd@XeTeXBigCharstrue
3938   \HyPsd@PrerenderUnicode{#1}%
3939   \pdfstringdef\@pdftitle{#1}%
3940 }
3941 \define@key{Hyp}{pdfauthor}{%
3942   \HyXeTeX@CheckUnicode

```

```

3943 \HyPsd@XeTeXBigCharstrue
3944 \HyPsd@PrerenderUnicode{#1}%
3945 \pdfstringdef\@pdfauthor{#1}%
3946 }
3947 \define@key{Hyp}{pdfproducer}{%
3948 \HyXeTeX@CheckUnicode
3949 \HyPsd@XeTeXBigCharstrue
3950 \HyPsd@PrerenderUnicode{#1}%
3951 \pdfstringdef\@pdfproducer{#1}%
3952 \ifxetex
3953 \Hy@Warning{%
3954 pdfproducer: %
3955 xdvipdfmx will use its own setting\MessageBreak
3956 instead of the value given%
3957 }%
3958 \else
3959 \def\Hy@temp{hdvipdfm}%
3960 \ifx\Hy@driver\Hy@temp
3961 \Hy@Warning{%
3962 pdfproducer: %
3963 dvipdfm(x) will use its own setting\MessageBreak
3964 instead of the value given%
3965 }%
3966 \fi
3967 \fi
3968 }
3969 \define@key{Hyp}{pdfcreator}{%
3970 \HyXeTeX@CheckUnicode
3971 \HyPsd@XeTeXBigCharstrue
3972 \HyPsd@PrerenderUnicode{#1}%
3973 \pdfstringdef\@pdfcreator{#1}%
3974 }
3975 \define@key{Hyp}{pdfcreationdate}{%
3976 \begingroup
3977 \Hy@unicodetfalse
3978 \pdfstringdef\@pdfcreationdate{#1}%
3979 \endgroup
3980 }
3981 \define@key{Hyp}{pdfmoddate}{%
3982 \begingroup
3983 \Hy@unicodetfalse
3984 \pdfstringdef\@pdfmoddate{#1}%
3985 \endgroup
3986 }
3987 \define@key{Hyp}{pdfsubject}{%
3988 \HyXeTeX@CheckUnicode
3989 \HyPsd@XeTeXBigCharstrue
3990 \HyPsd@PrerenderUnicode{#1}%
3991 \pdfstringdef\@pdfsubject{#1}%
3992 }
3993 \define@key{Hyp}{pdfkeywords}{%
3994 \HyXeTeX@CheckUnicode
3995 \HyPsd@XeTeXBigCharstrue
3996 \HyPsd@PrerenderUnicode{#1}%
3997 \pdfstringdef\@pdfkeywords{#1}%
3998 }
3999 \define@key{Hyp}{pdftrapped}{%

```

```

4000 \lowercase{\edef\Hy@temp{#1}}%
4001 \ifx\Hy@temp\HyInfo@trapped@true
4002 \def\@pdftrapped{True}%
4003 \else
4004 \ifx\Hy@temp\HyInfo@trapped@false
4005 \def\@pdftrapped{False}%
4006 \else
4007 \ifx\Hy@temp\HyInfo@trapped@unknown
4008 \def\@pdftrapped{Unknown}%
4009 \else
4010 \ifx\Hy@temp\@empty
4011 \else
4012 \Hy@Warning{%
4013     Unsupported value '#1'\MessageBreak
4014     for option 'pdftrapped'%
4015 }%
4016 \fi
4017 \def\@pdftrapped{}%
4018 \fi
4019 \fi
4020 \fi
4021 }
4022 \def\HyInfo@trapped@true{true}
4023 \def\HyInfo@trapped@false{false}
4024 \def\HyInfo@trapped@unknown{unknown}
4025 \def\HyInfo@TrappedUnsupported{%
4026 \ifx\@pdftrapped\@empty
4027 \else
4028 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4029 \gdef\HyInfo@TrappedUnsupported{}%
4030 \fi
4031 }
4032 \define@key{Hyp}{pdfinfo}{%
4033 \kvsetkeys{pdfinfo}{#1}%
4034 }
4035 \def\Hy@temp#1{%
4036 \lowercase{\Hy@temp@A{#1}}{#1}%
4037 }
4038 \def\Hy@temp@A#1#2{%
4039 \define@key{pdfinfo}{#2}{%
4040 \hypersetup{pdf#1={##1}}%
4041 }%
4042 }
4043 \Hy@temp{Title}
4044 \Hy@temp{Author}
4045 \Hy@temp{Keywords}
4046 \Hy@temp{Subject}
4047 \Hy@temp{Creator}
4048 \Hy@temp{Producer}
4049 \Hy@temp{CreationDate}
4050 \Hy@temp{ModDate}
4051 \Hy@temp{Trapped}
4052 \newif\ifHyInfo@AddonUnsupported
4053 \kv@set@family@handler{pdfinfo}{%
4054 \HyInfo@AddonHandler{#1}{#2}%
4055 }
4056 \let\HyInfo@do\relax

```

```

4057 \def\HyInfo@AddonHandler#1#2{%
4058   \ifx\kv@value\relax
4059     \Hy@Warning{%
4060       Option 'pdfinfo': ignoring key '\kv@key' without value%
4061     }%
4062   \else
4063     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4064     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4065     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4066     \ifHyInfo@AddonUnsupported
4067       \Hy@Warning{%
4068         This driver does not support additional\MessageBreak
4069         information entries, therefore\MessageBreak
4070         '\kv@key' is ignored%
4071       }%
4072     \else
4073       \define@key{pdfinfo}{\HyInfo@Key}{%
4074         \HyXeTeX@CheckUnicode
4075         \HyPsd@XeTeXBigCharstrue
4076         \HyPsd@PrerenderUnicode{##1}%
4077         \pdfstringdef\HyInfo@Value{##1}%
4078         \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
4079         \HyInfo@Value
4080       }%
4081     \edef\HyInfo@AddonList{%
4082       \HyInfo@AddonList
4083       \HyInfo@do{\HyInfo@Key}%
4084     }%
4085     \kv@parse@normalized{%
4086       \HyInfo@Key={##2}%
4087     }{%
4088       \kv@processor@default{pdfinfo}%
4089     }%
4090   \fi
4091 \else
4092   \kv@parse@normalized{%
4093     \HyInfo@Key={##2}%
4094   }{%
4095     \kv@processor@default{pdfinfo}%
4096   }%
4097 \fi
4098 \fi
4099 }
4100 \def\HyInfo@GenerateAddons{%
4101   \ifHyInfo@AddonUnsupported
4102     \def\HyInfo@Addons{%
4103       \else
4104         \begingroup
4105         \toks@{%
4106           \def\HyInfo@do##1{%
4107             \EdefEscapeName\HyInfo@Key{##1}%
4108             \edef\x{%
4109               \toks@{%
4110                 \the\toks@
4111                 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4112               }%
4113             }%

```

```

4114 \x
4115 }%
4116 \HyInfo@AddonList
4117 \edef\x{\endgroup
4118 \def\noexpand\HyInfo@Addons{\the\toks@}%
4119 }%
4120 \x
4121 \fi
4122 }
4123 \let\HyInfo@AddonList\ltx@empty

4124 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
4125 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4126 \let\setpdfinkmargin\gobble
4127 \def\calculate@pdfview#1 #2\\\{%
4128 \def\@pdfview{#1}%
4129 \ifx\#2\\\%
4130 \def\@pdfviewparams{-32768}%
4131 \else
4132 \def\@pdfviewparams{ #2}%
4133 \fi
4134 }
4135 \begingroup\expandafter\expandafter\expandafter\endgroup
4136 \expandafter\ifx\csname numexpr\endcsname\relax
4137 \def\Hy@number#1{%
4138 \expandafter\@firstofone\expandafter{\number#1}%
4139 }%
4140 \else
4141 \def\Hy@number#1{%
4142 \the\numexpr#1\relax
4143 }%
4144 \fi
4145 \define@key{Hyp}{pdfstartpage}{\%
4146 \ifx\#1\\\%
4147 \let\@pdfstartpage\ltx@empty
4148 \else
4149 \edef\@pdfstartpage{\Hy@number{#1}}%
4150 \fi
4151 }%
4152 \define@key{Hyp}{pdfstartview}{\%
4153 \ifx\#1\\\%
4154 \let\@pdfstartview\ltx@empty
4155 \else
4156 \hypercalcbpdef\@pdfstartview{/#1}%
4157 \fi
4158 }
4159 \def\HyPat@NonNegativeReal/{\%
4160 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *\%
4161 }
4162 \define@key{Hyp}{pdfremotestartview}{\%
4163 \ifx\#1\\\%
4164 \def\@pdfremotestartview{/Fit}%
4165 \else
4166 \hypercalcbpdef\@pdfremotestartview{#1}%
4167 \edef\@pdfremotestartview{\@pdfremotestartview}%
4168 \Hy@Match\@pdfremotestartview{%
4169 ^{XYZ}-(null|\HyPat@NonNegativeReal/) \%
4170 -(null|\HyPat@NonNegativeReal/) \%

```

```

4171      (null|\HyPat@NonNegativeReal/)|%
4172      Fit(|B|)%
4173      (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
4174      R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
4175      \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
4176      ))$%
4177      }-}{%
4178      \Hy@Warning{%
4179      Invalid value '\@pdfremotestartview'\MessageBreak
4180      of 'pdfremotestartview'\MessageBreak
4181      is replaced by 'Fit'%
4182      }%
4183      \let\@pdfremotestartview\@empty
4184      }%
4185      \ifx\@pdfremotestartview\@empty
4186      \def\@pdfremotestartview{/Fit}%
4187      \else
4188      \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4189      \fi
4190      \fi
4191      }
4192      \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4193      \define@key{Hyp}{pdftoolbar}[true]{%
4194      \Hy@boolkey{pdftoolbar}{#1}%
4195      }
4196      \define@key{Hyp}{pdfmenubar}[true]{%
4197      \Hy@boolkey{pdfmenubar}{#1}%
4198      }
4199      \define@key{Hyp}{pdfwindowui}[true]{%
4200      \Hy@boolkey{pdfwindowui}{#1}%
4201      }
4202      \define@key{Hyp}{pdffitwindow}[true]{%
4203      \Hy@boolkey{pdffitwindow}{#1}%
4204      }
4205      \define@key{Hyp}{pdfcenterwindow}[true]{%
4206      \Hy@boolkey{pdfcenterwindow}{#1}%
4207      }
4208      \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4209      \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4210      }
4211      \define@key{Hyp}{pdfa}[true]{%
4212      \Hy@boolkey{pdfa}{#1}%
4213      }
4214      \define@key{Hyp}{pdfnewwindow}[true]{%
4215      \def\Hy@temp{#1}%
4216      \ifx\Hy@temp\@empty
4217      \Hy@pdfnewwindowsetfalse
4218      \else
4219      \Hy@pdfnewwindowsettrue
4220      \Hy@boolkey{pdfnewwindow}{#1}%
4221      \fi
4222      }
4223      \def\Hy@SetNewWindow{%
4224      \ifHy@pdfnewwindowset
4225      /NewWindow %
4226      \ifHy@pdfnewwindow true\else false\fi
4227      \fi

```



```

4228 }
4229 \Hy@DefNameKey{pdfpagelayout}{%
4230   \do{SinglePage}{}%
4231   \do{OneColumn}{}%
4232   \do{TwoColumnLeft}{}%
4233   \do{TwoColumnRight}{}%
4234   \do{TwoPageLeft}{PDF 1.5}%
4235   \do{TwoPageRight}{PDF 1.5}%
4236 }
4237 \define@key{Hyp}{pdflang}{%
4238   \def\@pdflang{#1}%
4239 }
4240 \define@key{Hyp}{pdfpagelabels}[true]{%
4241   \Hy@boolkey{pdfpagelabels}{#1}%
4242 }
4243 \define@key{Hyp}{pdfescapeform}[true]{%
4244   \Hy@boolkey{pdfescapeform}{#1}%
4245 }

```

Default values:

```

4246 \def\@linkbordercolor{1 0 0}
4247 \def\@urlbordercolor{0 1 1}
4248 \def\@menubordercolor{1 0 0}
4249 \def\@filebordercolor{0 .5 .5}
4250 \def\@runbordercolor{0 .7 .7}
4251 \def\@citebordercolor{0 1 0}
4252 \def\@pdfhighlight{/I}
4253 \let\@pdftitle\ltx@empty
4254 \let\@pdfauthor\ltx@empty
4255 \let\@pdfproducer\relax
4256 \def\@pdfcreator{LaTeX with hyperref package}
4257 \let\@pdfcreationdate\ltx@empty
4258 \let\@pdfmoddate\ltx@empty
4259 \let\@pdfsubject\ltx@empty
4260 \let\@pdfkeywords\ltx@empty
4261 \let\@pdftrapped\ltx@empty
4262 \let\@pdfpagescrop\ltx@empty
4263 \def\@pdfstartview{/Fit}
4264 \def\@pdfremotestartview{/Fit}
4265 \def\@pdfstartpage{1}
4266 \let\@pdfprintpagerange\ltx@empty
4267 \let\@pdflang\ltx@empty
4268 \let\PDF@SetupDoc\@empty
4269 \let\PDF@FinishDoc\@empty
4270 \let\phantomsection\@empty
4271 \let\special@paper\@empty
4272 \def\HyperDestNameFilter#1{#1}
4273 \Hy@AtBeginDocument{%
4274   \begingroup
4275     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4276     \dimen@=\x\relax
4277     \ifdim\dimen@>\z@
4278       \else
4279         \dimen@=11in\relax
4280         \Hy@WarningNoLine{%
4281           Height of page (\expandafter\string\x) %
4282           is invalid (\the\x),\MessageBreak
4283           using 11in%

```

```

4284 }%
4285 \fi
4286 \dimen@=0.99626401\dimen@
4287 \xdef\Hy@pageheight{\strip@pt\dimen@}%
4288 \endgroup
4289 }
4290 \def\HyInd@EncapChar{\|}

```

Allow the user to use `\ExecuteOptions` in the `cfg` file even though this package does not use the normal option mechanism. Use `\hyper@normalise` as a scratch macro, since it is going to be defined in a couple of lines anyway.

```

4291 \let\hyper@normalise\ExecuteOptions
4292 \let\ExecuteOptions\hypersetup
4293 \Hy@RestoreCatcodes
4294 \InputIfFileExists{hyperref.cfg}{-}{-}
4295 \Hy@SetCatcodes
4296 \let\ExecuteOptions\hyper@normalise
4297 \ifx\Hy@MaybeStopNow\relax
4298 \else
4299 \Hy@stoppedearlytrue
4300 \expandafter\Hy@MaybeStopNow
4301 \fi
4302 \Hy@stoppedearlyfalse

```

To add flexibility, we will not use the ordinary processing of package options, but put them through the *keyval* package. This section was written by David Carlisle.

```

4303 \SetupKeyvalOptions{family=Hyp}
4304 \DeclareLocalOptions{%
4305   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4306 }

```

Add option `tex4ht` if package `tex4ht` is loaded.

```

4307 \@ifpackageloaded{tex4ht}{%
4308   \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
4309   \PassOptionsToPackage{tex4ht}{hyperref}%
4310 }%
4311 }{-}

4312 \let\ReadBookmarks\relax
4313 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package `xspace` support

```

4314 \def\Hy@xspace@end{}
4315 \ltx@ifundefined{xspaceaddexceptions}{-}%
4316 \Hy@AtBeginDocument{%
4317   \ltx@ifundefined{xspaceaddexceptions}{-}%
4318 }{-}%
4319 \def\Hy@xspace@end{%
4320   \ltx@gobble{end for xspace}%
4321 }%
4322 \xspaceaddexceptions{%
4323   \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4324 }%
4325 }%
4326 }%
4327 }{-}%

```

```

4328 \def\Hy@xspace@end{%
4329   \ltx@gobble{end for xspace}%
4330 }%
4331 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4332 }

```

15.2 Option draft

```

4333 \Hy@AtBeginDocument{%
4334   \ifHy@draft
4335     \let\hyper@@anchor\@gobble
4336     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4337     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4338     \def\hyper@anchorend{\Hy@xspace@end}%
4339     \let\hyper@linkstart\@gobbletwo
4340     \def\hyper@linkend{\Hy@xspace@end}%
4341     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4342     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4343     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4344     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4345     \let\PDF@SetupDoc\@empty
4346     \let\PDF@FinishDoc\@empty
4347     \let\@fifthoffive\@secondoftwo
4348     \let\@secondoffive\@secondoftwo
4349     \let\ReadBookmarks\relax
4350     \let\WriteBookmarks\relax
4351     \Hy@WarningNoLine{Draft mode on}%
4352   \fi
4353   \Hy@DisableOption{draft}%
4354   \Hy@DisableOption{nolinks}%
4355   \Hy@DisableOption{final}%
4356 }

```

15.3 PDF/A

```

4357 \Hy@DisableOption{pdfa}
4358 \ifHy@pdfa
4359   \kvsetkeys{Hyp}{pdfversion=1.4}%
4360   \Hy@DisableOption{pdfversion}%
4361   \def\Hy@Acrobatmenu#1#2{%
4362     \leavevmode
4363     \begingroup
4364       \edef\x{#1}%
4365       \@onelevel@sanitize\x
4366       \ifx\x\Hy@NextPage
4367         \let\y=Y%
4368       \else
4369         \ifx\x\Hy@PrevPage
4370           \let\y=Y%
4371         \else
4372           \ifx\x\Hy@FirstPage
4373             \let\y=Y%
4374           \else
4375             \ifx\x\Hy@LastPage
4376               \let\y=Y%
4377             \else
4378               \let\y=N%
4379             \fi
4380           \fi

```

```

4381 \fi
4382 \fi
4383 \expandafter\endgroup
4384 \ifx\y Y%
4385 \else
4386 \Hy@Error{%
4387 PDF/A: Named action ‘#1’ is not permitted%
4388 }\@ehc
4389 {#2}%
4390 \expandafter\@gobble
4391 \fi
4392 }%
4393 \def\Hy@temp#1{%
4394 \expandafter\def\csname Hy@#1\endcsname{#1}%
4395 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4396 }%
4397 \Hy@temp{NextPage}%
4398 \Hy@temp{PrevPage}%
4399 \Hy@temp{FirstPage}%
4400 \Hy@temp{LastPage}%
4401 \else
4402 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4403 \fi

```

15.4 Patch for babel’s \texttilde

Babel does not define \texttilde in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, \texttilde is defined in babel manner.

```

4404 \Hy@nextfalse
4405 \ltx@ifundefined{spanish@sh@}{}{\Hy@nexttrue}
4406 \ltx@ifundefined{galician@sh@}{}{\Hy@nexttrue}
4407 \ltx@ifundefined{estonian@sh@}{}{\Hy@nexttrue}
4408 \ifHy@next
4409 \let\texttilde\~%
4410 \fi

4411 \def\Hy@wrapper@babel#1#2{%
4412 \begingroup
4413 \Hy@safe@activetrue
4414 \set@display@protect
4415 \edef\x{#2}%
4416 \@onelevel@sanitize\x
4417 \toks@{#1}%
4418 \edef\x{\endgroup\the\toks@\x}}%
4419 \x
4420 }
4421 \def\Hy@WrapperDef#1{%
4422 \begingroup
4423 \escapechar=\m@ne
4424 \xdef\Hy@gtemp{%
4425 \expandafter\noexpand\csname HyWrap@string#1\endcsname
4426 }%
4427 \endgroup
4428 \edef#1{%
4429 \noexpand\Hy@wrapper@babel
4430 \expandafter\noexpand\Hy@gtemp
4431 }%

```

```

4432 \expandafter\def\Hy@gtemp
4433 }

4434 \ifHy@hyperfigures
4435 \Hy@Info{Hyper figures ON}%
4436 \else
4437 \Hy@Info{Hyper figures OFF}%
4438 \fi
4439 \ifHy@nesting
4440 \Hy@Info{Link nesting ON}%
4441 \else
4442 \Hy@Info{Link nesting OFF}%
4443 \fi
4444 \ifHy@hyperindex
4445 \Hy@Info{Hyper index ON}%
4446 \else
4447 \Hy@Info{Hyper index OFF}%
4448 \fi
4449 \ifHy@plainpages
4450 \Hy@Info{Plain pages ON}%
4451 \else
4452 \Hy@Info{Plain pages OFF}%
4453 \fi
4454 \ifHy@backref
4455 \Hy@Info{Backreferencing ON}%
4456 \else
4457 \Hy@Info{Backreferencing OFF}%
4458 \fi
4459 \ifHy@typexml
4460 \Hy@AtEndOfPackage{%
4461 \RequirePackage{color}%
4462 \RequirePackage{nameref}[2012/07/28]%
4463 }%
4464 \fi
4465 \Hy@DisableOption{typexml}
4466 \ifHy@implicit
4467 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4468 \else
4469 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4470 \def\MaybeStopEarly{%
4471 \Hy@Message{Stopped early}%
4472 \Hy@AtBeginDocument{%
4473 \PDF@FinishDoc
4474 \gdef\PDF@FinishDoc{}}%
4475 }%
4476 \endinput
4477 }%
4478 \Hy@AtBeginDocument{%
4479 \let\autoref\ref
4480 \let\autopageref\pageref
4481 \ifx\@pdfpagemode\@empty
4482 \gdef\@pdfpagemode{UseNone}%
4483 \fi
4484 \global\Hy@backreffalse
4485 }%
4486 \Hy@AtEndOfPackage{%
4487 \global\let\ReadBookmarks\relax
4488 \global\let\WriteBookmarks\relax

```

```

4489 }%
4490 \fi
4491 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4492 \Hy@AtEndOfPackage{%
4493   \@ifpackageloaded{tex4ht}{%
4494     \def\Hy@driver{htex4ht}%
4495     \Hy@texhttrue
4496   }%

```

Some drivers can be detected. Check for these drivers, whether the given driver option is ok. Otherwise force the right driver or use the default driver.

```

4497   \ifx\Hy@driver\@empty
4498   \else
4499     \def\Hy@temp{hpdftex}%
4500     \ifpdf
4501       \ifx\Hy@driver\Hy@temp
4502       \else
4503         \Hy@WarningNoLine{%
4504           Wrong driver '\Hy@driver.def';\MessageBreak
4505           pdfTeX is running in PDF mode.\MessageBreak
4506           Forcing driver '\Hy@temp.def"%
4507         }%
4508         \let\Hy@driver\Hy@temp
4509       \fi
4510     \else
4511       \ifx\Hy@driver\Hy@temp
4512       \Hy@WarningNoLine{%
4513         Wrong driver '\Hy@driver.def';\MessageBreak
4514         pdfTeX is not running in PDF mode.\MessageBreak
4515         Using default driver%
4516       }%
4517       \let\Hy@driver\@empty
4518     \fi
4519   \fi
4520 \fi
4521 \ifHy@texht
4522 \else
4523   \ifx\Hy@driver\@empty
4524   \else
4525     \def\Hy@temp{hxdetex}%
4526     \ifxdetex
4527       \ifx\Hy@driver\Hy@temp
4528       \else
4529         \Hy@WarningNoLine{%
4530           Wrong driver '\Hy@driver.def';\MessageBreak
4531           XeTeX is running.\MessageBreak
4532           Forcing driver '\Hy@temp.def' for XeTeX%
4533         }%
4534         \let\Hy@driver\Hy@temp
4535       \fi
4536     \fi
4537   \fi
4538 \fi
4539 \ifx\Hy@driver\@empty
4540 \else

```

```

4541 \def\Hy@temp{hvtexhtm}%
4542 \ifvtexhtml
4543 \ifx\Hy@driver\Hy@temp
4544 \else
4545 \Hy@WarningNoLine{%
4546   Wrong driver '\Hy@driver.def';\MessageBreak
4547   VTeX is running in HTML mode.\MessageBreak
4548   Forcing driver '\Hy@temp.def"%
4549 }%
4550 \let\Hy@driver\Hy@temp
4551 \fi
4552 \else
4553 \ifx\Hy@driver\Hy@temp
4554 \Hy@WarningNoLine{%
4555   Wrong driver '\Hy@driver.def';\MessageBreak
4556   VTeX is not running in HTML mode.\MessageBreak
4557   Using default driver%
4558 }%
4559 \let\Hy@driver\@empty
4560 \fi
4561 \fi
4562 \fi

```

If the driver is not given, find the right driver or use the default driver.

```

4563 \def\HyOpt@DriverType{%
4564 \ifx\Hy@driver\@empty
4565 \def\HyOpt@DriverType{ (autodetected)}%
4566 \providecommand*\Hy@defaultdriver{hypertex}%
4567 \ifpdf
4568 \def\Hy@driver{hpdfTeX}%
4569 \else
4570 \ifxetex
4571 \def\Hy@driver{hxetex}%
4572 \else
4573 \ifvtexhtml
4574 \def\Hy@driver{hvtexhtm}%
4575 \def\MaybeStopEarly{%
4576 \Hy@Message{Stopped early}%
4577 \Hy@AtBeginDocument{%
4578 \PDF@FinishDoc
4579 \gdef\PDF@FinishDoc{}}%
4580 }%
4581 \endinput
4582 }%
4583 \else
4584 \ifvtexpdf
4585 \def\Hy@driver{hvtex}%
4586 \else
4587 \ifvtexps
4588 \def\Hy@driver{hvtex}%
4589 \else
4590 \ifx\HyOpt@DriverFallback\ltx@empty
4591 \let\Hy@driver\Hy@defaultdriver
4592 \def\HyOpt@DriverType{ (default)}%
4593 \else
4594 \begingroup
4595 \toks@\expandafter{\HyOpt@DriverFallback}%
4596 \edef\x{\endgroup

```

```

4597         \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4598     }%
4599     \x
4600     \ifx\Hy@driver\ltx@empty
4601         \let\Hy@driver\Hy@defaultdriver
4602         \def\HyOpt@DriverType{ (default)}%
4603     \else
4604         \def\HyOpt@DriverType{ (fallback)}%
4605     \fi
4606 \fi
4607 \fi
4608 \fi
4609 \fi
4610 \fi
4611 \fi
4612 \ifx\Hy@driver\Hy@defaultdriver
4613     \def\Hy@temp{hdvwind}%
4614     \ifx\Hy@temp\Hy@driver
4615         \kvsetkeys{Hyp}{colorlinks}%
4616         \PassOptionsToPackage{dviwindo}{color}%
4617     \fi
4618 \fi
4619 \fi
4620 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4621 \chardef\Hy@VersionChecked=0 %
4622 \input{\Hy@driver.def}%
4623 \ifcase\Hy@VersionChecked
4624     \Hy@VersionCheck{\Hy@driver.def}%
4625 \fi
4626 \let\@unprocessedoptions\relax
4627 \Hy@RestoreCatcodes
4628 \Hy@DisableOption{tex4ht}%
4629 \Hy@DisableOption{pdftex}%
4630 \Hy@DisableOption{nativepdf}%
4631 \Hy@DisableOption{dvipdfm}%
4632 \Hy@DisableOption{dvipdfmx}%
4633 \Hy@DisableOption{dvipdfmx-outline-open}%
4634 \Hy@DisableOption{pdfmark}%
4635 \Hy@DisableOption{dvips}%
4636 \Hy@DisableOption{hypertext}%
4637 \Hy@DisableOption{vtex}%
4638 \Hy@DisableOption{vtexpdfmark}%
4639 \Hy@DisableOption{dviwindo}%
4640 \Hy@DisableOption{dvipsone}%
4641 \Hy@DisableOption{textures}%
4642 \Hy@DisableOption{latex2html}%
4643 \Hy@DisableOption{ps2pdf}%
4644 \Hy@DisableOption{xetex}%
4645 \Hy@DisableOption{pdfversion}%
4646 }

```

Support for open outlines is enabled for XeTeX ≥ 0.9995 . I don't know, if older versions also support this. AFAIK older dvipdfmx versions will break, thus the switch cannot be turned on by default.

```

4647 \newif\ifHy@DvipdfmxOutlineOpen
4648 \ifxetex
4649     \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4650     \else

```



```

4651 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4652 \Hy@DvipdfmxOutlineOpenttrue
4653 \fi
4654 \fi
4655 \begingroup\expandafter\expandafter\expandafter\endgroup
4656 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4657 \else
4658 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4659 \Hy@DvipdfmxOutlineOpenttrue
4660 \fi
4661 \fi

```

15.4.2 Bookmarks

```

4662 \def\WriteBookmarks{0}
4663 \def\@bookmarkopenstatus#1{%
4664 \ifHy@bookmarksopen

```

The purpose of the \@firstofone-number-space-construct is that no \relax will be inserted by T_EX before the \else:

```

4665 \ifnum#1<\expandafter\@firstofone\expandafter
4666 {\number\@bookmarkopenlevel} % explicit space
4667 \else
4668 -%
4669 \fi
4670 \else
4671 -%
4672 \fi
4673 }
4674 \ifHy@bookmarks
4675 \Hy@Info{Bookmarks ON}%
4676 \ifx\@pdfpagemode\@empty
4677 \def\@pdfpagemode{UseOutlines}%
4678 \fi
4679 \else
4680 \let\@bookmarkopenstatus\ltx@gobble
4681 \Hy@Info{Bookmarks OFF}%
4682 \Hy@AtEndOfPackage{%
4683 \global\let\ReadBookmarks\relax
4684 \global\let\WriteBookmarks\relax
4685 }%
4686 \ifx\@pdfpagemode\@empty
4687 \def\@pdfpagemode{UseNone}%
4688 \fi
4689 \fi
4690 \Hy@DisableOption{bookmarks}

```

Add wrapper for setting standard catcodes (babel's shorthands).

```

4691 \def\Hy@CatcodeWrapper#1{%
4692 \let\Hy@endWrap\ltx@empty
4693 \def\TMP@EnsureCode##1##2{%
4694 \edef\Hy@endWrap{%
4695 \Hy@endWrap
4696 \catcode##1 \the\catcode##1\relax
4697 }%
4698 \catcode##1 ##2\relax
4699 }%
4700 \TMP@EnsureCode{10}{12}% ^^J
4701 \TMP@EnsureCode{33}{12}% !
4702 \TMP@EnsureCode{34}{12}% "

```

```

4703 \TMP@EnsureCode{36}{3}% $ (math)
4704 \TMP@EnsureCode{38}{4}% & (alignment)
4705 \TMP@EnsureCode{39}{12}% '
4706 \TMP@EnsureCode{40}{12}% (
4707 \TMP@EnsureCode{41}{12}% )
4708 \TMP@EnsureCode{42}{12}% *
4709 \TMP@EnsureCode{43}{12}% +
4710 \TMP@EnsureCode{44}{12}% ,
4711 \TMP@EnsureCode{45}{12}% -
4712 \TMP@EnsureCode{46}{12}% .
4713 \TMP@EnsureCode{47}{12}% /
4714 \TMP@EnsureCode{58}{12}% :
4715 \TMP@EnsureCode{59}{12}% ;
4716 \TMP@EnsureCode{60}{12}% <
4717 \TMP@EnsureCode{61}{12}% =
4718 \TMP@EnsureCode{62}{12}% >
4719 \TMP@EnsureCode{63}{12}% ?
4720 \TMP@EnsureCode{91}{12}% [
4721 \TMP@EnsureCode{93}{12}% ]
4722 \TMP@EnsureCode{94}{7}% ^ (superscript)
4723 \TMP@EnsureCode{95}{8}% _ (subscript)
4724 \TMP@EnsureCode{96}{12}% '
4725 \TMP@EnsureCode{124}{12}% |
4726 \TMP@EnsureCode{126}{13}% ~ (active)
4727 #1\relax
4728 \Hy@EndWrap
4729 }

```

\HyColor@UseColor expects a macro as argument. It contains the color specification.

```

4730 \Hy@AtBeginDocument{%
4731   \ifHy@ocgcolorlinks
4732     \kvsetkeys{Hyp}{colorlinks}%
4733     \ifHy@pdfa
4734       \Hy@Warning{%
4735         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4736         using 'colorlinks' instead of 'ocgcolorlinks'%
4737       }%
4738     \Hy@ocgcolorlinksfalse
4739   \fi
4740 \fi
4741 \ifHy@ocgcolorlinks
4742 \else
4743   \Hy@DisableOption{ocgcolorlinks}%
4744 \fi
4745 \ifHy@colorlinks
4746   \def\@pdfborder{0 0 0}%
4747   \let\@pdfborderstyle\@empty
4748   \ifHy@typexml
4749   \else
4750     \Hy@CatcodeWrapper{%
4751       \RequirePackage{color}%
4752     }%
4753   \fi
4754   \def\Hy@colorlink#1{%
4755     \begingroup
4756     \HyColor@UseColor#1%
4757   }%

```

```

4758 \def\Hy@endcolorlink{\endgroup}%
4759 \Hy@Info{Link coloring ON}%
4760 \else
4761 \ifHy@frenchlinks
4762 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4763 \def\Hy@endcolorlink{\endgroup}%
4764 \Hy@Info{French linking ON}%
4765 \else
for grouping consistency:
4766 \def\Hy@colorlink#1{\begingroup}%
4767 \def\Hy@endcolorlink{\endgroup}%
4768 \Hy@Info{Link coloring OFF}%
4769 \fi
4770 \fi
4771 \Hy@DisableOption{colorlinks}%
4772 \Hy@DisableOption{frenchlinks}%
4773 \ifHy@texht
4774 \long\def\@firstoffive#1#2#3#4#5{#1}%
4775 \long\def\@secondoffive#1#2#3#4#5{#2}%
4776 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4777 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4778 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4779 \providecommand*\@safe@activetrue{}%
4780 \providecommand*\@safe@activesfalse{}%
4781 \def\T@ref#1{%
4782 \Hy@safe@activetrue
4783 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4784 \Hy@safe@activesfalse
4785 }%
4786 \def\T@pageref#1{%
4787 \Hy@safe@activetrue
4788 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4789 \Hy@safe@activesfalse
4790 }%
4791 \else
4792 \ifHy@typexml
4793 \else
4794 \Hy@CatcodeWrapper{%
4795 \RequirePackage{nameref}[2012/07/28]%
4796 }%
4797 \fi
4798 \fi
4799 \DeclareRobustCommand\ref{%
4800 \@ifstar\@refstar\T@ref
4801 }%
4802 \DeclareRobustCommand\pageref{%
4803 \@ifstar\@pagerefstar\T@pageref
4804 }%
4805 % \ifclassloaded{memoir}{%
4806 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4807 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4808 % }%
4809 % }\ltx@secondoftwo
4810 % {%
4811 % \DeclareRobustCommand*\@nameref{%
4812 % \@ifstar\@mem@titlerefno link\@mem@titleref
4813 % }%

```

```

4814 % }{%
4815   \DeclareRobustCommand*{\nameref}{%
4816     \@ifstar\@namerefstar\T@nameref
4817   }%
4818 % }%
4819 }
4820 \Hy@AtBeginDocument{%
4821   \ifHy@texht
4822   \else
4823     \Hy@CatcodeWrapper\ReadBookmarks
4824   \fi
4825 }

4826 \ifHy@backref
4827   \RequirePackage{backref}%
4828 \else
4829   \let\Hy@backout\@gobble
4830 \fi
4831 \Hy@DisableOption{backref}
4832 \Hy@DisableOption{pagebackref}
4833 \Hy@activeanchorfalse

```

16 User hypertext macros

We need to normalise all user commands taking a URL argument; Within the argument the following special definitions apply: `\#`, `\%`, `~` produce `#`, `%`, `~` respectively. for consistency `\~` produces `~` as well. At the *top level only* ie not within the argument of another command, you can use `#` and `%` unescaped, to produce themselves. even if, say, `#` is entered as `#` it will be converted to `\#` so it does not die if written to an aux file etc. `\#` will write as `#` locally while making `\specials`.

```

4834 \begingroup
4835   \endlinechar=-1 %
4836   \catcode'\^^A=14 %
4837   \catcode'\^^M\active
4838   \catcode'\%\active
4839   \catcode'\#\active
4840   \catcode'\_\active
4841   \catcode'\$\active
4842   \catcode'\&\active
4843   \gdef\hyper@normalise{^^A
4844     \begingroup
4845       \catcode'\^^M\active
4846       \def^^M{ }^^A
4847       \catcode'\%\active
4848       \let%\@percentchar
4849       \let\%\@percentchar
4850       \catcode'\#\active
4851       \def#{\hyper@hash}^^A
4852       \def\#{\hyper@hash}^^A
4853       \@makeother\&^^A
4854       \edef&{\string&}^^A
4855       \edef\&{\string&}^^A
4856       \edef\textunderscore{\string_}^^A
4857       \let\_ \textunderscore
4858       \catcode'\_\active
4859       \let\_ \textunderscore

```

```

4860 \let~\hyper@tilde
4861 \let\~\hyper@tilde
4862 \let\textasciitilde\hyper@tilde
4863 \let\\\@backslashchar
4864 \edef$\string$}^^A
4865 \Hy@safe@activetrue
4866 \hyper@n@rmalise
4867 }^^A
4868 \catcode'\#=6 ^^A
4869 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4870 \gdef\hyper@n@rmalise#1#2{^^A
4871 \def\Hy@tempa{#2}^^A
4872 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4873 \ltx@ReturnAfterElseFi{^^A
4874 \hyper@@normalise{#1}^^A
4875 }^^A
4876 \else
4877 \ltx@ReturnAfterFi{^^A
4878 \hyper@@normalise{#1}{#2}^^A
4879 }^^A
4880 \fi
4881 }^^A
4882 \gdef\hyper@@normalise#1#2{^^A
4883 \edef\Hy@tempa{^^A
4884 \endgroup
4885 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4886 }^^A
4887 \Hy@tempa
4888 }^^A
4889 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4890 #1^^A
4891 \ifx\limits#2\limits
4892 \else
4893 \ltx@ReturnAfterFi{^^A
4894 \Hy@RemovePercentCr #2\@nil
4895 }^^A
4896 \fi
4897 }^^A
4898 \endgroup
4899 \providecommand*\hyper@chars{%
4900 \let\#\hyper@hash
4901 \let\%\@percentchar
4902 \Hy@safe@activetrue
4903 }
4904 \def\hyperlink#1#2{%
4905 \hyper@@link{}{#1}{#2}%
4906 }
4907 \def\Hy@VerboseLinkStart#1#2{%
4908 \ifHy@verbose
4909 \begingroup
4910 \Hy@safe@activetrue
4911 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4912 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4913 \xdef\Hy@VerboseGlobalTemp{%
4914 \Hy@VerboseGlobalTemp, %
4915 line \the\inputlineno
4916 }%

```

```

4917 \endgroup
4918 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4919 \@onelevel@sanitize\Hy@VerboseLinkInfo
4920 \fi
4921 }

4922 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4923 \def\Hy@VerboseLinkStop{%
4924 \ifHy@verbose
4925 \begingroup
4926 \edef\x{\endgroup
4927 \write\m@ne{%
4928 Package ‘hyperref’ Info: %
4929 End of reference \Hy@VerboseLinkInfo.%
4930 }%
4931 }%
4932 \x
4933 \fi
4934 }

4935 \def\Hy@VerboseAnchor#1{%
4936 \ifHy@verbose
4937 \begingroup
4938 \Hy@safe@activestrue
4939 \Hy@Info{Anchor ‘\HyperDestNameFilter{#1}’}%
4940 \endgroup
4941 \fi
4942 }

4943 \def\Hy@AllowHyphens{%
4944 \relax
4945 \ifhmode
4946 \penalty\@M
4947 \hskip\z@skip
4948 \fi
4949 }

4950 \DeclareRobustCommand*{\href}[1][]{%
4951 \begingroup
4952 \setkeys{href}{#1}%
4953 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4954 }
4955 \def\Hy@href#1{%
4956 \hyper@normalise\href@
4957 }
4958 \begingroup
4959 \catcode'\$=6 %
4960 \catcode'\#=12 %
4961 \gdef\href@\$1{\expandafter\href@split$1##\}%
4962 \gdef\href@split$1##$2##$3\\$4{%
4963 \hyper@@link{$1}{$2}{$3}{$4}%
4964 \endgroup
4965 }%
4966 \endgroup

```

Option ‘page’.

```

4967 \define@key{href}{page}{%
4968 \def\Hy@href@page{#1}%
4969 }
4970 \let\Hy@href@page\@empty

```

```

4971 \newcount\c@Hy@tempcnt
4972 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4973 \def\Hy@MakeRemoteAction{%
4974   \ifx\Hy@href@page\@empty
4975     \def\Hy@href@page{0}%
4976   \else
4977     \setcounter{Hy@tempcnt}{\Hy@href@page}%
4978     \ifnum\c@Hy@tempcnt<\@ne
4979       \Hy@Warning{%
4980         Invalid page number (\theHy@tempcnt)\MessageBreak
4981         for remote PDF file.\MessageBreak
4982         Using page 1%
4983       }%
4984     \def\Hy@href@page{0}%
4985   \else
4986     \global\advance\c@Hy@tempcnt\m@ne
4987     \edef\Hy@href@page{\theHy@tempcnt}%
4988   \fi
4989 \fi

```

If a next action is set, then also a new window should be opened. Otherwise AR reclaims that it closes the current file with discarding the next actions.

```

4990 \ifx\Hy@href@nextactionraw\@empty
4991 \else
4992   \Hy@pdfnewwindowsettrue
4993   \Hy@pdfnewwindowtrue
4994 \fi
4995 }

```

Option ‘pdfremotestartview’.

```

4996 \define@key{href}{pdfremotestartview}{%
4997   \setkeys{Hyp}{pdfremotestartview={#1}}%
4998 }

```

Option ‘pdfnewwindow’.

```

4999 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5000 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5001 \newif\ifHy@href@ismap
5002 \define@key{href}{ismap}[true]{%
5003   \ltx@ifundefined{Hy@href@ismap#1}{%
5004     \Hy@Error{%
5005       Invalid value (#1) for key ‘ismap’.\MessageBreak
5006       Permitted values are ‘true’ or ‘false’.\MessageBreak
5007       Ignoring ‘ismap’%
5008     }\@ehc
5009   }{%
5010     \csname Hy@href@ismap#1\endcsname
5011   }%
5012 }

```

Option ‘nextactionraw’.

```

5013 \let\Hy@href@nextactionraw\@empty
5014 \define@key{href}{nextactionraw}{%
5015   \edef\Hy@href@nextactionraw{#1}%
5016   \ifx\Hy@href@nextactionraw\@empty
5017     \else
5018       \Hy@Match\Hy@href@nextactionraw{%

```

```

5019 ~(\HyPat@ObjRef/|<<.*[/S[ /.+>>|)%
5020 \[( ?\HyPat@ObjRef/|<<.*[/S[ /.+>>)+ ?)]$%
5021 }{}{%
5022 \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
5023 \Hy@href@nextactionraw\MessageBreak
5024 The action is discarded%
5025 }%
5026 }%
5027 \ifx\Hy@href@nextactionraw\@empty
5028 \else
5029 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5030 \fi
5031 \fi
5032 }
5033 \def\HyPat@ObjRef/{.+}

```

Load package `url.sty` and save the meaning of the original `\url` in `\nolinkurl`.

```

5034 \RequirePackage{url}
5035 \let\HyOrg@url\url
5036 \def\Hurl{\begingroup \Url}
5037 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
5038 \def\nolinkurl@#1{\Hurl{#1}}
5039 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
5040 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
5041 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
5042 \providecommand\hyper@image[2]{#2}
5043 \def\hypertarget#1#2{%
5044 \ifHy@nesting
5045 \hyper@@anchor{#1}{#2}%
5046 \else
5047 \hyper@@anchor{#1}{\relax}#2%
5048 \fi
5049 }

```

`\hyperref` is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. `\hyperdef` sets up an anchor in the same way. They each have three parameters of category, linkname, and marked text, and `\hyperref` also has a first parameter of URL. If there is an optional first parameter to `\hyperdef`, it is the name of a \LaTeX label which can be used in a short form of `\hyperref` later, to avoid remembering the name and category.

```

5050 \DeclareRobustCommand*{\hyperref}{%
5051 \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
5052 }
5053 \def\Hy@babelnormalise#1[#2]{%
5054 \begingroup
5055 \Hy@safe@activetrue
5056 \edef\Hy@tempa{%
5057 \endgroup
5058 \noexpand#1[{#2}]}%
5059 }%
5060 \Hy@tempa
5061 }
5062 \def\@hyperref{\hyper@normalise\@hyperref}
5063 \def\@hyperref#1#2#3{%
5064 \edef\ref@one{\ifx\\#2\\ \else#2.\fi#3}%
5065 \expandafter\tryhyper@link\ref@one\\{#1}%

```



```

5066 }
5067 \def\tryhyper@link#1\#2{%
5068   \hyper@@link{#2}{#1}%
5069 }

5070 \def\hyperdef{\@ifnextchar[{\label@hyperdef}{\@hyperdef}}
5071 \def\@hyperdef#1#2#3{% category, name, text
5072   \ifx\#1\%
5073     \def\Hy@AnchorName{#2}%
5074   \else
5075     \def\Hy@AnchorName{#1.#2}%
5076   \fi
5077   \ifHy@nesting
5078     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5079   \else
5080     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#3}%
5081   \fi
5082 }

```

We also have a need to give a L^AT_EX *label* to a hyper reference, to ease the pain of referring to it later.

```

5083 \def\label@hyperref[#1]{%
5084   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5085 }%
5086 \def\label@@hyperref#1#2#3{%
5087   \ifx#1\relax
5088     \protect\G@refundefinedtrue
5089     \@latex@warning{%
5090       Hyper reference ‘#2’ on page \thepage \space undefined%
5091     }%
5092     \begingroup
5093       #3%
5094     \endgroup
5095   \else
5096     \hyper@@link{\expandafter\@fifthoffive#1}%
5097     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5098   \fi
5099 }
5100 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5101                               % anchor text
5102   \@bsphack
5103   \ifx\#2\%
5104     \def\Hy@AnchorName{#3}%
5105   \else
5106     \def\Hy@AnchorName{#2.#3}%
5107   \fi
5108   \if@filesw
5109     \protected@write\@auxout{}{%
5110       \string\newlabel{#1}{\Hy@AnchorName}{#3}%
5111     }%
5112   \fi
5113   \@esphack
5114   \ifHy@nesting
5115     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5116   \else
5117     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#4}%
5118   \fi
5119 }

```

16.1 Link box support for XeTeX

```
5120 \newdimen\XeTeXLinkMargin
5121 \setlength{\XeTeXLinkMargin}{2pt}
5122 \ifxetex
5123   \font\XeTeXLink@font=pzdr at 1sp\relax
5124   \newcommand*{\XeTeXLink@space}{%
5125     \begingroup
5126       \XeTeXLink@font
5127       \@xxxii
5128     \endgroup
5129   }%
5130   \newcommand{\XeTeXLinkBox}[1]{%
5131     \begingroup
5132       \leavevmode
5133       \sbox\z@{#1}%
5134       \begingroup
5135         \dimen@=\dp\z@
5136         \advance\dimen@\XeTeXLinkMargin
5137         \setbox\tw@=\llap{%
5138           \hb@xt@\XeTeXLinkMargin{%
5139             \lower\dimen@\hbox{\XeTeXLink@space}%
5140             \hss
5141           }%
5142         }%
5143         \dp\tw@=\dp\z@
5144         \ht\tw@=\ht\z@
5145         \copy\tw@
5146       \endgroup
5147       \copy\z@
5148       \dimen@=\ht\z@
5149       \advance\dimen@\XeTeXLinkMargin
5150       \setbox\tw@=\rlap{%
5151         \hb@xt@\XeTeXLinkMargin{%
5152           \hss
5153           \raise\dimen@\hbox{\XeTeXLink@space}%
5154         }%
5155       }%
5156       \dp\tw@=\dp\z@
5157       \ht\tw@=\ht\z@
5158       \copy\tw@
5159     \endgroup
5160   }%
5161 \else
5162   \newcommand*{\XeTeXLinkBox}[1]{%
5163     \begingroup
5164       \leavevmode
5165       \sbox\z@{#1}%
5166       \copy\z@
5167     \endgroup
5168   }%
5169 \fi
```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the second parameter is empty, its an internal link, otherwise we

need to open another file or a URL. A link start has a type, and a URL.

```

5170 \def\hyper@@link{\let\Hy@reserved@a\relax
5171 \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
5172 }
5173 \def\hyper@link@[#1]#2#3#4{%
5174 \ltx@ifempty{#4}{% link text
5175 \Hy@Warning{Suppressing empty link}%
5176 }{%
5177 \begingroup
5178 \expandafter\ltx@ifempty\expandafter{#2}{% url
5179 \toks@{%
5180 \endgroup
5181 \hyper@link{#1}%
5182 }%
5183 }{%
5184 \toks@{%
5185 \endgroup
5186 \expandafter\hyper@readexternallink#2\{#1}%
5187 }%
5188 }%
5189 \Hy@safe@activetrue
5190 \edef\Hy@tempa{#3}%
5191 \Hy@safe@activesfalse
5192 \toks@\expandafter{%
5193 \the\expandafter\toks@
5194 \expandafter{\Hy@tempa}{#4}%
5195 }%
5196 \the\toks@
5197 }%
5198 }

```

The problem here is that the first (URL) parameter may be a local file: reference (in which case some browsers treat it differently) or a genuine URL, in which case we'll have to activate a real Web browser. Note that a simple name is also a URL, as that is interpreted as a relative file name. We have to worry about # signs in a local file as well.

```

5199 \def\hyper@readexternallink#1\{#2#3#4{%
5200 \begingroup
5201 \let\\\relax
5202 \expandafter\endgroup
5203 \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5204 }
5205 \def\@hyper@@readexternallink#1\{#2#3#4{%

```

Parameters are:

1. The URL or file name
2. The type
3. The internal name
4. The link string

We need to get the 1st parameter properly expanded, so we delimit the arguments rather than passing it inside a group.

```

5206 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5207 }

```

Now (potentially), we are passed: 1) The link type 2) The internal name, 3) the link string, 4) the URL type (http, mailto, file etc), 5) the URL details 6) anything after a real : in the URL 7) the whole URL again

```
5208 \def\@pdftempwordfile{file}%
5209 \def\@pdftempwordrun{run}%
5210 \def\@hyper@readexternallink#1#2#3#4:#5:#6\\#7{%
```

If there are no colons at all (#6 is blank), its a local file; if the URL type (#4) is blank, its probably a Mac filename, so treat it like a file: URL. The only flaw is if its a relative Mac path, with several colon-separated elements — then we lose. Such names must be prefixed with an explicit dvi:

```
5211 \ifx\\#6\\%
5212 \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5213 \else
5214 \ifx\\#4\\%
5215 \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5216 \else
```

If the URL type is ‘file’, pass it for local opening

```
5217 \def\@pdftempa{#4}%
5218 \ifx\@pdftempa\@pdftempwordfile
5219 \@hyper@linkfile#7\\{#3}{#2}{#7}%
5220 \else
```

if it starts ‘run:’, its to launch an application.

```
5221 \ifx\@pdftempa\@pdftempwordrun
5222 \ifHy@pdfa
5223 \Hy@Error{%
5224 PDF/A: Launch action is prohibited%
5225 }\@ehc
5226 \begingroup
5227 \leavevmode
5228 #2%
5229 \endgroup
5230 \else
5231 \@hyper@launch#7\\{#3}{#2}%
5232 \fi
5233 \else
```

otherwise its a URL

```
5234 \hyper@linkurl{#3}{#7\ifx\\#2\\%else\hyper@hash#2\fi}%
5235 \fi
5236 \fi
5237 \fi
5238 \fi
5239 }
```

By default, turn run: into file:

```
5240 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
5241 \hyper@linkurl{#2}{%
5242 \Hy@linkfileprefix
5243 #1%
5244 \ifx\\#3\\%
5245 \else
5246 \hyper@hash
5247 #3%
5248 \fi
5249 }%
5250 }
```

D P Story <story@uakron.edu> pointed out that relative paths starting .. fell over. Switched to using \filename@parse to solve this.

```

5251 \def\@hyper@linkfile file:#1\|#2#3#4{%
5252     %file url,link string, name, original uri
5253     \filename@parse{#1}%
5254     \ifx\filename@ext\relax
5255         \edef\filename@ext{\XR@ext}%
5256     \fi
5257     \def\use@file{\filename@area\filename@base.\filename@ext}%
5258     \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5259         \hyper@linkfile{#2}{\use@file}{#3}%
5260     }{%
5261         \ifx\@baseurl\@empty
5262             \hyper@linkurl{#2}{%
5263                 #4\ifx\|#3\\\else\hyper@hash#3\fi
5264             }%
5265         \else
5266             \hyper@linkurl{#2}{\use@file\ifx\|#3\\\else\hyper@hash#3\fi}%
5267         \fi
5268     }%
5269 }

5270 \def\Hy@ifStringEndsWith#1#2{%
5271     \begingroup
5272     \edef\x{#1}%
5273     \@onelevel@sanitize\x
5274     \edef\x{.\x}%
5275     \edef\y{#2}%
5276     \@onelevel@sanitize\y
5277     \edef\y{.\y}%
5278     \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5279         \endgroup
5280         \ifx\relax##2\relax
5281             \expandafter\ltx@secondoftwo
5282         \else
5283             \expandafter\ltx@firstoftwo
5284         \fi
5285     }%
5286     \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5287 }

5288 \def\Hy@StringLocalhost{localhost}
5289 \@onelevel@sanitize\Hy@StringLocalhost
5290 \def\Hy@CleanupFile#1{%
5291     \edef#1{#1}%
5292     \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5293 }
5294 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5295     \begingroup
5296     \toks@{\endgroup}%
5297     \def\x{#1}%
5298     \ifx\x\@empty
5299         \def\x{#2}%
5300     \ifx\x\@empty
5301         \toks@{\endgroup\def#5{/#3}}%
5302     \else
5303         \@onelevel@sanitize\x
5304         \ifx\x\Hy@StringLocalhost

```

```

5305      \toks@{\endgroup\def#5{/#3}}%
5306      \fi
5307      \fi
5308      \fi
5309      \the\toks@
5310 }

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a `\special` around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that `#2` comes here a multiple letters, and the `noexpand` just looks at the first one, putting the rest in the output. Yuck.

```

5311 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5312 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5313   \ifx\\#1\\%
5314     #2\Hy@Warning{Ignoring empty anchor}%
5315   \else
5316     \def\anchor@spot{#2#3}%
5317     \let\put@me@back\@empty
5318     \ifx\relax#2\relax
5319       \else
5320         \ifHy@nesting
5321         \else
5322           \ifcat a\noexpand#2\relax
5323           \else
5324             \ifcat 0\noexpand#2 \relax
5325           \else
5326 %           \typeout{Anchor start is not alphanumeric %
5327 %             on input line\the\inputlineno%
5328 %           }%
5329           \let\anchor@spot\@empty
5330           \def\put@me@back{#2#3}%
5331         \fi
5332       \fi
5333     \fi
5334   \fi
5335   \ifHy@activeanchor
5336     \anchor@spot
5337   \else
5338     \hyper@anchor{#1}%
5339   \fi
5340   \expandafter\put@me@back
5341 \fi
5342 \let\anchor@spot\@empty
5343 }
5344 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5345 \ifHy@destlabel

\hyper@newdestlabel

5346 \def\hyper@newdestlabel#1#2{%
5347   \begingroup
5348   \Hy@safe@activetrue

```

```

5349 \edef\x{\endgroup
5350 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5351 }%
5352 \x
5353 }%

\hyper@destlabel@hook

5354 \providecommand*{\hyper@destlabel@hook}{}%

\Hy@DestRename

5355 \newcommand*{\Hy@DestRename}[2]{%
5356 \ltx@ifundefined{HyDL!#1}{%
5357 \begingroup
5358 \Hy@safe@activetrue
5359 \edef\dest@name{#1}%
5360 \edef\label@name{#2}%
5361 \hyper@destlabel@hook
5362 \Hy@IsNotEmpty{dest@name}{%
5363 \Hy@IsNotEmpty{label@name}{%
5364 \global\expandafter
5365 \let\csname HyDL!#1\endcsname\ltx@empty
5366 \if@files
5367 \protected@write\@auxout{}{%
5368 \string\hyper@newdestlabel
5369 {#1}%
5370 {\label@name}%
5371 }%
5372 \fi
5373 }%
5374 }%
5375 \endgroup
5376 }{}%
5377 }%

\HyperDestRename

5378 \newcommand*{\HyperDestRename}[2]{%
5379 \AtBeginDocument{%
5380 \Hy@DestRename{#1}{#2}%
5381 }%
5382 }%
5383 \AtBeginDocument{%
5384 \let\HyperDestRename\Hy@DestRename
5385 }%

\Hy@IsNotEmpty

5386 \def\Hy@IsNotEmpty#1{%
5387 \ltx@ifundefined{#1}\ltx@gobble{%
5388 \expandafter\ifx\csname#1\endcsname\ltx@empty
5389 \expandafter\ltx@gobble
5390 \else
5391 \expandafter\ltx@firstofone
5392 \fi
5393 }%
5394 }%

5395 \ltx@GlobalAppendToMacro\label@hook{%
5396 \HyperDestRename\@currentHref\label@name
5397 }%

```

\HyperDestLabelReplace

```

5398 \def\HyperDestLabelReplace#1{%
5399 \ltx@ifundefined{HyDL@#1}{%
5400   #1%
5401 }{%
5402   \csname HyDL@#1\endcsname
5403 }%
5404 }%

```

\HyperDestNameFilter

```

5405 \let\HyperDestNameFilter\HyperDestLabelReplace

5406 \else

```

\hyper@newdestlabel

```

5407 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5408 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

@gobbletwo

```

5409 \fi
5410 \Hy@DisableOption{destlabel}

Provide a dummy default definition of \hyper@newdestlabel inside the .aux
files.
5411 \AddLineBeginAux{%
5412 \string\providecommand\string\hyper@newdestlabel[2]{}%
5413 }

```

19 Compatibility with the *L^AT_EX2html* package

Map our macro names on to Nikos', so that documents prepared for that system will work without change.

Note, however, that the whole complicated structure for segmenting documents is not supported; it is assumed that the user will load `html.sty` first, and then `hyperref.sty`, so that the definitions in `html.sty` take effect, and are then overridden in a few circumstances by this package.

```

5414 \let\htmladding\hyperimage

5415 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5416 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5417 \def\htmlref#1#2{% anchor text, label
5418 \label@hyperref{#2}{#1}%
5419 }

```

This is really too much. The *L^AT_EX2html* package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the 'printed' way, since we are about fidelity to the page.

```

5420 \def\@@latextohtmlX{%
5421 \let\hhyperref\hyperref
5422 \def\hyperref##1##2##3##4{% anchor text for HTML
5423   % text to print before label in print

```



```

5424             % label
5425             % post-label text in print
5426     ##2\ref{##4}##3%
5427 }%
5428 }

```

20 Forms creation

Allow for creation of PDF or HTML forms. The effects here are limited somewhat by the need to support both output formats, so it may not be as clever as something which only wants to make PDF forms.

I (Sebastian) could not have started this without the encouragement of T V Raman.

20.1 Field flags

The field flags are organized in a bit set.

```

5429 \RequirePackage{bitset}

```

Each flag has a option name, an \if switch, and a bit position. The default is always ‘false’, the flag is clear. This is also the default of the switch created by \newif.

The names of the flags in the PDF specification (1.7) are used as lowercase option names.

```

\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
5430 \def\HyField@NewFlag#1#2{%
5431   \lowercase{\HyField@NewOption{#2}}%
5432   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5433 }

```

```

\HyField@NewFlagOnly
5434 \def\HyField@NewFlagOnly#1#2{%
5435   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5436 }

```

```

\HyField@NewOption #1: option name
5437 \def\HyField@NewOption#1{%
5438   \expandafter\newif\csname ifFld@#1\endcsname
5439   \define@key{Field}{#1}[true]{%
5440     \lowercase{\Field@boolkey{##1}}{#1}%
5441   }%
5442 }

```

```

\HyField@NewBitsetFlag Package ‘bitset’ uses zero based positions, the PDF specification starts with one.
#1: option
#2: PDF name
#3: type: F annot flags, Ff field flags
#4: PDF position
5443 \def\HyField@NewBitsetFlag#1#2#3#4{%
5444   \begingroup
5445   \count@=#4\relax
5446   \advance\count@\m@ne

```

```

5447 \def\x##1{%
5448 \endgroup
5449 \expandafter\def\csname HyField@#3@##1\endcsname{##1}%
5450 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5451 \expandafter\edef\csname HyField@#3@##1\endcsname{%
5452 (\number#4) #2%
5453 }%
5454 \else
5455 \expandafter\edef\csname HyField@#3@##1\endcsname{%
5456 \csname HyField@#3@##1\endcsname
5457 /#2%
5458 }%
5459 \fi
5460 }%
5461 \expandafter\x\expandafter{\the\count@}%
5462 }

```

\HyField@UseFlag The bit set is HyField@#1

```

5463 \def\HyField@UseFlag#1#2{%
5464 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5465 }

```

\HyField@@UseFlag

```

5466 \def\HyField@@UseFlag#1#2{%
5467 \bitsetSet\Value{HyField@#2}{%
5468 \csname HyField@#2@#1\endcsname
5469 }{%
5470 \csname ifFld@#1\endcsname 1\else 0\fi
5471 }%
5472 }

```

\HyField@SetFlag The bit set is HyField@#1

```

5473 \def\HyField@SetFlag#1#2{%
5474 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5475 }

```

\HyField@@SetFlag

```

5476 \def\HyField@@SetFlag#1#2{%
5477 \bitsetSet\Value{HyField@#2}{%
5478 \csname HyField@#2@#1\endcsname
5479 }{1}%
5480 }

```

\HyField@PrintFlags

```

5481 \def\HyField@PrintFlags#1#2{%
5482 \ifHy@verbose
5483 \begingroup
5484 \let\Hy@temp\@empty
5485 \let\MessageBreak\relax
5486 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5487 \bitsetGet\SetBitList{HyField@#1}\do{%
5488 \edef\Hy@temp{%
5489 \Hy@temp
5490 \csname HyField@#1@\x\endcsname\MessageBreak
5491 }%
5492 }%
5493 \edef\x{\endgroup

```

```

5494 \noexpand\Hy@Info{%
5495   Field flags: %
5496   \expandafter\ifx\@car#1\@nil S\else/\fi
5497   #1 %
5498   \bitsetGetDec{HyField@#1} %
5499   (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5500   \Hy@temp
5501   for #2%
5502 }%
5503 }\x
5504 \fi
5505 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5506 \HyField@NewFlag{Ff}{ReadOnly}{1}
5507 \HyField@NewFlag{Ff}{Required}{2}
5508 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5509 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5510 \HyField@NewFlag{Ff}{Radio}{16}
5511 \HyField@NewFlag{Ff}{Pushbutton}{17}
5512 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5513 \HyField@NewFlag{Ff}{Multiline}{13}
5514 \HyField@NewFlag{Ff}{Password}{14}
5515 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5516 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5517 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5518 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5519 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5520 \HyField@NewFlag{Ff}{Combo}{18}
5521 \HyField@NewFlag{Ff}{Edit}{19}
5522 \HyField@NewFlag{Ff}{Sort}{20}
5523 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5524 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5525 \HyField@NewFlag{Ff}{CommitOnSelChange}{27}% PDF 1.5

```

Signature fields are not supported.

Until 6.76i hyperref uses field option ‘combo’ to set three flags ‘Combo’, ‘Edit’, and ‘Sort’. Option ‘popdown’ sets flag ‘Combo’ only.

```

5526 \newif\ifFld@popdown
5527 \define@key{Field}{popdown}[true]{%
5528   \lowercase{\Field@boolkey{#1}}{popdown}%
5529 }

```

Annotation flags. The form objects are widget annotations. There are two flags for readonly settings, the one in the annotation flags is ignored, instead the other in the field flags is used.

Flag **Print** is not much useful, because hyperref do not use the appearance entry of the annotations for most fields.

```

5530 \HyField@NewFlag{F}{Invisible}{1}
5531 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5532 \HyField@NewFlag{F}{Print}{3}% PDF 1.2

```

```

5533 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5534 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5535 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5536 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5537 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5538 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5539 \ifHy@pdfa
5540 \def\HyField@PDFAFIWarning#1#2{%
5541   \Hy@Warning{%
5542     PDF/A: Annotation flag ‘#1’ must\MessageBreak
5543     be set to ‘#2’%
5544   }%
5545 }%
5546 \Fld@invisiblefalse
5547 \def\Fld@invisibletrue{%
5548   \HyField@PDFAFIWarning{invisible}{false}%
5549 }%
5550 \Fld@hiddenfalse
5551 \def\Fld@hiddentrue{%
5552   \HyField@PDFAFIWarning{hidden}{false}%
5553 }%
5554 \Fld@printtrue
5555 \def\Fld@printfalse{%
5556   \HyField@PDFAFIWarning{print}{true}%
5557 }%
5558 \Fld@nozoomtrue
5559 \def\Fld@nozoomfalse{%
5560   \HyField@PDFAFIWarning{nozoom}{true}%
5561 }%
5562 \Fld@norotatetrue
5563 \def\Fld@norotatefalse{%
5564   \HyField@PDFAFIWarning{norotate}{true}%
5565 }%
5566 \Fld@noviewfalse
5567 \def\Fld@noviewtrue{%
5568   \HyField@PDFAFIWarning{noview}{false}%
5569 }%
5570 \fi

```

Submit flags. Flag 1 Include/Exclude is not supported, use option noexport instead.

```

5571 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5572 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5573 \HyField@NewFlag{Submit}{GetMethod}{4}
5574 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5575 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5576 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5577 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5578 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5579 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5580 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5581 \HyField@NewFlag{Submit}{ExclFKey}{12}
5582 \HyField@NewFlag{Submit}{EmbedForm}{14}

5583 \define@key{Field}{export}{%
5584   \lowercase{\def\Hy@temp{#1}}%
5585   \@ifundefined{Fld@export@\Hy@temp}{%
5586     \@onelevel@sanitize\Hy@temp

```

```

5587 \Hy@Error{%
5588     Unknown export format '\Hy@temp'.\MessageBreak
5589     Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5590 } \@ehc
5591 }{%
5592 \let\Fld@export\Hy@temp
5593 }%
5594 }
5595 \def\Fld@export{fdf}
5596 \@namedef{Fld@export@fdf}{0}%
5597 \@namedef{Fld@export@html}{1}%
5598 \@namedef{Fld@export@xfdf}{2}%
5599 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5600 \def\HyField@FlagsSubmit{%
5601 \bitsetReset{HyField@Submit}%
5602 \ifcase\@nameuse{Fld@export@Fld@export} %
5603 % FDF
5604 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5605 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5606 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5607 \HyField@UseFlag{Submit}{IncludeAnnotations}%
5608 \HyField@UseFlag{Submit}{CanonicalFormat}%
5609 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5610 \HyField@UseFlag{Submit}{ExclFKey}%
5611 \HyField@UseFlag{Submit}{EmbedForm}%
5612 \or % HTML
5613 \HyField@SetFlag{Submit}{ExportFormat}%
5614 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5615 \HyField@UseFlag{Submit}{GetMethod}%
5616 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5617 \HyField@UseFlag{Submit}{CanonicalFormat}%
5618 \or % XFDF
5619 \HyField@SetFlag{Submit}{XFDF}%
5620 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5621 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5622 \HyField@UseFlag{Submit}{CanonicalFormat}%
5623 \or % PDF
5624 \HyField@SetFlag{Submit}{SubmitPDF}%
5625 \HyField@UseFlag{Submit}{GetMethod}%
5626 \fi
5627 \HyField@PrintFlags{Submit}{submit button field}%
5628 \bitsetIsEmpty{HyField@Submit}{%
5629 \let\Fld@submitflags\ltx@empty
5630 }{%
5631 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5632 }%
5633 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5634 \def\HyField@FlagsAnnot#1{%
5635 \bitsetReset{HyField@F}%

```

```

5636 \HyField@UseFlag{F}{Invisible}%
5637 \HyField@UseFlag{F}{Hidden}%
5638 \HyField@UseFlag{F}{Print}%
5639 \HyField@UseFlag{F}{NoZoom}%
5640 \HyField@UseFlag{F}{NoRotate}%
5641 \HyField@UseFlag{F}{NoView}%
5642 \HyField@UseFlag{F}{Locked}%
5643 \HyField@UseFlag{F}{ToggleNoView}%
5644 \HyField@UseFlag{F}{LockedContents}%
5645 \HyField@PrintFlags{F}{#1}%
5646 \bitsetIsEmpty{HyField@F}%
5647 \let\Fld@annotflags\ltx@empty
5648 }{%
5649 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5650 }%
5651 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5652 \def\HyField@FlagsPushButton{%
5653 \HyField@FlagsAnnot{push button field}%
5654 \bitsetReset{HyField@Ff}%
5655 \HyField@UseFlag{Ff}{ReadOnly}%
5656 \HyField@UseFlag{Ff}{Required}%
5657 \HyField@UseFlag{Ff}{NoExport}%
5658 \HyField@SetFlag{Ff}{PushButton}%
5659 \HyField@PrintFlags{Ff}{push button field}%
5660 \bitsetIsEmpty{HyField@Ff}%
5661 \let\Fld@flags\ltx@empty
5662 }{%
5663 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5664 }%
5665 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5666 \def\HyField@FlagsCheckBox{%
5667 \HyField@FlagsAnnot{check box field}%
5668 \bitsetReset{HyField@Ff}%
5669 \HyField@UseFlag{Ff}{ReadOnly}%
5670 \HyField@UseFlag{Ff}{Required}%
5671 \HyField@UseFlag{Ff}{NoExport}%
5672 \HyField@PrintFlags{Ff}{check box field}%
5673 \bitsetIsEmpty{HyField@Ff}%
5674 \let\Fld@flags\ltx@empty
5675 }{%
5676 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5677 }%
5678 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5679 \def\HyField@FlagsRadioButton{%
5680 \HyField@FlagsAnnot{radio button field}%

```

```

5681 \bitsetReset{HyField@Ff}%
5682 \HyField@UseFlag{Ff}{ReadOnly}%
5683 \HyField@UseFlag{Ff}{Required}%
5684 \HyField@UseFlag{Ff}{NoExport}%
5685 \HyField@UseFlag{Ff}{NoToggleToOff}%
5686 \HyField@SetFlag{Ff}{Radio}%
5687 \HyField@UseFlag{Ff}{RadiosInUnison}%
5688 \HyField@PrintFlags{Ff}{radio button field}%
5689 \bitsetIsEmpty{HyField@Ff}{%
5690   \let\Fld@flags\ltx@empty
5691 }{%
5692   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5693 }%
5694 }

```

20.1.7 Text fields

\HyField@FlagsText

```

5695 \def\HyField@FlagsText{%
5696   \HyField@FlagsAnnot{text field}%
5697   \bitsetReset{HyField@Ff}%
5698   \HyField@UseFlag{Ff}{ReadOnly}%
5699   \HyField@UseFlag{Ff}{Required}%
5700   \HyField@UseFlag{Ff}{NoExport}%
5701   \HyField@UseFlag{Ff}{Multiline}%
5702   \HyField@UseFlag{Ff}{Password}%
5703   \HyField@UseFlag{Ff}{FileSelect}%
5704   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5705   \HyField@UseFlag{Ff}{DoNotScroll}%
5706   \ifFld@comb
5707     \ifcase0\ifFld@multiline
5708       \else\ifFld@password
5709       \else\ifFld@fileselect
5710       \else 1\fi\fi\fi\relax
5711     \Hy@Error{%
5712       Field option ‘comb’ cannot used together with\MessageBreak
5713       ‘multiline’, ‘password’, or ‘fileselect’%
5714     }\@ehc
5715   \else
5716     \HyField@UseFlag{Ff}{Comb}%
5717   \fi
5718 \fi
5719 \HyField@UseFlag{Ff}{RichText}%
5720 \HyField@PrintFlags{Ff}{text field}%
5721 \bitsetIsEmpty{HyField@Ff}{%
5722   \let\Fld@flags\ltx@empty
5723 }{%
5724   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5725 }%
5726 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

5727 \def\HyField@FlagsChoice{%
5728   \HyField@FlagsAnnot{choice field}%
5729   \bitsetReset{HyField@Ff}%

```

```

5730 \HyField@UseFlag{Ff}{ReadOnly}%
5731 \HyField@UseFlag{Ff}{Required}%
5732 \HyField@UseFlag{Ff}{NoExport}%
5733 \HyField@UseFlag{Ff}{Combo}%
5734 \ifFld@combo
5735   \HyField@UseFlag{Ff}{Edit}%
5736 \fi
5737 \HyField@UseFlag{Ff}{Sort}%
5738 \HyField@UseFlag{Ff}{MultiSelect}%
5739 \ifFld@combo
5740   \ifFld@edit
5741     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5742   \fi
5743 \fi
5744 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5745 \HyField@PrintFlags{Ff}{choice field}%
5746 \bitsetIsEmpty{HyField@Ff}{%
5747   \let\Fld@flags\ltx@empty
5748 }{%
5749   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5750 }%
5751 }

```

20.2 Choice field

`\HyField@PDFChoices` #1: list of choices in key value syntax, key = exported name, value = displayed text.

Input: `\Fld@default`, `\Fld@value`, `\ifFld@multiselect`

Result: `\Fld@choices` with entries: `/Opt`, `/DV`, `/V`, `/I`.

```

5752 \def\HyField@PDFChoices#1{%
5753   \begingroup
5754   \global\let\Fld@choices\ltx@empty
5755   \let\HyTmp@optlist\ltx@empty
5756   \let\HyTmp@optitem\relax
5757   \count@=0 %
5758   \kv@parse{#1}{%
5759     \Hy@pdfstringdef\kv@key\kv@key
5760     \ifx\kv@value\relax
5761       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
5762         \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
5763       \else
5764         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5765       \fi
5766     \else
5767       \Hy@pdfstringdef\kv@value\kv@value
5768       \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
5769     \fi
5770   \edef\HyTmp@optlist{%
5771     \HyTmp@optlist
5772     \HyTmp@optitem{the\count@}{\kv@key}0%
5773   }%
5774   \advance\count@ by 1 %
5775   \@gobbletwo
5776 }%
5777 \xdef\Fld@choices{/Opt\Fld@choices}%
5778 \ifFld@multiselect
5779   \HyField@@@PDFChoices{DV}\Fld@default

```



```

5780 \HyField@@PDFChoices{V}\Fld@value
5781 \else
5782 \ifx\Fld@default\relax
5783 \else
5784 \pdfstringdef\Hy@gtemp\Fld@default
5785 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5786 \fi
5787 \ifx\Fld@value\relax
5788 \else
5789 \pdfstringdef\Hy@gtemp\Fld@value
5790 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5791 \fi
5792 \fi
5793 \endgroup
5794 }

```

\HyField@@PDFChoices

```

5795 \def\HyField@@PDFChoices#1#2{%
5796 \ifx#2\relax
5797 \else
5798 \count@=0 %
5799 \def\HyTmp@optitem##1##2##3{%
5800 \def\HyTmp@key{##2}%
5801 \ifx\HyTmp@key\Hy@gtemp
5802 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5803 \HyTmp@optlist
5804 \HyTmp@optitem{##1}{##2}1%
5805 }%
5806 \let\HyTmp@found=Y%
5807 \else
5808 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5809 \HyTmp@optlist
5810 \HyTmp@optitem{##1}{##2}##3%
5811 }%
5812 \fi
5813 }%
5814 \expandafter\comma@parse\expandafter{#2}{%
5815 \pdfstringdef\Hy@gtemp\comma@entry
5816 \let\HyTmp@found=N %
5817 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5818 \HyTmp@optlist
5819 \ifx\HyTmp@found Y%
5820 \advance\count@ by 1 %
5821 \else
5822 \@onelevel@sanitize\comma@entry
5823 \PackageWarning{hyperref}{%
5824 \string\ChoiceBox: Ignoring value '\comma@entry',%
5825 \MessageBreak
5826 it cannot be found in the choices%
5827 }%
5828 \fi
5829 \@gobble
5830 }%
5831 \def\HyTmp@optitem##1##2##3{%
5832 \ifnum##3=1 %
5833 (##2)%
5834 \fi
5835 }%

```

```

5836 \ifcase\count@
5837 \or
5838 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5839 \else
5840 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5841 \ifx#1V%
5842 \def\HyTmp@optitem##1##2##3{%
5843 \ifnum##3=1 %
5844 \@firstofone{ ##1}%
5845 \fi
5846 }%
5847 \edef\HyTmp@optlist{\HyTmp@optlist}%
5848 \xdef\Fld@choices{%
5849 \Fld@choices
5850 /I\expandafter\@firstofone\HyTmp@optlist}%
5851 }%
5852 \fi
5853 \fi
5854 \fi
5855 }

```

20.3 Forms

\HyField@SetKeys

```

5856 \def\HyField@SetKeys{%
5857 \kvsetkeys{Field}%
5858 }

5859 \newif\ifFld@checked
5860 \newif\ifFld@disabled
5861 \Fld@checkedfalse
5862 \Fld@disabledfalse
5863 \newcount\Fld@menulength
5864 \newdimen\Field@Width
5865 \newdimen\Fld@charsize
5866 \Fld@charsize=10\p@
5867 \def\Fld@maxlen{0}
5868 \def\Fld@align{0}
5869 \def\Fld@color{0 0 0 rg}
5870 \def\Fld@bcolor{1 1 1}
5871 \def\Fld@bordercolor{1 0 0}
5872 \def\Fld@bordersep{1\p@}
5873 \def\Fld@borderwidth{1}
5874 \def\Fld@borderstyle{S}
5875 \def\Fld@cbsymbol{4}
5876 \def\Fld@radiosymbol{H}
5877 \def\Fld@rotation{0}
5878 \def\Fld@Form{\ifnextchar[{\@Form}{\@Form[]}}
5879 \def\endForm{\@endForm}
5880 \newif\ifForm@html
5881 \Form@htmlfalse
5882 \def\Fld@boolkey#1#2{%
5883 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5884 }
5885 \define@key{Form}{action}{%
5886 \hyper@normalise\Hy@DefFormAction{#1}%
5887 }

```

```

5888 \def\Hy@DefFormAction{\def\Form@action}
5889 \def\enc@html{html}
5890 \define@key{Form}{encoding}{%
5891   \def\Hy@tempa{#1}%
5892   \ifx\Hy@tempa\enc@html
5893     \Form@htmltrue
5894     \def\Fld@export{html}%
5895   \else
5896     \Hy@Warning{%
5897       Form 'encoding' key with \MessageBreak
5898       unknown value '#1'%
5899     }%
5900     \Form@htmlfalse
5901   \fi
5902 }
5903 \define@key{Form}{method}{%
5904   \lowercase{\def\Hy@temp{#1}}%
5905   \@ifundefined{Form@method@\Hy@temp}{%
5906     \@onelevel@sanitize\Hy@temp
5907     \Hy@Error{%
5908       Unknown method '\Hy@temp'\MessageBreak
5909       Known values are 'post' and 'get'%
5910     } \@ehc
5911   }{%
5912     \let\Form@method\Hy@temp
5913     \ifcase\@nameuse{Form@method@\Hy@temp} %
5914       \Fld@getmethodfalse
5915     \else
5916       \Fld@getmethodtrue
5917     \fi
5918   }%
5919 }
5920 \def\Form@method{}
5921 \@namedef{Form@method@post}{0}
5922 \@namedef{Form@method@get}{1}
5923 \newif\ifHyField@NeedAppearances
5924 \def\HyField@NeedAppearancesfalse{%
5925   \global\let\ifHyField@NeedAppearances\iffalse
5926 }
5927 \def\HyField@NeedAppearancetrue{%
5928   \global\let\ifHyField@NeedAppearances\iftrue
5929 }
5930 \HyField@NeedAppearancetrue
5931 \define@key{Form}{NeedAppearances}[true]{%
5932   \edef\Hy@tempa{#1}%
5933   \ifx\Hy@tempa\Hy@true
5934     \HyField@NeedAppearancetrue
5935   \else
5936     \ifx\Hy@tempa\Hy@false
5937       \HyField@NeedAppearancesfalse
5938     \else
5939       \Hy@Error{%
5940         Unexpected value '\Hy@tempa'\MessageBreak
5941         of option 'NeedAppearances' instead of \MessageBreak
5942         'true' or 'false'%
5943       } \@ehc
5944     \fi

```

```

5945 \fi
5946 }
5947 \def\Field@boolkey#1#2{%
5948 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5949 }
5950 \ifHy@texht
5951 \newtoks\Field@toks
5952 \Field@toks={ }%
5953 \def\Field@addtoks#1#2{%
5954 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5955 \@processme
5956 }%
5957 \else
5958 \def\Hy@WarnHTMLFieldOption#1{%
5959 \Hy@Warning{%
5960 HTML field option '#1'\MessageBreak
5961 is ignored%
5962 }%
5963 }%
5964 \fi
5965 \def\Fld@checkequals#1=#2=#3\\{%
5966 \def\@currDisplay{#1}%
5967 \ifx\\#2\\%
5968 \def\@currValue{#1}%
5969 \else
5970 \def\@currValue{#2}%
5971 \fi
5972 }
5973 \define@key{Field}{loc}{%
5974 \def\Fld@loc{#1}%
5975 }
5976 \define@key{Field}{checked}[true]{%
5977 \lowercase{\Field@boolkey{#1}}{checked}%
5978 }
5979 \define@key{Field}{disabled}[true]{%
5980 \lowercase{\Field@boolkey{#1}}{disabled}%
5981 }
5982 \ifHy@texht
5983 \define@key{Field}{accesskey}{%
5984 \Field@addtoks{accesskey}{#1}%
5985 }%
5986 \define@key{Field}{tabkey}{%
5987 \Field@addtoks{tabkey}{#1}%
5988 }%
5989 \else
5990 \define@key{Field}{accesskey}{%
5991 \Hy@WarnHTMLFieldOption{accesskey}%
5992 }%
5993 \define@key{Field}{tabkey}{%
5994 \Hy@WarnHTMLFieldOption{tabkey}%
5995 }%
5996 \fi
5997 \define@key{Field}{name}{%
5998 \def\Fld@name{#1}%
5999 }
6000 \let\Fld@altname\relax
6001 \define@key{Field}{altname}{%

```

```

6002 \def\Fld@altname{#1}%
6003 }
6004 \let\Fld@mappingname\relax
6005 \define@key{Field}{mappingname}{%
6006 \def\Fld@mappingname{#1}%
6007 }
6008 \define@key{Field}{width}{%
6009 \def\Fld@width{#1}%
6010 \Field@Width#1\setbox0=\hbox{m}%
6011 }
6012 \define@key{Field}{maxlen}{%
6013 \def\Fld@maxlen{#1}%
6014 }
6015 \define@key{Field}{menulength}{%
6016 \Fld@menulength=#1\relax
6017 }
6018 \define@key{Field}{height}{%
6019 \def\Fld@height{#1}%
6020 }
6021 \define@key{Field}{charsize}{%
6022 \setlength{\Fld@charsize}{#1}%
6023 }
6024 \define@key{Field}{borderwidth}{%
6025 \Hy@defaultbp\Fld@borderwidth{#1}%
6026 }
6027 \def\Hy@defaultbp#1#2{%
6028 \begingroup
6029 \afterassignment\Hy@defaultbpAux
6030 \dimen@=#2bp\relax{#1}{#2}%
6031 }
6032 \begingroup\expandafter\expandafter\expandafter\endgroup
6033 \expandafter\ifx\csname dimexpr\endcsname\relax
6034 \def\Hy@defaultbpAux#1\relax#2#3{%
6035 \ifx!#1!%
6036 \endgroup
6037 \def#2{#3}%
6038 \else
6039 \dimen@=.99626\dimen@
6040 \edef\x{\endgroup
6041 \def\noexpand#2{%
6042 \strip@pt\dimen@
6043 }%
6044 }\x
6045 \fi
6046 }%
6047 \else
6048 \def\Hy@defaultbpAux#1\relax#2#3{%
6049 \ifx!#1!%
6050 \endgroup
6051 \def#2{#3}%
6052 \else
6053 \edef\x{\endgroup
6054 \def\noexpand#2{%
6055 \strip@pt\dimexpr\dimen@*800/803\relax
6056 }%
6057 }\x
6058 \fi

```

```

6059 }%
6060 \fi
6061 \define@key{Field}{borderstyle}{%
6062   \let\Hy@temp\Fld@borderstyle
6063   \def\Fld@borderstyle{#1}%
6064   \Hy@Match\Fld@borderstyle{%
6065     ~[SDBIU]$%
6066   }~}{%
6067   \Hy@Warning{%
6068     Invalid value '@pdfborderstyle'\MessageBreak
6069     for option 'pdfborderstyle'. Valid values:\MessageBreak
6070     \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6071     \space\space I (Inset), U (Underline)\MessageBreak
6072     Option setting is ignored%
6073   }%
6074   \let\Fld@borderstyle\Hy@temp
6075 }%
6076 }
6077 \define@key{Field}{bordersep}{%
6078   \def\Fld@bordersep{#1}%
6079 }
6080 \define@key{Field}{default}{%
6081   \def\Fld@default{#1}%
6082 }
6083 \define@key{Field}{align}{%
6084   \def\Fld@align{#1}%
6085 }
6086 \define@key{Field}{value}{%
6087   \def\Fld@value{#1}%
6088 }
6089 \define@key{Field}{checkboxsymbol}{%
6090   \Fld@DingDef\Fld@cbsymbol{#1}%
6091 }
6092 \define@key{Field}{radiosymbol}{%
6093   \Fld@DingDef\Fld@radiosymbol{#1}%
6094 }
6095 \def\Fld@DingDef#1#2{%
6096   \let\Fld@temp\ltx@empty
6097   \Fld@@@DingDef#2\ding{ }\@nil
6098   \let#1\Fld@temp
6099 }
6100 \def\Fld@@@DingDef#1\ding{#2#3}\@nil{%
6101   \expandafter\def\expandafter\Fld@temp\expandafter{%
6102     \Fld@temp
6103     #1%
6104   }%
6105   \ifx\#3\%
6106     \expandafter\@gobble
6107   \else
6108     \begingroup
6109     \lccode'0=#2\relax
6110     \lowercase{\endgroup
6111     \expandafter\def\expandafter\Fld@temp\expandafter{%
6112       \Fld@temp
6113       0%
6114     }%
6115   }%

```

```

6116 \expandafter\@firstofone
6117 \fi
6118 {%
6119 \Fld@@DingDef#3\@nil
6120 }%
6121 }

6122 \define@key{Field}{rotation}{%
6123 \def\Fld@rotation{#1}%
6124 }

6125 \define@key{Field}{backgroundcolor}{%
6126 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6127 }
6128 \define@key{Field}{bordercolor}{%
6129 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6130 }
6131 \define@key{Field}{color}{%
6132 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6133 }

6134 \let\Fld@onclick@code\ltx@empty
6135 \let\Fld@format@code\ltx@empty
6136 \let\Fld@validate@code\ltx@empty
6137 \let\Fld@calculate@code\ltx@empty
6138 \let\Fld@keystroke@code\ltx@empty
6139 \let\Fld@onfocus@code\ltx@empty
6140 \let\Fld@onblur@code\ltx@empty
6141 \let\Fld@onmousedown@code\ltx@empty
6142 \let\Fld@onmouseup@code\ltx@empty
6143 \let\Fld@onenter@code\ltx@empty
6144 \let\Fld@onexit@code\ltx@empty
6145 \def\Hy@temp#1{%
6146 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6147 }
6148 \def\Hy@@temp#1#2{%
6149 \ifHy@pdfa
6150 \define@key{Field}{#2}{%
6151 \Hy@Error{%
6152 PDF/A: Additional action ‘#2’ is prohibited%
6153 }\@ehc
6154 }%
6155 \else
6156 \define@key{Field}{#2}{%
6157 \def#1{##1}%
6158 }%
6159 \fi
6160 }
6161 \Hy@temp{keystroke}
6162 \Hy@temp{format}
6163 \Hy@temp{validate}
6164 \Hy@temp{calculate}
6165 \Hy@temp{onfocus}
6166 \Hy@temp{onblur}
6167 \Hy@temp{onenter}
6168 \Hy@temp{onexit}
6169 \ifHy@texht
6170 \def\Hy@temp#1{%
6171 \define@key{Field}{#1}{%

```

```

6172 \Field@addtoks{#1}{##1}%
6173 }%
6174 }%
6175 \else
6176 \def\Hy@temp#1{%
6177 \define@key{Field}{#1}{%
6178 \Hy@WarnHTMLFieldOption{#1}%
6179 }%
6180 }%
6181 \fi
6182 \Hy@temp{ondblclick}
6183 \Hy@temp{onmousedown}
6184 \Hy@temp{onmouseup}
6185 \Hy@temp{onmouseover}
6186 \Hy@temp{onmousemove}
6187 \Hy@temp{onmouseout}
6188 \Hy@temp{onkeydown}
6189 \Hy@temp{onkeyup}
6190 \Hy@temp{onselect}
6191 \Hy@temp{onchange}
6192 \Hy@temp{onkeypress}
6193 \ifHy@texht
6194 \define@key{Field}{onclick}{%
6195 \Field@addtoks{onclick}{#1}%
6196 }%
6197 \else
6198 \ifHy@pdfa
6199 \define@key{Field}{onclick}{%
6200 \Hy@Error{%
6201 PDF/A: Action 'onclick' is prohibited%
6202 }\@ehc
6203 }%
6204 \else
6205 \define@key{Field}{onclick}{%
6206 \def\Fld@onclick@code{#1}%
6207 }%
6208 \fi
6209 \fi
6210 \DeclareRobustCommand\TextField{%
6211 \@ifnextchar[{\@TextField}{\@TextField[]}%
6212 }
6213 \DeclareRobustCommand\ChoiceMenu{%
6214 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6215 }
6216 \DeclareRobustCommand\CheckBox{%
6217 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6218 }
6219 \DeclareRobustCommand\PushButton{%
6220 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6221 }
6222 \DeclareRobustCommand\Gauge{%
6223 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6224 }
6225 \DeclareRobustCommand\Submit{%
6226 \@ifnextchar[{\@Submit}{\@Submit[]}%
6227 }
6228 \DeclareRobustCommand\Reset{%

```



```

6229 \@ifnextchar[{\@Reset}{\@Reset[]}%
6230 }
6231 \def\LayoutTextField#1#2{% label, field
6232   #1 #2%
6233 }
6234 \def\LayoutChoiceField#1#2{% label, field
6235   #1 #2%
6236 }
6237 \def\LayoutCheckField#1#2{% label, field
6238   #1 #2%
6239 }
6240 \def\LayoutPushButtonField#1{% button
6241   #1%
6242 }
6243 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6244 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6245 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6246 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6247 \def\MakeButtonField#1{%
6248   \sbox0{%
6249     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6250   }%
6251   \@tempdima\ht0 %
6252   \advance\@tempdima by \Fld@borderwidth bp %
6253   \advance\@tempdima by \Fld@borderwidth bp %
6254   \ht0\@tempdima
6255   \@tempdima\dp0 %
6256   \advance\@tempdima by \Fld@borderwidth bp %
6257   \advance\@tempdima by \Fld@borderwidth bp %
6258   \dp0\@tempdima
6259   \box0\relax
6260 }
6261 \def\DefaultHeightofSubmit{14pt}
6262 \def\DefaultWidthofSubmit{2cm}
6263 \def\DefaultHeightofReset{14pt}
6264 \def\DefaultWidthofReset{2cm}
6265 \def\DefaultHeightofCheckBox{\baselineskip}
6266 \def\DefaultWidthofCheckBox{\baselineskip}
6267 \def\DefaultHeightofChoiceMenu{\baselineskip}
6268 \def\DefaultWidthofChoiceMenu{\baselineskip}
6269 \def\DefaultHeightofText{\baselineskip}
6270 \def\DefaultHeightofTextMultiline{4\baselineskip}
6271 \def\DefaultWidthofText{3cm}
6272 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6273 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6274 \def\DefaultOptionsofPushButton{print}
6275 \def\DefaultOptionsofCheckBox{print}
6276 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6277 \def\DefaultOptionsofListBox{print}
6278 \def\DefaultOptionsofComboBox{print,edit,sort}
6279 \def\DefaultOptionsofPopdownBox{print}
6280 \def\DefaultOptionsofRadio{print,notoggetooff}

```

21 Setup

```

6281 \ifHy@hyperfigures
6282 \Hy@Info{Hyper figures ON}%
6283 \else
6284 \Hy@Info{Hyper figures OFF}%
6285 \fi
6286 \ifHy@nesting
6287 \Hy@Info{Link nesting ON}%
6288 \else
6289 \Hy@Info{Link nesting OFF}%
6290 \fi
6291 \ifHy@hyperindex
6292 \Hy@Info{Hyper index ON}%
6293 \else
6294 \Hy@Info{Hyper index OFF}%
6295 \fi
6296 \ifHy@backref
6297 \Hy@Info{backreferencing ON}%
6298 \else
6299 \Hy@Info{backreferencing OFF}%
6300 \fi
6301 \ifHy@colorlinks
6302 \Hy@Info{Link coloring ON}%
6303 \else
6304 \Hy@Info{Link coloring OFF}%
6305 \fi
6306 \ifHy@ocgcolorlinks
6307 \Hy@Info{Link coloring with OCG ON}%
6308 \else
6309 \Hy@Info{Link coloring with OCG OFF}%
6310 \fi
6311 \ifHy@pdfa
6312 \Hy@Info{PDF/A mode ON}%
6313 \else
6314 \Hy@Info{PDF/A mode OFF}%
6315 \fi

```

22 Low-level utility macros

We need unrestricted access to the #, ~ and " characters, so make them nice macros.

```

6316 \edef\hyper@hash{\string#}
6317 \edef\hyper@tilde{\string~}
6318 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6319 \def\@currentHref{Doc-Start}
6320 \let\Hy@footnote@currentHref\@empty

```

We give the start of document a special label; this is used in backreferencing-by-section, to allow for cites before any sectioning commands. Set up PDF info.

```

6321 \Hy@AtBeginDocument{%
6322 \Hy@pdfstringtrue
6323 \PDF@SetupDoc
6324 \let\PDF@SetupDoc\@empty
6325 \Hy@DisableOption{pdfpagescrop}%
6326 \Hy@DisableOption{pdfpagemode}%
6327 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6328 \Hy@DisableOption{pdfdirection}%

```

```

6329 \Hy@DisableOption{pdfviewarea}%
6330 \Hy@DisableOption{pdfviewclip}%
6331 \Hy@DisableOption{pdfprintarea}%
6332 \Hy@DisableOption{pdfprintclip}%
6333 \Hy@DisableOption{pdfprintscaling}%
6334 \Hy@DisableOption{pdfduplex}%
6335 \Hy@DisableOption{pdfpicktraybypdfsize}%
6336 \Hy@DisableOption{pdfprintpagerange}%
6337 \Hy@DisableOption{pdfnumcopies}%
6338 \Hy@DisableOption{pdfstartview}%
6339 \Hy@DisableOption{pdfstartpage}%
6340 \Hy@DisableOption{pdftoolbar}%
6341 \Hy@DisableOption{pdfmenubar}%
6342 \Hy@DisableOption{pdfwindowui}%
6343 \Hy@DisableOption{pdffitwindow}%
6344 \Hy@DisableOption{pdfcenterwindow}%
6345 \Hy@DisableOption{pdfdisplaydoctitle}%
6346 \Hy@DisableOption{pdfpagelayout}%
6347 \Hy@DisableOption{pdflang}%
6348 \Hy@DisableOption{baseurl}%
6349 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6350 \Hy@pdfstringfalse
6351 }

Ignore star from referencing macros:
6352 \LetLtxMacro\NoHy@OrgRef\ref
6353 \DeclareRobustCommand*{\ref}{\%
6354 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6355 }
6356 \LetLtxMacro\NoHy@OrgPageRef\pageref
6357 \DeclareRobustCommand*{\pageref}{\%
6358 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6359 }

```

23 Localized nullifying of package

Sometimes we just don't want the wretched package interfering with us. Define an environment we can put in manually, or include in a style file, which stops the hypertext functions doing anything. This is used, for instance, in the Elsevier classes, to stop `hyperref` playing havoc in the front matter.

```

6360 \def\NoHyper{%
6361 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6362 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6363 \global\let\hyper@livelink\hyper@link
6364 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6365 \let\hyper@anchor\ltx@gobble
6366 \let\hyper@anchorstart\ltx@gobble
6367 \def\hyper@anchorend{\Hy@xspace@end}%
6368 \let\hyper@linkstart\ltx@gobbletwo
6369 \def\hyper@linkend{\Hy@xspace@end}%
6370 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6371 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6372 \let\Hy@backout\@gobble
6373 }
6374 \def\stop@hyper{%
6375 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%

```

```

6376 \let\Hy@backout\@gobble
6377 \let\hyper@@anchor\ltx@gobble
6378 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6379 \let\hyper@anchor\ltx@gobble
6380 \let\hyper@anchorstart\ltx@gobble
6381 \def\hyper@anchorend{\Hy@xspace@end}%
6382 \let\hyper@linkstart\ltx@gobbletwo
6383 \def\hyper@linkend{\Hy@xspace@end}%
6384 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6385 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6386 }
6387 \def\endNoHyper{%
6388 \global\let\hyper@link\hyper@livelink
6389 }
6390 \end{package}

```

24 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package nohyperref is a dummy package that defines some low level and some top-level commands. It is done for jadetex, which calls hyperref low-level commands, but it would also be useful with people using normal hyperref, who really do not want the package loaded at all.

Some low-level commands:

```

6391 \*nohyperref
6392 \RequirePackage{letltxmacro}[2008/06/13]
6393 \let\hyper@@anchor\@gobble
6394 \def\hyper@link##1##2##3{##3}%
6395 \let\hyper@anchorstart\@gobble
6396 \let\hyper@anchorend\@empty
6397 \let\hyper@linkstart\@gobbletwo
6398 \let\hyper@linkend\@empty
6399 \def\hyper@linkurl##1##2{##1}%
6400 \def\hyper@linkfile##1##2##3{##1}%
6401 \def\hyper@link@[##1]##2##3{##1}%
6402 \let\PDF@SetupDoc\@empty
6403 \let\PDF@FinishDoc\@empty
6404 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6405 \def\Acrobatmenu#1##2{\leavevmode#2}
6406 \let\pdfstringdefDisableCommands\@gobbletwo
6407 \let\texorpdfstring\@firstoftwo
6408 \let\pdfbookmark\@undefined
6409 \newcommand\pdfbookmark[3]{}{}
6410 \let\phantomsection\@empty
6411 \let\hypersetup\@gobble
6412 \let\hyperbaseurl\@gobble
6413 \newcommand*\href[3]{}{#3}
6414 \let\hyperdef\@gobbletwo
6415 \let\hyperlink\@gobble
6416 \let\hypertarget\@gobble
6417 \def\hyperref{%
6418 \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6419 }
6420 \long\def\@gobbleopt[#1]{}

```

```

6421 \let\hyperpage\@empty
Ignore star from referencing macros:
6422 \LetLtxMacro\NoHy@OrgRef\ref
6423 \DeclareRobustCommand*\ref}{\ref}{\%
6424 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6425 }
6426 \LetLtxMacro\NoHy@OrgPageRef\pageref
6427 \DeclareRobustCommand*\pageref}{\pageref}{\%
6428 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6429 }
6430 \nohyperref

```

25 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}`

```

6431 \*package
6432 \Hy@AtBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

6433 \if@filesw
6434 \ifHy@typexml
6435 \immediate\closeout\@mainaux
6436 \immediate\openout\@mainaux\jobname.aux\relax
6437 \immediate\write\@auxout{<relaxxml>\relax}%
6438 \fi
6439 \immediate\write\@auxout{%
6440 \string\providecommand\string\HyperFirstAtBeginDocument{%
6441 \string\AtBeginDocument}^^J%
6442 \string\HyperFirstAtBeginDocument{%
6443 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6444 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6445 \string\gdef\string\contentsline%
6446 \string#1\string#2\string#3\string#4{%
6447 \string\oldcontentsline%
6448 {\string#1}{\string#2}{\string#3}}^^J%
6449 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6450 \string\gdef\string\newlabel\string#1\string#2{%
6451 \string\newlabelxx{\string#1}\string#2}^^J%
6452 \string\gdef\string\newlabelxx%
6453 \string#1\string#2\string#3\string#4\string#5\string#6{%
6454 \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```

6455 \string\AtEndDocument{%
6456 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6457 \string\let\string\contentsline\string\oldcontentsline^^J%
6458 \string\let\string\newlabel\string\oldnewlabel^^J%
6459 \string\fi%
6460 }^^J%

```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```

6461     \string\fi%
6462   }^^J%
6463   \string\global\string\let\string\hyper@last\relax^^J%
6464   \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6465 }%
6466 \fi
6467 \let\HyperFirstAtBeginDocument\ltx@firstofone

```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

6468 \ifx\hyper@last\@undefined
6469   \def\@starttoc#1{%
6470     \begingroup
6471       \makeatletter
6472       \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6473       \IfFileExists{jobname.#1}{%
6474         \Hy@WarningNoLine{%
6475           old #1 file detected, not used; run LaTeX again%
6476         }%
6477       }{}%
6478       \if@filesw
6479         \expandafter\newwrite\csname tf@#1\endcsname
6480         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6481       \fi
6482       \@nobreakfalse
6483     \endgroup
6484   }%
6485   \def\newlabel#1#2{\@newl@bel r{#1}{#2}{ }{}{}}%
6486 \fi
6487 }

```

26 Title strings

If options pdftitle and pdfauthor are not used, these informations for the pdf information dictionary can be extracted by the nd

```

6488 \ifHy@pdfusetitle
6489   \let\HyOrg@title\title
6490   \let\HyOrg@author\author
6491   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6492   \def\Hy@scanopttitle[#1]{%
6493     \gdef\Hy@title{#1}%
6494     \HyOrg@title{#1}%
6495   }%
6496   \def\Hy@scantitle#1{%
6497     \gdef\Hy@title{#1}%
6498     \HyOrg@title{#1}%
6499   }%
6500   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6501   \def\Hy@scanoptauthor[#1]{%
6502     \gdef\Hy@author{#1}%
6503     \HyOrg@author{#1}%
6504   }%
6505   \def\Hy@scanauthor#1{%

```

```

6506 \gdef\Hy@author{#1}%
6507 \HyOrg@author{#1}%
6508 }%

```

The case, that or re given before hyperref is loaded, is much more complicate, because LaTeX initializes the macros title and author with LaTeX error and warning messages.

```

6509 \begingroup
6510 \def\process@me#1\@nil#2{%
6511 \expandafter\let\expandafter\x\csname @#2\endcsname
6512 \edef\y{\expandafter\strip@prefix\meaning\x}%
6513 \def\c##1#1##2\@nil{%
6514 \ifx\\##1\\%
6515 \else
6516 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6517 \expandafter{\x}%
6518 \fi
6519 }%
6520 \expandafter\c\y\relax#1\@nil
6521 }%
6522 \expandafter\process@me\string\@latex@\@nil{title}%
6523 \expandafter\process@me\string\@latex@\@nil{author}%
6524 \endgroup
6525 \fi
6526 \Hy@DisableOption{pdfusetitle}

```

Macro `\Hy@UseMaketitleInfos` is used in the driver files, before the information entries are used.

The newline macro `\newline` or `\\` is much more complicate. In the title a good replacement can be a space, but can be already a space after `\\` in the title string. So this space is removed by scanning for the next non-empty argument.

In the macro `\author` the newline can perhaps separate the different authors, so the newline expands here to a comma with space.

The possible arguments such as space or the optional argument after the newline macros are not detected.

```

6527 \def\Hy@UseMaketitleString#1{%
6528 \ltx@ifundefined{Hy@#1}{-}%
6529 \begingroup
6530 \let\Hy@saved@hook\pdfstringdefPreHook
6531 \pdfstringdefDisableCommands{%
6532 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6533 \let\newline\\%
6534 }%
6535 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6536 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6537 \csname Hy@#1\endcsname\@empty
6538 }%
6539 \fi
6540 \global\let\pdfstringdefPreHook\Hy@saved@hook
6541 \endgroup
6542 }%
6543 }
6544 \def\Hy@newline@title#1{ #1}
6545 \def\Hy@newline@author#1{, #1}
6546 \def\Hy@UseMaketitleInfos{%
6547 \Hy@UseMaketitleString{title}%
6548 \Hy@UseMaketitleString{author}%

```

6549 }

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```
6550 \RequirePackage{atbegshi}[2007/09/09]
6551 \let\Hy@EveryPageHook\ltx@empty
6552 \let\Hy@EveryPageBoxHook\ltx@empty
6553 \let\Hy@FirstPageHook\ltx@empty
6554 \AtBeginShipout{%
6555   \Hy@EveryPageHook
6556   \ifx\Hy@EveryPageBoxHook\ltx@empty
6557   \else
6558     \setbox\AtBeginShipoutBox=\vbox{%
6559       \offinterlineskip
6560       \Hy@EveryPageBoxHook
6561       \box\AtBeginShipoutBox
6562     }%
6563   \fi
6564 }
6565 \ltx@iffileloaded{hpdftex.def}{%
6566   \AtBeginShipout{%
6567     \Hy@FirstPageHook
6568     \global\let\Hy@FirstPageHook\ltx@empty
6569   }%
6570 }{%
6571   \AtBeginShipoutFirst{%
6572     \Hy@FirstPageHook
6573   }%
6574 }
6575 \g@addto@macro\Hy@FirstPageHook{%
6576   \PDF@FinishDoc
6577   \global\let\PDF@FinishDoc\ltx@empty
6578 }
```

28.1 PDF /PageLabels

Internal macros of this module are marked with \HyPL@.

```
6579 \ifHy@pdfpagelabels
6580   \begingroup\expandafter\expandafter\expandafter\endgroup
6581   \expandafter\ifx\csname thepage\endcsname\relax
6582     \Hy@pdfpagelabelsfalse
6583     \Hy@WarningNoLine{%
6584       Option 'pdfpagelabels' is turned off\MessageBreak
6585       because \string\thepage\space is undefined%
6586     }%
6587     \csname fi\endcsname
6588     \csname iffalse\expandafter\endcsname
6589   \fi
```

\thispdfpagelabel The command \thispdfpagelabel allows to label a special page without the re-definition of \thepage for the page.


```

6590 \def\thispdfpagelabel#1{%
6591   \gdef\HyPL@thisLabel{#1}%
6592 }%
6593 \global\let\HyPL@thisLabel\relax

```

`\HyPL@Labels` The page labels are collected in `\HyPL@Labels` and set at the end of the document.

```

6594 \let\HyPL@Labels\ltx@empty

```

`\Hy@abspage` We have to know the the absolute page number and introduce a new counter for that.

```

6595 \newcount\Hy@abspage
6596 \Hy@abspage=0 %

```

For comparisons with the values of the previous page, some variables are needed:

```

6597 \def\HyPL@LastType{init}%
6598 \def\HyPL@LastNumber{0}%
6599 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the L^AT_EX pendants.

```

6600 \def\HyPL@arabic{D}%
6601 \def\HyPL@Roman{R}%
6602 \def\HyPL@roman{r}%
6603 \def\HyPL@Alph{A}%
6604 \def\HyPL@alph{a}%

6605 \let\HyPL@SlidesSetPage\ltx@empty
6606 \ltx@ifclassloaded{slides}{%
6607   \def\HyPL@SlidesSetPage{%
6608     \advance\c@page\ltx@one
6609     \ifnum\value{page}>\ltx@one
6610       \protected@edef\HyPL@SlidesOptionalPage{%
6611         \Hy@SlidesFormatOptionalPage{thepage}%
6612       }%
6613     \else
6614       \let\HyPL@SlidesOptionalPage\ltx@empty
6615     \fi
6616     \advance\c@page-\ltx@one
6617     \def\HyPL@page{%
6618       \csname the\Hy@SlidesPage\endcsname
6619       \HyPL@SlidesOptionalPage
6620     }%
6621   }%
6622 }{}%

```

`\HyPL@EveryPage` If a page is shipout and the page number is known, `\HyPL@EveryPage` has to be called. It stores the current page label.

```

6623 \def\HyPL@EveryPage{%
6624   \begingroup
6625   \ifx\HyPL@thisLabel\relax
6626     \let\HyPL@page\thepage
6627     \HyPL@SlidesSetPage
6628   \else
6629     \let\HyPL@page\HyPL@thisLabel
6630     \global\let\HyPL@thisLabel\relax
6631   \fi
6632   \let\HyPL@Type\relax
6633   \ifnum\c@page>0 %
6634     \ifx\HyPL@SlidesSetPage\ltx@empty

```

```

6635     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6636     \fi
6637   \fi
6638   \let\Hy@temp Y%
6639   \ifx\HyPL@Type\HyPL@LastType
6640   \else
6641     \let\Hy@temp N%
6642   \fi
6643   \ifx\HyPL@Type\relax
6644     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6645   \else
6646     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6647   \fi
6648   \ifx\HyPL@Prefix\HyPL@LastPrefix
6649   \else
6650     \let\Hy@temp N%
6651   \fi
6652   \if Y\Hy@temp
6653     \advance\c@page by -1 %
6654     \ifnum\HyPL@LastNumber=\the\c@page\relax
6655     \else
6656       \let\Hy@temp N%
6657     \fi
6658     \Hy@StepCount\c@page
6659   \fi
6660   \if N\Hy@temp
6661     \ifx\HyPL@Type\relax
6662       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6663     \else
6664       \HyPL@StorePageLabel{%
6665         \ifx\HyPL@Prefix\@empty
6666         \else
6667           /P(\HyPL@Prefix)%
6668         \fi
6669         /S/\csname HyPL\HyPL@Type\endcsname
6670         \ifnum\the\c@page=1 %
6671         \else
6672           \space/St \the\c@page
6673         \fi
6674       }%
6675     \fi
6676   \fi
6677   \xdef\HyPL@LastNumber{\the\c@page}%
6678   \global\let\HyPL@LastType\HyPL@Type
6679   \global\let\HyPL@LastPrefix\HyPL@Prefix
6680 \endgroup
6681 \Hy@GlobalStepCount\Hy@abspage
6682 }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

6683 \def\HyPL@CheckThePage#1\@nil{%
6684   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6685 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e.g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

6686 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6687   \def\Hy@tempa{#4}%
6688   \def\Hy@tempb{\csname\endcsname\c@page}%
6689   \ifx\Hy@tempa\Hy@tempb
6690     \expandafter\ifx\csname HyPL#3\endcsname\relax
6691       \else
6692         \def\HyPL@Type{#3}%
6693         \def\HyPL@Prefix{#2}%
6694       \fi
6695     \else
6696       \begingroup
6697         \let\Hy@next\endgroup
6698         \let\HyPL@found\@undefined
6699         \def\arabic{\HyPL@Format{arabic}}%
6700         \def\Roman{\HyPL@Format{Roman}}%
6701         \def\roman{\HyPL@Format{roman}}%
6702         \def\Alph{\HyPL@Format{Alph}}%
6703         \def\alph{\HyPL@Format{alph}}%
6704         \protected@edef\Hy@temp{#1}%
6705         \ifx\HyPL@found\relax
6706           \toks@{\expandafter{\Hy@temp}}%
6707           \edef\Hy@next{\endgroup
6708             \noexpand\HyPL@@@CheckThePage\the\toks@
6709             \noexpand\HyPL@found\relax\noexpand\@nil
6710           }%
6711         \fi
6712       \Hy@next
6713     \fi
6714   }%

```

`\HyPL@Format` The help macro `\HyPL@Format` is executed while a `\protected@edef` in the second check method of `\HyPL@@CheckPage`. The first occurrences of, for example, `\arabic{page}` is marked by `\HyPL@found` that is also defined by `\csname`.

```

6715 \def\HyPL@Format#1#2{%
6716   \ifx\HyPL@found\@undefined
6717     \expandafter\ifx\csname c@#2\endcsname\c@page
6718       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6719     \else
6720       \expandafter\noexpand\csname#1\endcsname{#2}%
6721     \fi
6722   \else
6723     \expandafter\noexpand\csname#1\endcsname{#2}%
6724   \fi
6725 }%

```

`\HyPL@@@CheckThePage` If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```

6726 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6727   \def\Hy@tempa{#3}%
6728   \def\Hy@tempb{\HyPL@found\relax}%
6729   \ifx\Hy@tempa\Hy@tempb
6730     \def\HyPL@Type{#2}%
6731     \def\HyPL@Prefix{#1}%
6732   \fi
6733 }%

```

`\HyPL@StorePageLabel` Dummy for drivers that does not support `/PageLabel`.

```
6734 \providecommand*{\HyPL@StorePageLabel}[1]{}%
```

`\HyPL@Useless` The `/PageLabels` entry does not make sense, if the absolute page numbers and the page labels are the same. Then `\HyPL@Labels` has the meaning of `\HyPL@Useless`.

```
6735 \def\HyPL@Useless{0<</S/D>>}%
6736 \@onelevel@sanitize\HyPL@Useless
```

`\HyPL@SetPageLabels` The page labels are written to the PDF catalogue. The command `\Hy@PutCatalog` is defined in the driver files.

```
6737 \def\HyPL@SetPageLabels{%
6738   \@onelevel@sanitize\HyPL@Labels
6739   \ifx\HyPL@Labels\@empty
6740     \else
6741       \ifx\HyPL@Labels\HyPL@Useless
6742         \else
6743           \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6744         \fi
6745       \fi
6746   }%
```

```
6747 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6748 \fi
```

Option ‘pdfpagelabels’ has been used and is now disabled.

```
6749 \Hy@DisableOption{pdfpagelabels}
6750 \</package>
```

28.1.1 pdfTeX and VTeX

Because of pdfTeX’s `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
6751 \<{*pdfTeX}>
6752 \pdf@ifdraftmode{%
6753   \let\Hy@PutCatalog\ltx@gobble
6754 }{%
6755   \let\Hy@PutCatalog\pdfcatalog
6756 }
6757 \</pdfTeX>
```

The code for VTeX is more complicate, because it does not allow the direct access to the `/Catalog` object. The command scans its argument and looks for a `/PageLabels` entry.

VTeX 6.59g is the first version, that implements `\special{!pdfpagelabels...}`. For this version `\VTeXversion` reports 660.

```
6758 \<{*vTeX}>
6759 \providecommand*{\XR@ext}{pdf}
6760 \edef\Hy@VTeXversion{%
6761   \ifx\VTeXversion\@undefined
6762     \z@
6763   \else
6764     \ifx\VTeXversion\relax
6765       \z@
```

```

6766 \else
6767 \VTeXversion
6768 \fi
6769 \fi
6770 }
6771 \begingroup
6772 \ifnum\Hy@VTeXversion<660 %
6773 \gdef\Hy@PutCatalog#1{%
6774 \Hy@WarningNoLine{%
6775 VTeX 6.59g or above required for pdfpagelabels%
6776 }%
6777 }%
6778 \else
6779 \gdef\Hy@PutCatalog#1{%
6780 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6781 }%
6782 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6783 \ifx\#2\%
6784 \else
6785 \immediate\special{!pdfpagelabels #2}%
6786 \fi
6787 }%
6788 \fi
6789 \endgroup
6790 </vtex>

6791 <*pdfTeX | vtex>

```

`\HyPL@StorePageLabel` This macro adds the entry `#1` to `\HyPL@Labels`.

```

6792 \ifHy@pdfpagelabels
6793 \def\HyPL@StorePageLabel#1{%
6794 \toks@ \expandafter{\HyPL@Labels}%
6795 \xdef\HyPL@Labels{%
6796 \the\toks@
6797 \the\Hy@absPage<<#1>>%
6798 }%
6799 }%

```

Package `atveryend` is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

6800 \RequirePackage{atveryend}[2009/12/07]%
6801 \AtVeryEndDocument{%
6802 \HyPL@SetPageLabels
6803 }%

6804 \fi
6805 </pdfTeX | vtex>

```

28.1.2 xetex

```

6806 <*xetex>
6807 \HyPsd@LoadUnicode
6808 \Hy@unicodetrue
6809 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6810 \else
6811 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6812 \fi

```

```

6813 \HyPsd@LoadStringEnc
6814 \define@key{Hyp}{unicode}[true]{%
6815   \Hy@boolkey{unicode}{#1}%
6816   \ifHy@unicode
6817   \else
6818     \Hy@Warning{%
6819       XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
6820       option setting 'unicode=false'%
6821     }%
6822   \Hy@unicodetrue
6823 \fi
6824 }
6825 \define@key{Hyp}{pdfencoding}{%
6826   \edef\HyPsd@temp{#1}%
6827   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6828     \let\HyPsd@pdfencoding\HyPsd@temp
6829   \else
6830     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6831       \let\HyPsd@pdfencoding\HyPsd@temp
6832     \else
6833       \Hy@Warning{%
6834         XeTeX driver only supports\MessageBreak
6835         'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6836         setting 'pdfencoding=\HyPsd@temp'%
6837       }%
6838     \fi
6839   \fi
6840 }
6841 \let\HyXeTeX@CheckUnicode\relax
6842 \xetex

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

6843 (*pdfmarkbase)
6844 \begingroup
6845   \@ifundefined{headerps@out}{}{%
6846     \toks@\expandafter{\Hy@FirstPageHook}%
6847     \xdef\Hy@FirstPageHook{%
6848       \noexpand\headerps@out{%
6849         systemdict /pdfmark known%
6850         {%
6851           userdict /?pdfmark systemdict /exec get put%
6852         }{%
6853           userdict /?pdfmark systemdict /pop get put %
6854           userdict /pdfmark systemdict /cleartomark get put%
6855         }%
6856         ifelse%
6857       }%
6858       \the\toks@
6859     }%
6860   }%
6861 \endgroup
6862 \pdfmarkbase

```

\Hy@PutCatalog

```

6863 \dvipdfm|xetex\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
6864 (*pdfmarkbase)
6865 \def\Hy@PutCatalog#1{%
6866   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%

```

```

6867 }
6868 </pdfmarkbase>

6869 <{*pdfmarkbase | dvipdfm | xetex>
6870 \ifHy@pdfpagelabels

```

`\HyPL@StorePageLabel` This macro writes a string to the .aux file.

```

6871 \def\HyPL@StorePageLabel#1{%
6872   \if@filesw
6873     \begingroup
6874     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6875     \immediate\write\@mainaux{%
6876       \string\HyPL@Entry{\Hy@tempa}%
6877     }%
6878   \endgroup
6879 \fi
6880 }%

```

Write a dummy definition of `\HyPL@Entry` for the case, that the next run is done without hyperref. A marker for the rerun warning is set and the `/PageLabels` is written.

```

6881 \Hy@AtBeginDocument{%
6882   \if@filesw
6883     \immediate\write\@mainaux{%
6884       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6885     }%
6886   \fi
6887   \ifx\HyPL@Labels\@empty
6888     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6889   \else
6890     \HyPL@SetPageLabels
6891   \fi
6892   \let\HyPL@Entry\@gobble
6893 }%

```

`\HyPL@Entry`

```

6894 \def\HyPL@Entry#1{%
6895   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6896     \HyPL@Labels
6897     #1%
6898   }%
6899 }%

6900 \fi
6901 </pdfmarkbase | dvipdfm | xetex>
6902 <{*package>
6903 \ifx\MaybeStopEarly\relax
6904 \else
6905   \Hy@stoppeearlytrue
6906   \expandafter\MaybeStopEarly
6907 \fi
6908 \Hy@stoppeearlyfalse

```

29 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of

that for later use in `\label`. This will fail badly if `\theH<name>` does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent `\theH<name>` for every `\the<name>`. We do make a trap to make `\theH<name>` be the same as `\arabic{<name>}`, if `\theH<name>` is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up `\@currentlabel`? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like `subeqn` will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for `\part` and `\chapter`.

Start with a fallback for equations

```

6909 \def\Hy@CounterExists#1{%
6910   \begingroup\expandafter\expandafter\expandafter\endgroup
6911   \expandafter\ifx\csname c@#1\endcsname\relax
6912     \expandafter\@gobble
6913   \else
6914     \begingroup\expandafter\expandafter\expandafter\endgroup
6915     \expandafter\ifx\csname the#1\endcsname\relax
6916       \expandafter\expandafter\expandafter\@gobble
6917     \else
6918       \expandafter\expandafter\expandafter\@firstofone
6919     \fi
6920   \fi
6921 }
6922 \Hy@CounterExists{section}{%
6923   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6924 }
6925 \Hy@CounterExists{part}{%
6926   \providecommand\theHpart{\arabic{part}}}%
6927 }
6928 \ltx@ifundefined{thechapter}{%
6929   \providecommand\theHsection   {\arabic{section}}}%
6930   \providecommand\theHfigure    {\arabic{figure}}}%
6931   \providecommand\theHtable     {\arabic{table}}}%
6932 }{%
6933   \providecommand\theHchapter   {\arabic{chapter}}}%
6934   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
6935   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
6936   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
6937 }
6938 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6939 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6940 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
6941 \providecommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
6942 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6943 \providecommand\theHthm        {\theHsection.\arabic{thm}}

```

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration starts at 0 for every list! But `\item` occurs inside `\trivlist`, so check if its a real `\item` before incrementing counters.

```

6944 \let\H@item\item

```



```

6945 \newcounter{Item}
6946 \def\theHItem{\arabic{Item}}
6947 \def\item{%
6948   \@hyper@itemfalse
6949   \if@nmbrlist\@hyper@itemtrue\fi
6950   \H@item
6951 }

6952 \providecommand\theHenumi   {\theHItem}
6953 \providecommand\theHenumii  {\theHItem}
6954 \providecommand\theHenumiii {\theHItem}
6955 \providecommand\theHenumiv  {\theHItem}
6956 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6957 \providecommand\theHmpfootnote {\arabic{mpfootnote}}
6958 \@ifundefined{theHHmpfootnote}{%
6959   \let\theHHmpfootnote\theHHfootnote
6960 }{}

```

Tanmoy asked for this default handling of undefined `\theH<name>` situations. It really isn't clear what would be ideal, whether to turn off hyperizing of unknown elements, to pick up the textual definition of the counter, or to default it to something like `\arabic{name}`. We take the latter course, slightly worriedly.

```

6961 \let\H@refstepcounter\refstepcounter
6962 \edef\name@of@eq{equation}%
6963 \edef\name@of@slide{slide}%

```

We do not want the handler for `\refstepcounter` to cut in during the processing of `\item` (we handle that separately), so we provide a bypass conditional.

```

6964 \newif\if@hyper@item
6965 \newif\if@skiphyperref
6966 \@hyper@itemfalse
6967 \@skiphyperreffalse
6968 \def\refstepcounter#1{%
6969   \ifHy@pdfstring
6970   \else
6971     \H@refstepcounter{#1}%
6972     \edef\This@name{#1}%
6973     \ifx\This@name\name@of@slide
6974     \else
6975       \if@skiphyperref
6976       \else
6977         \if@hyper@item
6978           \stepcounter{Item}%
6979           \hyper@refstepcounter{Item}%
6980           \@hyper@itemfalse
6981         \else
6982           \hyper@refstepcounter{#1}%
6983         \fi
6984       \fi
6985     \fi
6986   \fi
6987 }
6988 \let\Hy@saved@refstepcounter\refstepcounter

```

AMS \LaTeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

6989 \@ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6990 \def\hyper@refstepcounter#1{%
6991   \edef\This@name{#1}%
6992   \ifx\This@name\name@of@eq
6993     \ifundefined{theHequation}{%
6994       \make@stripped@name{\theequation}%
6995       \let\theHequation\newname
6996     }{}%
6997   \fi
6998   \HyCnt@ProvideTheHCounter{#1}%
6999   \hyper@makecurrent{#1}%
7000   \ifmeasuring@
7001   \else
7002     \Hy@raisedlink{%
7003       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7004     }%
7005   \fi
7006 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@Cckpt`, the clear counter list of the artificial counter `Cckpt`, \LaTeX remembers the defined counters (needed for `\include`). We check the clear counter lists, whether our counter is present. If we found it, then we add the parent counter value to `\theH<counter>`. The `\@elt` list is used in sanitized form for the comparison, because the list might contain other stuff than `\@elts`. Also it simplifies the implementation, because \LaTeX , substring search `\in@` can be used.

```

7007 \def\HyCnt@ProvideTheHCounter#1{%
7008   \ifundefined{theH#1}{%
7009     \expandafter\def\csname theH#1\endcsname{}%
7010     \def\Hy@temp{\@elt{#1}}%
7011     \ltx@onelevel@sanitize\Hy@temp
7012     \let\HyOrg@elt\@elt
7013     \edef\@elt{%
7014       \noexpand\HyCnt@LookForParentCounter
7015       \expandafter\noexpand\csname theH#1\endcsname
7016     }%
7017     \cl@Cckpt
7018     \let\@elt\HyOrg@elt
7019     \expandafter
7020     \ltx@LocalAppendToMacro\csname theH#1\endcsname\expandafter\endcsname
7021     \expandafter{%
7022       \expandafter\@arabic\csname c@#1\endcsname
7023     }%
7024   }{}%
7025 }

```

`\Hy@LookForParentCounter`

```

7026 \def\HyCnt@LookForParentCounter#1#2{%
7027   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7028   \ltx@ifundefined{cl@#2}{%
7029   }{%
7030     \ltx@onelevel@sanitize\Hy@temp@A
7031     \edef\Hy@temp@A{%
7032       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7033     }\Hy@temp@A
7034     \ifin@
7035       \ltx@ifundefined{theH#2}{%

```

```

7036 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7037 \expandafter{%
7038 \expandafter\@arabic\csname c@#2\endcsname.%
7039 }%
7040 }{%
7041 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7042 \expandafter{%
7043 \csname theH#2\endcsname.%
7044 }%
7045 }%
7046 \fi
7047 }%
7048 }

```

After `\appendix` “chapter” (or “section” for classes without chapter) should be replaced by “appendix” to get `\autoref` work. Macro `\Hy@chapapp` contains the current valid name like `\@chapapp`, which cannot be used, because this string depends on the current language.

The “french” package defines counter `\thechapter` by `\newcounterchapter`, if `\@ifundefinedchapter`.

```

7049 \begingroup\expandafter\expandafter\expandafter\endgroup
7050 \expandafter\ifx\csname chapter\endcsname\relax
7051 \def\Hy@chapterstring{section}%
7052 \else
7053 \def\Hy@chapterstring{chapter}%
7054 \fi
7055 \def\Hy@appendixstring{appendix}
7056 \def\Hy@chapapp{\Hy@chapterstring}
7057 \ltx@ifundefined{appendix}{%
7058 }{%
7059 \let\HyOrg@appendix\appendix
7060 \def\Hy@AlphNoErr#1{%
7061 \ifnum\value{#1}>26 %
7062 Alph\number\value{#1}%
7063 \else
7064 \ifnum\value{#1}<1 %
7065 Alph\number\value{#1}%
7066 \else
7067 \Alph{#1}%
7068 \fi
7069 \fi
7070 }%
7071 \def\appendix{%
7072 \ltx@ifundefined{chapter}{%
7073 \gdef\theHsection{\Hy@AlphNoErr{section}}%
7074 }{%
7075 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7076 }%
7077 \xdef\Hy@chapapp{\Hy@appendixstring}%
7078 \HyOrg@appendix
7079 }%
7080 }

```

`\Hy@Test@alph`

```

7081 \def\Hy@Test@alph#1{%
7082 \ifcase#1\or
7083 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or

```

```

7084   k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7085   u\or v\or w\or x\or y\or z%
7086 \else
7087   \@ctrerr
7088 \fi
7089 }

```

\Hy@Test@Alph

```

7090 \def\Hy@Test@Alph#1{%
7091   \ifcase#1\or
7092     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7093     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7094     U\or V\or W\or X\or Y\or Z%
7095 \else
7096   \@ctrerr
7097 \fi
7098 }

```

\hyper@makecurrent Because of Babel mucking around, nullify \textlatin when making names. And \@number because of babel's lrbabel.def.

```

7099 \def\hyper@makecurrent#1{%
7100   \begingroup
7101   \Hy@safe@activetrue
7102   \edef\Hy@param{#1}%
7103   \ifx\Hy@param\Hy@chapterstring
7104     \let\Hy@param\Hy@chapapp
7105   \fi
7106   \ifHy@hypertextnames
7107     \let\@number\@firstofone
7108     \def\@fnsymbol##1{fnsymbol\number##1}%
7109     \def\@arabic##1{\number##1}%
7110     \ifx\@alph\Hy@Test@alph
7111     \else
7112       \def\@alph{alph\number}%
7113     \fi
7114     \ifx\@Alph\Hy@Test@Alph
7115     \else
7116       \def\@Alph{Alph\number}%
7117     \fi
7118     \ifHy@naturalnames
7119       \let\textlatin\@firstofone
7120       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7121     \else
7122       \xdef\HyperGlobalCurrentHref{%
7123         \csname
7124           the%
7125           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7126           #1%
7127         \endcsname
7128       }%
7129     \fi
7130     \xdef\HyperGlobalCurrentHref{%
7131       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7132     }%
7133   \else
7134     \Hy@GlobalStepCount\Hy@linkcounter
7135     \xdef\HyperGlobalCurrentHref{\Hy@param.the\Hy@linkcounter}%

```

```

7136   \fi
7137 \endgroup
7138 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7139 \ifHy@localanchorname
7140   \let\@currentHref\HyperLocalCurrentHref
7141 \else
7142   \global\let\@currentHref\HyperGlobalCurrentHref
7143 \fi
7144 }

\Hy@MakeCurrentHref
7145 \def\Hy@MakeCurrentHref#1{%
7146   \edef\HyperLocalCurrentHref{#1}%
7147   \@onelevel@sanitize\HyperLocalCurrentHref
7148   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7149   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7150   \ifHy@localanchorname
7151     \let\@currentHref\HyperLocalCurrentHref
7152   \else
7153     \global\let\@currentHref\HyperGlobalCurrentHref
7154   \fi
7155 }

\Hy@MakeCurrentHrefAuto
7156 \def\Hy@MakeCurrentHrefAuto#1{%
7157   \Hy@GlobalStepCount\Hy@linkcounter
7158   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7159 }

```

```

\@currentHlabel \@currrentHlabel is only defined for compatibility with package ‘hypdvips’.
7160 \def\@currentHlabel{\@currentHref}

7161 \@ifpackageloaded{fancyvrb}{%
7162   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
7163     \def\FV@StepLineNo{%
7164       \FV@SetLineNo
7165       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7166       \FV@StepLineNo
7167     }%
7168   }%
7169 }{}

```

30 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options `hypertextnames` and `plainpages`) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 39). The link will not work if option `pageanchor` is set to false.

```

\lastpage@putlabel
7170 \Hy@AtBeginDocument{%
7171   \@ifclassloaded{revtex4}{%
7172     \@namedef{ver@lastpage.sty}{1994/06/25}%

```

```

7173 }{}%
7174 \@ifpackageloaded{lastpage}{%
7175   \ifHy@pageanchor
7176   \else
7177     \Hy@WarningNoLine{%
7178       The \string\pageref{LastPage} link doesn't work\MessageBreak
7179       with disabled option 'pageanchor'%
7180     }%
7181   \fi
7182   \def\lastpage@putlabel{%
7183     \addtocounter{page}{-1}%
7184     \if@filesw
7185       \begingroup
7186       \let\@number\@firstofone
7187       \ifHy@pageanchor
7188         \ifHy@hypertextnames
7189         \ifHy@plainpages
7190           \def\Hy@temp{\arabic{page}}%
7191         \else
7192           \Hy@unicodedefalse
7193           \pdfstringdef\Hy@temp{\thepage}%
7194         \fi
7195       \else
7196         \def\Hy@temp{\the\Hy@pagecounter}%
7197       \fi
7198     \fi
7199     \immediate\write\@auxout{%
7200       \string\newlabel
7201       {LastPage}{}{\thepage}{}{%
7202         \ifHy@pageanchor page.\Hy@temp\fi}{}%
7203       }%
7204     \endgroup
7205   \fi
7206   \addtocounter{page}{1}%
7207 }%
7208 \@ifclassloaded{revtex4}{%
7209   \begingroup
7210   \toks@{\expandafter{\lastpage@putlabel}}%
7211   \edef\x{\endgroup
7212     \def\noexpand\lastpage@putlabel{%
7213       \noexpand\stepcounter{page}%
7214       \the\toks@
7215       \noexpand\addtocounter{page}\noexpand\m@ne
7216     }%
7217   }%
7218   \x
7219 }{}%
7220 }{}%
7221 }
7222 \end{package}
7223 \check{*check}
7224 \checkpackage{lastpage}[1994/06/25]
7225 \checkcommand\def\lastpage@putlabel{%
7226   \addtocounter{page}{-1}%
7227   \immediate\write\@auxout{%
7228     \string\newlabel{LastPage}{}{\thepage}%
7229   }%

```

```

7230 \addtocounter{page}{1}%
7231 }
7232 </check>
7233 <*package>

```

31 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\hypergetref` and `\hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

7234 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
7235 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

32 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:

```

7236 \@ifpackageloaded{titlesec}{%
7237   \def\ttl@Hy@steplink#1{%
7238     \Hy@MakeCurrentHrefAuto{#1*}%
7239     \edef\ttl@Hy@saveanchor{%
7240       \noexpand\Hy@raisedlink{%
7241         \noexpand\hyper@anchorstart{\@currentHref}%
7242         \noexpand\hyper@anchorend
7243         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7244         \noexpand\ttl@Hy@PatchSaveWrite
7245       }%
7246     }%
7247   }%
7248   \def\ttl@Hy@PatchSaveWrite{%
7249     \begingroup
7250     \toks@{\expandafter{\ttl@savewrite}}%
7251     \edef\x{\endgroup
7252       \def\noexpand\ttl@savewrite{%
7253         \let\noexpand\@currentHref
7254         \noexpand\ttl@Hy@SavedCurrentHref
7255         \the\toks@
7256       }%
7257     }%
7258     \x
7259   }%
7260   \def\ttl@Hy@refstepcounter#1{%
7261     \let\ttl@b\Hy@raisedlink
7262     \def\Hy@raisedlink##1{%
7263       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7264     }%
7265     \refstepcounter{#1}%
7266     \let\Hy@raisedlink\ttl@b
7267   }%
7268 }{}

```

Package titletoc support:

```

7269 \@ifpackageloaded{titletoc}{%
7270   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7271 }{}

```

33 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```

7272 \def\Hy@varioref@undefined{{??}{??}{-}{-}}
7273 \@ifpackageloaded{varioref}{%
7274   \def\vref@pagenum#1#2{%
7275     \@ifundefined{r@#2}{%
7276       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7277     }{}%
7278     \edef#1{\getpagerefnumber{#2}}%
7279   }%
7280 }
```

Package varioref redefines `\refstepcounter`, thus it needs fixing, if the package is loaded *after* `hyperref`.

```

7281 \def\Hy@varioref@refstepcounter#1{%
7282   \stepcounter{#1}%
7283   \protected@edef\@currentlabel{%
7284     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7285   }%
7286 }
7287 \AtBeginDocument{%
7288   \ifx\refstepcounter\Hy@varioref@refstepcounter
7289     \let\H@refstepcounter\refstepcounter
7290     \let\refstepcounter\Hy@saved@refstepcounter
7291   \fi
7292 }
```

34 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by `hyperref`'s `\refstepcounter` and the anchor setting is moved after `\vskip\LTpre`.

Patch of `\LT@array`: replace `\refstepcounter` by the original `\H@refstepcounter` without anchor generation

```

7293 \@ifpackageloaded{longtable}{%
7294   \begingroup
7295     \def\y{\LT@array}%
7296     \@ifundefined{scr@LT@array}{%
7297       \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7298     }{\def\y{\scr@LT@array}}%
7299     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7300       \expandafter\endgroup
7301       \expandafter\def\y[##1]##2{%
7302         \H@refstepcounter{#1}%
7303         \hyper@makecurrent{table}%
7304         \let\Hy@LT@currentHref\@currentHref
7305         #2\@sharp###4%
7306       }%
7307     }%
7308     \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
```

Patch of `\LT@start`: add anchor before first line after `\vskip\LTpre`

```

7309 \begingroup
7310   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
```



```

7311 \endgroup
7312 \def\LT@start{%
7313   #1%
7314   \ifvoid\LT@foot#2\fi
7315   \let\@currentHref\Hy@LT@currentHref
7316   \Hy@raisedlink{%
7317     \hyper@anchorstart{\@currentHref}\hyper@anchorend
7318   }%
7319   #3%
7320 }%
7321 }%
7322 \expandafter\x\LT@start\@nil
7323 }{}

```

35 Equations

We want to make the whole equation a target anchor. Overload equation, temporarily reverting to original `\refstepcounter`. If, however, it is in AMS math, we do not do anything, as the tag mechanism is used there (see section 42). The exception is that we move the equation incrementation inside the math environment to avoid specials outside and a wrong vertical spacing of equation environments.

```

7324 \let\new@refstepcounter\refstepcounter
7325 \let\H@equation\equation
7326 \let\H@endequation\endequation
7327 \@ifpackageloaded{amsmath}{%
7328   \long\def\Hy@temp{%
7329     \incr@eqnum
7330     \mathdisplay@push
7331     \st@rredfalse \global\@eqnswtrue
7332     \mathdisplay{equation}%
7333   }%
7334   \ifx\Hy@temp\equation
7335     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7336       \csname iftrue\endcsname
7337   \else
7338     \long\def\equation{%
7339       \mathdisplay@push
7340       \st@rredfalse \global\@eqnswtrue
7341       \mathdisplay{equation}%
7342       \incr@eqnum
7343     }%
7344   \fi
7345 \fi
7346 }{}%
7347 \def\equation{%
7348   \let\refstepcounter\H@refstepcounter
7349   \H@equation
7350   \@ifundefined{theHequation}{%
7351     \make@stripped@name{\theequation}%
7352     \let\theHequation\newname
7353   }{}%
7354   \hyper@makecurrent{equation}%

```

`\mathopen` is needed in case the equation starts with an unary minus, for example.

```

7355   \mathopen{%
7356     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%

```

```

7357 }%
7358 \let\refstepcounter\new@refstepcounter
7359 }%
7360 \def\endequation{%
7361   \ifx\Hy@raisedlink\ltx@empty
7362     \hyper@anchorend
7363   \else
7364     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7365   \fi
7366   \H@endequation
7367 }%
7368 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

7369 \newif\if@eqnstar
7370 \@eqnstarfalse
7371 \let\H@eqnarray\eqnarray
7372 \let\H@endeqnarray\endeqnarray
7373 \def\eqnarray{%
7374   \let\Hy@reserved@a\relax
7375   \def\@currentHref{}%
7376   \H@eqnarray
7377   \if@eqnstar
7378   \else
7379     \ifx\\\@currentHref\\%
7380     \else
7381       \@ifundefined{theHequation}{%
7382         \make@stripped@name{\theequation}%
7383         \let\theHequation\newname
7384       }{}%
7385       \hyper@makecurrent{equation}%
7386       \mathopen{%
7387         \Hy@raisedlink{%
7388           \hyper@anchorstart{\@currentHref}\hyper@anchorend
7389         }%
7390       }%
7391     \fi
7392   \fi
7393 }
7394 \def\endeqnarray{%
7395   \H@endeqnarray
7396 }

```

This is quite heavy-handed, but it works for now. If its an `eqnarray*` we need to disable the hyperref actions. There may well be a cleaner way to trap this. Bill Moss found this.

```

7397 \@namedef{eqnarray*}{%
7398   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7399 }
7400 \@namedef{endeqnarray*}{%
7401   \nonumber\endeqnarray\@eqnstarfalse
7402 }

```

Then again, we have the *subeqnarray* package. Tanmoy provided some code for this:

```

7403 \ltx@ifundefined{subeqnarray}{-}{%
7404   \let\H@subeqnarray\subeqnarray
7405   \let\H@endsubeqnarray\endsubeqnarray
7406   \def\subeqnarray{%
7407     \let\Hy@reserved@a\relax
7408     \H@subeqnarray
7409     \@ifundefined{theHequation}{%
7410       \make@stripped@name{\theequation}%
7411       \let\theHequation\newname
7412     }{}%
7413     \hyper@makecurrent{equation}%
7414     \hyper@anchorstart{\@currentHref}{-}\hyper@anchorend
7415   }%
7416   \def\endsubeqnarray{%
7417     \H@endsubeqnarray
7418   }%
7419   \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7420 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.

```

7421 \def\make@stripped@name#1{%
7422   \begingroup
7423   \escapechar\m@ne
7424   \global\let\newname\@empty
7425   \protected@edef\Hy@tempa{#1}%
7426   \edef\@tempb{%
7427     \noexpand\@tfor\noexpand\Hy@tempa:=%
7428     \expandafter\strip@prefix\meaning\Hy@tempa
7429   }%
7430   \@tempb\do{%
7431     \if\Hy@tempa\else
7432     \if\Hy@tempa\else
7433       \xdef\newname{\newname\Hy@tempa}%
7434     \fi
7435   }%
7436 }%
7437 \endgroup
7438 }

```

Support for amsmath's subequations:

```

7439 \begingroup\expandafter\expandafter\expandafter\endgroup
7440 \expandafter\ifx\csname subequations\endcsname\relax
7441 \else
7442   \let\HyOrg@subequations\subequations
7443   \def\subequations{%
7444     \stepcounter{equation}%
7445     \protected@edef\theHparentequation{%
7446       \@ifundefined{theHequation}\theequation\theHequation
7447     }%
7448     \addtocounter{equation}{-1}%
7449     \HyOrg@subequations
7450     \def\theHequation{\theHparentequation\alph{equation}}%
7451     \ignorespaces
7452   }%
7453 \fi

```

Support for package `amsthm` (Daniel Müllner):

```
7454 \@ifpackageloaded{amsthm}{%
```

Class `amsbook` uses a different definition of `\@thm`, where two lines are added (thanks to Dan Luecking for his analysis):

```

\let\thm@indent\indent % indent
\thm@headfont{\scshape}% heading font small caps

7455 \def\Hy@temp#1#2#3{%
7456   \ifhmode\unskip\unskip\par\fi
7457   \normalfont
7458   \trivlist
7459   \let\thmheadnl\relax
7460   \let\thm@swap\@gobble
7461   \let\thm@indent\indent % indent
7462   \thm@headfont{\scshape}% heading font small caps
7463   \thm@notefont{\fontseries\mddefault\upshape}%
7464   \thm@headpunct{.}% add period after heading
7465   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7466   \thm@space@setup
7467   #1% style overrides
7468   \@topsep \thm@preskip           % used by thm head
7469   \@topsepadd \thm@postskip       % used by \@endparenv
7470   \def\@tempa{#2}\ifx\@empty\@tempa
7471     \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7472   \else
7473     \refstepcounter{#2}%
7474     \def\@tempa{%
7475       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7476     }%
7477   \fi
7478   \@tempa
7479 }%
7480 \ifx\Hy@temp\@thm
7481   \def\@thm#1#2#3{%
7482     \ifhmode
7483       \unskip\unskip\par
7484     \fi
7485     \normalfont
7486     \trivlist
7487     \let\thmheadnl\relax
7488     \let\thm@swap\@gobble
7489     \let\thm@indent\indent % indent
7490     \thm@headfont{\scshape}% heading font small caps
7491     \thm@notefont{\fontseries\mddefault\upshape}%
7492     \thm@headpunct{.}% add period after heading
7493     \thm@headsep 5\p@ plus\p@ minus\p@\relax
7494     \thm@space@setup
7495     #1% style overrides
7496     \@topsep \thm@preskip           % used by thm head
7497     \@topsepadd \thm@postskip       % used by \@endparenv
7498     \def\dth@counter{#2}%
7499     \ifx\@empty\dth@counter
7500       \def\@tempa{%
7501         \@oparg{\@begintheorem{#3}{}}}%
7502       }%
7503     \else
7504       \H@refstepcounter{#2}%

```

```

7505     \hyper@makecurrent{#2}%
7506     \let\Hy@dth@currentHref\@currentHref
7507     \def\@tempa{%
7508         \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7509     }%
7510     \fi
7511     \@tempa
7512 }%
7513 \else
7514     \def\@thm#1#2#3{%
7515         \ifhmode
7516             \unskip\unskip\par
7517         \fi
7518         \normalfont
7519         \trivlist
7520         \let\thmheadnl\relax
7521         \let\thm@swap\@gobble
7522         \thm@notefont{\fontseries\mddefault\upshape}%
7523         \thm@headpunct{.}% add period after heading
7524         \thm@headsep 5\p@ plus\p@ minus\p@\relax
7525         \thm@space@setup
7526         #1% style overrides
7527         \@topsep \thm@preskip           % used by thm head
7528         \@topsepadd \thm@postskip       % used by \@endparenv
7529         \def\dth@counter{#2}%
7530         \ifx\@empty\dth@counter
7531             \def\@tempa{%
7532                 \@oparg{\@begintheorem{#3}{}}{}%
7533             }%
7534         \else
7535             \H@refstepcounter{#2}%
7536             \hyper@makecurrent{#2}%
7537             \let\Hy@dth@currentHref\@currentHref
7538             \def\@tempa{%
7539                 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7540             }%
7541         \fi
7542         \@tempa
7543     }%
7544     \fi
7545     \dth@everypar={%
7546         \@minipagefalse
7547         \global\@newlistfalse
7548         \@noparitemfalse
7549         \if@inlabel
7550             \global\@inlabelfalse
7551         \begingroup
7552             \setbox\z@\lastbox
7553             \ifvoid\z@
7554                 \kern-\itemindent
7555             \fi
7556         \endgroup
7557         \ifx\@empty\dth@counter
7558         \else
7559             \Hy@raisedlink{%
7560                 \hyper@anchorstart{%
7561                     \ltx@ifundefined{Hy@dth@currentHref}%

```

```

7562         \@currentHref\Hy@dth@currentHref
7563     }\hyper@anchorend
7564 }%
7565 \fi
7566 \unhbox\@labels
7567 \fi
7568 \if@nobreak
7569     \@nobreakfalse \clubpenalty\@M
7570 \else
7571     \clubpenalty\@clubpenalty \everypar{}\%
7572 \fi
7573 }%
7574 }{}

```

36 Footnotes

The footnote mark is a hypertext link, and the text is a target. We separately number the footnotes sequentially through the text, separately from whatever labels the text assigns. Too hard to keep track of markers otherwise. If the raw forms `\footnotemark` and `\footnotetext` are used, force them to use un-hyper original.

```

7575 \ifHy@hyperfootnotes
7576     \newcounter{Hfootnote}%
7577     \let\H@@@footnotetext\@footnotetext
7578     \let\H@@@footnotemark\@footnotemark
7579     \def\@xfootnotenext[#1]{%
7580         \begingroup
7581             \csname c@\@mpfn\endcsname #1\relax
7582             \unrestored@protected@xdef\@thefnmark{\thempfn}%
7583         \endgroup
7584         \ifx\@footnotetext\@mpfootnotetext
7585             \expandafter\H@@@mpfootnotetext
7586         \else
7587             \expandafter\H@@@footnotetext
7588         \fi
7589     }%
7590     \def\@xfootnotemark[#1]{%
7591         \begingroup
7592             \c@footnote #1\relax
7593             \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7594         \endgroup
7595         \H@@@footnotemark
7596     }%
7597     \let\H@@@mpfootnotetext\@mpfootnotetext
7598     \long\def\@mpfootnotetext#1{%
7599         \H@@@mpfootnotetext{%
7600             \ifHy@nesting
7601                 \expandafter\ltx@firstoftwo
7602             \else
7603                 \expandafter\ltx@secondoftwo
7604             \fi
7605             {%
7606                 \expandafter\hyper@@@anchor\expandafter{%
7607                     \Hy@footnote@currentHref
7608                     }{#1}%
7609             }{%

```

```

7610 \Hy@raisedlink{%
7611 \expandafter\hyper@@anchor\expandafter{%
7612 \Hy@footnote@currentHref
7613 }{\relax}%
7614 }#1%
7615 }%
7616 }%
7617 }%
7618 \long\def\@footnotetext#1{%
7619 \H@@@footnotetext{%
7620 \ifHy@nesting
7621 \expandafter\ltx@firstoftwo
7622 \else
7623 \expandafter\ltx@secondoftwo
7624 \fi
7625 {%
7626 \expandafter\hyper@@anchor\expandafter{%
7627 \Hy@footnote@currentHref
7628 }{#1}%
7629 }{%
7630 \Hy@raisedlink{%
7631 \expandafter\hyper@@anchor\expandafter{%
7632 \Hy@footnote@currentHref
7633 }{\relax}%
7634 }%
7635 \let\@currentHref\Hy@footnote@currentHref
7636 \let\@currentlabelname\@empty
7637 #1%
7638 }%
7639 }%
7640 }%

```

Redefine `\@footnotemark`, borrowing its code (at the cost of getting out of sync with `latex.ltx`), to take advantage of its white space and hyphenation fudges. If we just overload it, we can get variant documents (the word before the footnote is treated differently). Thanks to David Carlisle and Brian Ripley for confusing and helping me on this.

```

7641 \def\@footnotemark{%
7642 \leavevmode
7643 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
7644 \stepcounter{Hfootnote}%
7645 \global\let\Hy@saved@currentHref\@currentHref
7646 \hyper@makecurrent{Hfootnote}%
7647 \global\let\Hy@footnote@currentHref\@currentHref
7648 \global\let\@currentHref\Hy@saved@currentHref
7649 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7650 \@makefnmark
7651 \hyper@linkend
7652 \ifhmode\spacefactor\x@sf\fi
7653 \relax
7654 }%

```

Tabularx causes footnote problems, disable the linking if that is loaded. Since v6.82i footnotes are only disabled inside the environment ‘`tabularx`’.

```

7655 \@ifpackageloaded{tabularx}{%
7656 \let\HyOrg@TX@endtabularx\TX@endtabularx
7657 \def\Hy@tabularx@hook{%
7658 \let\@footnotetext\H@@@footnotetext

```

```

7659 \let\@footnotemark\H@@footnotemark
7660 \let\@mpfootnotetext\H@@mpfootnotetext
7661 }%
7662 \begingroup
7663 \toks@\expandafter{\TX@endtabularx}%
7664 \xdef\Hy@gtemp{%
7665   \noexpand\Hy@tabularx@hook
7666   \the\toks@
7667 }%
7668 \endgroup
7669 \let\TX@endtabularx\Hy@gtemp
7670 }{}%

```

Support for footnotes in p columns of longtable. Here `\footnote` commands are splitted into `\footnotemark` and a call of `\footnotetext` with the optional argument, that is not supported by hyperref. The result is a link by `\footnotemark` without valid anchor

```

7671 \@ifpackageloaded{longtable}{%
7672   \CheckCommand*\LT@p@ftntext}[1]{%
7673     \edef\@tempa{%
7674       \the\LT@p@ftn
7675       \noexpand\footnotetext[\the\c@footnote]%
7676     }%
7677     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7678   }%
7679   \long\def\LT@p@ftntext#1{%
7680     \edef\@tempa{%
7681       \the\LT@p@ftn
7682     \begingroup
7683       \noexpand\c@footnote=\the\c@footnote\relax
7684       \noexpand\protected\xdef\noexpand\@thefnmark{%
7685         \noexpand\thempfn
7686       }%
7687       \noexpand\Hy@LT@footnotetext{%
7688         \Hy@footnote@currentHref
7689       }%
7690     }%
7691     \global\LT@p@ftn\expandafter{%
7692       \@tempa{#1}%
7693     \endgroup
7694   }%
7695 }%
7696 \long\def\Hy@LT@footnotetext#1#2{%
7697   \H@@footnotetext{%
7698     \ifHy@nesting
7699       \hyper@@anchor{#1}{#2}%
7700     \else
7701       \Hy@raisedlink{%
7702         \hyper@@anchor{#1}{\relax}%
7703       }%
7704       \def\@currentHref{#1}%
7705       \let\@currentlabelname\@empty
7706       #2%
7707     \fi
7708   }%
7709 }%
7710 }{}%

```


Footnotes for fancyvrb (Fix by Manuel Pégourié-Gonnard).

```

7711 \ifpackageloaded{fancyvrb}{%
7712   \def\V@footnotetext{%
7713     \insert\footins\bgroup
7714     \csname reset@font\endcsname
7715     \footnotesize
7716     \interlinepenalty\interfootnotelinepenalty
7717     \splittopskip\footnotesep
7718     \splitmaxdepth\dp\strutbox
7719     \floatingpenalty \@MM
7720     \hsize\columnwidth
7721     \@parboxrestore
7722     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7723     \@makefntext{}%
7724     \rule{\z@}{\footnotesep}%
7725     \bgroup
7726     \aftergroup\V@@@footnotetext
7727     \Hy@raisedlink{%
7728       \expandafter\hyper@@anchor\expandafter{%
7729         \Hy@footnote@currentHref
7730       }\relax}%
7731     }%
7732     \let\@currentHref\Hy@footnote@currentHref
7733     \let\@currentlabelname\@empty
7734     \ignorespaces
7735   }%
7736 }{}%
```

KOMA-Script defines `\footref` that uses both `\ref` and `\@footnotemark` resulting in two links, one of them wrong.

```

7737 \def\Hy@temp#1{%
7738   \begingroup
7739   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7740   \endgroup
7741   \@footnotemark
7742 }%
7743 \ifx\Hy@temp\footref
7744   \def\footref#1{%
7745     \begingroup
7746     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7747     \endgroup
7748     \H@@@footnotemark
7749   }%
7750 \fi
```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```

7751 \let\HyOrg@maketitle\maketitle
7752 \def\maketitle{%
7753   \let\Hy@saved@footnotemark\@footnotemark
7754   \let\Hy@saved@footnotetext\@footnotetext
7755   \let\@footnotemark\H@@@footnotemark
7756   \let\@footnotetext\H@@@footnotetext
7757   \@ifnextchar[\Hy@maketitle@optarg{ } ]
7758   \HyOrg@maketitle
7759   \Hy@maketitle@end
7760 }%
```

```

7761 }%
7762 \def\Hy@maketitle@optarg[#1]{%
7763   \HyOrg@maketitle[{#1}]%
7764   \Hy@maketitle@end
7765 }%
7766 \def\Hy@maketitle@end{%
7767   \ifx\@footnotemark\H@@footnotemark
7768     \let\@footnotemark\Hy@saved@footnotemark
7769   \fi
7770   \ifx\@footnotetext\H@@footnotetext
7771     \let\@footnotetext\Hy@saved@footnotetext
7772   \fi
7773 }%

```

\realfootnote Does anyone remember the function and purpose of \realfootnote?

```

7774 \def\realfootnote{%
7775   \@ifnextchar\@xfootnote{%
7776     \stepcounter{\@mpfn}%
7777     \protected@xdef\@thefnmark{\thempfn}%
7778     \H@@footnotemark\H@@footnotetext
7779   }%
7780 }%

7781 \fi
7782 \Hy@DisableOption{hyperfootnotes}

7783 \</package>
7784 \< *check>
7785 \checklatex
7786 \checkcommand\def\@xfootnotenext[#1]{%
7787   \begingroup
7788     \csname c@\@mpfn\endcsname #1\relax
7789     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7790   \endgroup
7791   \@footnotetext
7792 }
7793 \checkcommand\def\@xfootnotemark[#1]{%
7794   \begingroup
7795     \c@footnote #1\relax
7796     \unrestored@protected@xdef\@thefnmark{\thefnmark}%
7797   \endgroup
7798   \@footnotemark
7799 }
7800 \checkcommand\def\@footnotemark{%
7801   \leavevmode
7802   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7803   \@makefnmark
7804   \ifhmode\spacefactor\@x@sf\fi
7805   \relax
7806 }
7807 \</check>
7808 \< *package>

```

37 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of \caption. Its all to do with expansion. It screws up. Sigh.

```

7809 \def\caption{%
7810   \ifx\@captype\@undefined
7811     \@latex@error{\noexpand\caption outside float}\@ehd
7812     \expandafter\@gobble
7813   \else
7814     \H@refstepcounter\@captype
7815     \let\Hy@tempa\@caption
7816     \@ifundefined{float@caption}{%
7817       }{%
7818         \expandafter\ifx\csname @float@c@\@captype\endcsname
7819           \float@caption
7820         \let\Hy@tempa\Hy@float@caption
7821       \fi
7822     }%
7823     \expandafter\@firstofone
7824   \fi
7825   {\@dblarg{\Hy@tempa\@captype}}}%
7826 }
7827 \long\def\@caption#1[#2]#3{%
7828   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7829     \csname iftrue\endcsname
7830     \global\let\@currentHref\hc@currentHref
7831   \else
7832     \hyper@makecurrent{\@captype}%
7833   \fi
7834   \@ifundefined{NR@getttitle}{%
7835     \def\@currentlabelname{#2}%
7836   }{%
7837     \NR@getttitle{#2}%
7838   }%
7839   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7840     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7841   }%
7842   \begingroup
7843     \@parboxrestore
7844     \if@minipage
7845       \@setminipage
7846     \fi
7847     \normalsize
7848     \expandafter\ifx\csname if@capstart\expandafter\endcsname
7849       \csname iftrue\endcsname
7850       \global\@capstartfalse
7851       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7852     \else
7853       \@makecaption{\csname fnum@#1\endcsname}{%
7854         \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7855   \ifHy@nesting
7856     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7857   \else
7858     \Hy@raisedlink{%
7859       \expandafter\hyper@@anchor\expandafter{%
7860         \@currentHref
7861       }\relax}%
7862     }%
7863     #3%
7864   \fi

```

```

7865 }%
7866 \fi
7867 \par
7868 \endgroup
7869 }

```

Compatibility with float.sty: anchor setting at the top of the float, if the float is controlled by float.sty. Several `\caption` commands inside one float are not supported.

`\HyNew@float@makebox` is introduced as feature request of Axel Sommerfeldt to make the life easier for his package ‘caption’.

```

7870 \let\Hy@float@caption\@caption
7871 \newcommand{\HyNew@float@makebox}[1]{%
7872   \HyOrg@float@makebox{%
7873     #1\relax
7874     \ifx\Hy@float@currentHref\@undefined
7875     \else
7876       \expandafter\hyper@@anchor\expandafter{%
7877         \Hy@float@currentHref
7878       }\relax}%
7879     \global\let\Hy@float@currentHref\@undefined
7880   \fi
7881 }%
7882 }%
7883 \@ifpackageloaded{float}{%
7884   \def\Hy@float@caption{%
7885     \ifx\Hy@float@currentHref\@undefined
7886       \hyper@makecurrent{\@capttype}%
7887       \global\let\Hy@float@currentHref\@currentHref
7888     \else
7889       \let\@currentHref\Hy@float@currentHref
7890     \fi
7891     \float@caption
7892   }%
7893   \let\HyOrg@float@makebox\float@makebox
7894   \let\float@makebox\HyNew@float@makebox
7895 }{}

7896 \</package>
7897 \<?check>
7898 \checklatex[1999/06/01 - 2000/06/01]
7899 \checkcommand\def\caption{%
7900   \ifx\@capttype\@undefined
7901     \@latex@error{\noexpand\caption outside float}\@ehd
7902     \expandafter\@gobble
7903   \else
7904     \refstepcounter\@capttype
7905     \expandafter\@firstofone
7906   \fi
7907   {\@dblarg{\@caption\@capttype}}}%
7908 }
7909 \checkcommand\long\def\@caption#1[#2]#3{%
7910   \par
7911   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7912     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7913   }%
7914   \begingroup
7915   \@parboxrestore

```

```

7916 \if@minipage
7917 \setminipage
7918 \fi
7919 \normalsize
7920 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7921 \endgroup
7922 }
7923 </check>
7924 <*package>

```

38 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly into the `.aux` file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, let's make an attempt to get *natbib* right, because that's a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

7925 \def\hyper@natlinkstart#1{%
7926 \Hy@backout{#1}%
7927 \hyper@linkstart{cite}{cite.#1}%
7928 \def\hyper@nat@current{#1}%
7929 }
7930 \def\hyper@natlinkend{%
7931 \hyper@linkend
7932 }
7933 \def\hyper@natlinkbreak#1#2{%
7934 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7935 }
7936 \def\hyper@natanchorstart#1{%
7937 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7938 }
7939 \def\hyper@natanchorend{\hyper@anchorend}

```

Do not play games if we have *natbib* support. Macro `extra@binfo` added for *chapterbib* support. *Chapterbib* also wants `\@extra@binfo` in the hyper-link, but since the link tag is not expanded immediately, we use `\@extra@b@citeb`, so cites in a chapter will link to the bibliography in that chapter.

```

7940 \ltx@ifundefined{NAT@parse}{%
7941 \providecommand*\@extra@binfo{}%
7942 \providecommand*\@extra@b@citeb{}%
7943 \def\bibcite#1#2{%
7944 \@newl@bel{b}{#1\@extra@binfo}{%
7945 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7946 }%
7947 }%
7948 \gdef\@extra@binfo{}%

```

Package *babel* redefines `\bibcite` with macro `\bbl@cite@choice`. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

7949 \let\Hy@bibcite\bibcite
7950 \begingroup
7951 \@ifundefined{bbl@cite@choice}{}{%
7952 \g@addto@macro\bbl@cite@choice{%

```

```

7953     \let\bibcite\Hy@bibcite
7954     }%
7955     }%
7956 \endgroup
\@BIBLABEL is working around a ‘feature’ of RevTeX.
7957 \providecommand*{\@BIBLABEL}{\@biblabel}%
7958 \def\@bibitem[#1]#2{%
7959     \@skiphyperreftrue
7960     \H@item{%
7961         \ifx\Hy@raisedlink\@empty
7962             \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7963             \@BIBLABEL{#1}%
7964             \hyper@anchorend
7965         \else
7966             \Hy@raisedlink{%
7967                 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7968             }%
7969             \@BIBLABEL{#1}%
7970         \fi
7971         \hfill
7972     }%
7973     \@skiphyperreffalse
7974     \if@filesw
7975         \begingroup
7976         \let\protect\noexpand
7977         \immediate\write\@auxout{%
7978             \string\bibcite{#2}{#1}%
7979         }%
7980     \endgroup
7981     \fi
7982     \ignorespaces
7983 }%

```

Since `\bibitem` is doing its own labelling, call the raw version of `\item`, to avoid extra spurious labels

```

7984 \def\@bibitem#1{%
7985     \@skiphyperreftrue\H@item\@skiphyperreffalse
7986     \Hy@raisedlink{%
7987         \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7988     }%
7989     \if@filesw
7990         \begingroup
7991         \let\protect\noexpand
7992         \immediate\write\@auxout{%
7993             \string\bibcite{#1}{\the\value{\@listctr}}%
7994         }%
7995     \endgroup
7996     \fi
7997     \ignorespaces
7998 }%
7999 }{}

8000 \</package>
8001 \< *check>
8002 \checklatex
8003 \checkcommand\def\@lbibitem[#1]#2{%
8004     \item[\@biblabel{#1}]{\hfill}%
8005     \if@filesw

```

```

8006  {%
8007    \let\protect\noexpand
8008    \immediate\write\@auxout{%
8009      \string\bibcite{#2}{#1}%
8010    }%
8011  }%
8012  \fi
8013  \ignorespaces
8014 }
8015 \checkcommand\def\@bibitem#1{%
8016   \item
8017   \if@filesw
8018     \immediate\write\@auxout{%
8019       \string\bibcite{#1}{\the\value{\@listctr}}}%
8020   }%
8021   \fi
8022   \ignorespaces
8023 }
8024 \</check>
8025 \<*package>

```

Revtext (bless its little heart) takes over \bibcite and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

8026 \@ifclassloaded{revtex}{%
8027   \Hy@Info{*** compatibility with revtex **** }%
8028   \def\revtex@checking#1#2{%
8029     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8030     \expandafter\def\csname b@#1\endcsname{#2}%
8031     \@SetMaxRnhelLabel{#1}%
8032     \expandafter\let\csname b@#1\endcsname\T@temp
8033   }%

```

Tanmoy provided this replacement for CITEX. Lord knows what it does. For chapterbib added: extra@b@citeb

```

8034 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8035 \providecommand*\@extra@b@citeb{}%
8036 \def\CITEX[#1]#2{%
8037   \let\@citea\@empty
8038   \leavevmode
8039   \unskip
8040   $\sim$%
8041   \scriptstyle
8042   \@CITE{%
8043     \@for\@citeb:=#2\do{%
8044       \@citea
8045       \def\@citea{,\penalty\@m\ }%
8046       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8047       \if@filesw
8048         \immediate\write\@auxout{\string\citation{\@citeb}}%
8049       \fi
8050       \@ifundefined{b@\@citeb\extra@b@citeb}{%
8051         \mbox{\reset@font\bfseries ?}%
8052         \G@refundefinedtrue
8053         \@latex@warning{%
8054           Citation '\@citeb' on page \thepage \space undefined%
8055         }%
8056       }%

```

```

8057      {\csname b@ \@citeb \@extra@b@citeb\endcsname}%
8058      }%
8059      }%
8060      }{#1}%
8061      }$%
8062      }%

```

No, life is too short. I am not going to understand the Revtex `\@collapse` macro, I shall just restore the original behaviour of `\@citex`; sigh. This is SO vile.

```

8063 \def\@citex[#1]#2{%
8064   \let\@citea\@empty
8065   \@cite{%
8066     \@for\@citeb:=#2\do{%
8067       \@citea
8068       \def\@citea{,\penalty\@m\ }%
8069       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8070       \iffilesw
8071         \immediate\write\@auxout{\string\citation{\@citeb}}%
8072       \fi
8073       \ifundefined{b@ \@citeb \@extra@b@citeb}{%
8074         \mbox{\reset@font\bfseries ?}%
8075         \G@refundefinedtrue
8076         \@latex@warning{%
8077           Citation '\@citeb' on page \thepage \space undefined%
8078         }%
8079       }{%
8080         \hbox{\csname b@ \@citeb \@extra@b@citeb\endcsname}%
8081       }%
8082     }%
8083   }{#1}%
8084 }%
8085 }{}

```

38.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to `\begin{document}`, because if `harvard.sty` is loaded and `html.sty` is present and detects pdfTeX, then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

8086 \@ifpackageloaded{harvard}{%
8087   \Hy@AtBeginDocument{%
8088     \Hy@Info{*** compatibility with harvard **** }%
8089     \Hy@raiselinksfalse
8090     \def\harvardcite#1#2#3#4{%
8091       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{#1}{#2}}%
8092       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{#1}{#3}}%
8093       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{#1}{#4}}%
8094       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8095     }%
8096     \def\HAR@citetoaux#1{%
8097       \iffilesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8098       \ifHy@backref
8099         \ifx\@empty\@currentlabel
8100         \else

```



```

8101 \bsphack
8102 \if@filesw
8103 \protected@write\@auxout{}\{
8104 \string\@writefile{brf}\{
8105 \string\backcite{#1}\{
8106 {\thepage}\@currentlabel}\@currentHref}%
8107 }%
8108 }%
8109 }%
8110 \fi
8111 \esphack
8112 \fi
8113 \fi
8114 }%
8115 \def\harvarditem{%
8116 \@ifnextchar{\@harvarditem}\@harvarditem[\null]}%
8117 }%
8118 \def\@harvarditem[#1]#2#3#4#5\par{%
8119 \item[]%
8120 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8121 \if@filesw
8122 \begingroup
8123 \def\protect##1{\string ##1\space}%
8124 \ifthenelse{equal{#1}\{null}}%
8125 {\def\next{{#4}{#2}{#2}{#3}}}%
8126 {\def\next{{#4}{#2}{#1}{#3}}}%
8127 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8128 \endgroup
8129 \fi
8130 \protect\hspace*{-\labelwidth}%
8131 \protect\hspace*{-\labelsep}%
8132 \ignorespaces
8133 #5%
8134 \ifHy@backref
8135 \newblock
8136 \backref{\csname br@#4\endcsname}%
8137 \fi
8138 \par
8139 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkcitations will fail every time and always will appear the “Changed labels” warning. So we have to redefine \Har@checkcitations:

```

8140 \long\def\HAR@checkcitations#1#2#3#4{%
8141 \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#2}}%
8142 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8143 \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#3}}%
8144 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8145 \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#4}}%
8146 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8147 \else
8148 \@tempswatruue
8149 \fi
8150 \else
8151 \@tempswatruue
8152 \fi
8153 \else

```

```

8154     \@tempswatrue
8155     \fi
8156   }%
8157 }%

8158 }{}

```

38.2 Package chicago

The links by `\citeN` and `\shortciteN` should include the closing parentheses.

```

8159 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

8160 \def\citeN{%
8161   \def\@citesep{-1000}%
8162   \def\@cite##1##2{##1}%
8163   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8164   \@citedata@opt
8165 }%

```

`\shortciteN`

```

8166 \def\shortciteN{%
8167   \def\@citesep{-1000}%
8168   \def\@cite##1##2{##1}%
8169   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8170   \@citedata@opt
8171 }%

```

`\@citedata@opt`

```

8172 \def\@citedata@opt{%
8173   \let\@cite@opt\@empty
8174   \@ifnextchar [{%
8175     \@tempswatrue
8176     \@citedatax@opt
8177   }{%
8178     \@tempswafalse
8179     \@citedatax[]%
8180   }%
8181 }%

```

`\@citedatax@opt`

```

8182 \def\@citedatax@opt[#1]{%
8183   \def\@cite@opt{, #1}%
8184   \@citedatax[{#1}]%
8185 }%

8186 }{}

```

39 Page numbers

The last page should not contain a `/Dur` key, because there is no page after the last page. Therefore at the last page there should be a command `\hypersetup{pdfpageduration={}}`. This can be set with `\AtEndDocument`, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by `hyperref`.

This where we supply a destination for each page.

```

8187 \ltx@ifclassloaded{slides}{%
8188   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8189   \def\Hy@PageAnchorSlidesPlain{%
8190     \advance\c@page\ltx@one
8191     \edef\Hy@TempPageAnchor{%
8192       \noexpand\hyper@@anchor{%
8193         page.\the\c@slide.\the\c@overlay.\the\c@note%
8194         \ifnum\c@page=\ltx@one
8195           \else
8196             .\the\c@page
8197           \fi
8198       }%
8199     }%
8200     \advance\c@page-\ltx@one
8201   }%
8202   \def\Hy@PageAnchorSlide{%
8203     \advance\c@page\ltx@one
8204     \ifnum\c@page>\ltx@one
8205       \ltx@ifundefined{theHpage}{%
8206         \protected@edef\Hy@TheSlideOptionalPage{%
8207           \Hy@SlidesFormatOptionalPage{theHpage}%
8208         }%
8209       }{%
8210         \protected@edef\Hy@TheSlideOptionalPage{%
8211           \Hy@SlidesFormatOptionalPage{theHpage}%
8212         }%
8213       }%
8214     \else
8215       \def\Hy@TheSlideOptionalPage{}%
8216     \fi
8217     \advance\c@page-\ltx@one
8218     \pdfstringdef\@the@H@page{%
8219       \csname
8220         the%
8221         \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8222         \Hy@SlidesPage
8223       \endcsname
8224     \Hy@TheSlideOptionalPage
8225   }%
8226   \ltx@gobblethree
8227 }%
8228 \def\Hy@SlidesPage{slide}%
8229 \g@addto@macro\slide{%
8230   \def\Hy@SlidesPage{slide}%
8231 }%
8232 \g@addto@macro\overlay{%
8233   \def\Hy@SlidesPage{overlay}%
8234 }%
8235 \g@addto@macro\note{%
8236   \def\Hy@SlidesPage{note}%
8237 }%
8238 }{%
8239   \def\Hy@PageAnchorSlidesPlain{}%
8240   \def\Hy@PageAnchorSlide{}%
8241 }
8242 \def\Hy@EveryPageAnchor{%

```

```

8243 \Hy@DistillerDestFix
8244 \ifHy@pageanchor
8245 \ifHy@hypertexnames
8246 \ifHy@plainpages
8247 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8248 \Hy@PageAnchorSlidesPlain
8249 \else
8250 \begingroup
8251 \let\@number\@firstofone
8252 \Hy@unicodefalse
8253 \Hy@PageAnchorSlide
8254 \pdfstringdef\@the@H@page{\thepage}%
8255 \endgroup
8256 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8257 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8258 \fi
8259 \else
8260 \Hy@GlobalStepCount\Hy@pagecounter
8261 \def\Hy@TempPageAnchor{%
8262 \hyper@@anchor{page.\the\Hy@pagecounter}%
8263 }%
8264 \fi
8265 \vbox to 0pt{%
8266 \kern\voffset
8267 \kern\topmargin
8268 \kern-1bp\relax
8269 \hbox to 0pt{%
8270 \kern\hoffset
8271 \kern\ifodd\value{page}%
8272 \oddsidemargin
8273 \else
8274 \evensidemargin
8275 \fi
8276 \kern-1bp\relax
8277 \Hy@TempPageAnchor\relax
8278 \hss
8279 }%
8280 \vss
8281 }%
8282 \fi
8283 }
8284 \g@addto@macro\Hy@EveryPageBoxHook{%
8285 \Hy@EveryPageAnchor
8286 }

```

40 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble.

```

8287 \def\addcontentsline#1#2#3{% toc extension, type, tag
8288 \begingroup
8289 \let\label\@gobble
8290 \ifx\@currentHref\@empty
8291 \Hy@Warning{%
8292 No destination for bookmark of \string\addcontentsline,%

```

```

8293     \MessageBreak destination is added%
8294 }%
8295 \phantomsection
8296 \fi
8297 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8298 \beginingroup
8299   \def\Hy@tempa{#1}%
8300   \ifx\Hy@tempa\Hy@bookmarkstype
8301     \Hy@WarningNoLine{%
8302       bookmark level for unknown #2 defaults to 0%
8303     }%
8304   \else
8305     \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8306   \fi
8307 \endgroup
8308 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8309 \fi
8310 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8311 \Hy@writebookmark{\csname the#2\endcsname}%
8312   {#3}%
8313   {\@currentHref}%
8314   {\Hy@toclevel}%
8315   {#1}%
8316 \ifHy@verbose
8317 \beginingroup
8318   \def\Hy@tempa{#3}%
8319   \@onelevel@sanitize\Hy@tempa
8320   \let\temp@online\on@line
8321   \let\on@line\@empty
8322   \Hy@Info{%
8323     bookmark\temp@online:\MessageBreak
8324     thecounter {\csname the#2\endcsname}\MessageBreak
8325     text {\Hy@tempa}\MessageBreak
8326     reference {\@currentHref}\MessageBreak
8327     toplevel {\Hy@toclevel}\MessageBreak
8328     type {#1}%
8329   }%
8330 \endgroup
8331 \fi
8332 \addtocontents{#1}{%
8333   \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
8334 }%
8335 \endgroup
8336 }

```

\contentsline The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

```

8337 \def\contentsline#1#2#3#4{%
8338   \beginingroup
8339     \Hy@safe@activetrue
8340   \edef\x{\endgroup
8341     \def\noexpand\Hy@tocdestname{#4}%
8342   }\x
8343   \ifx\Hy@tocdestname\lt@empty
8344     \csname l@#1\endcsname{#2}{#3}%
8345   \else
8346     \ifcase\Hy@linktoc % none

```

```

8347 \csname l@#1\endcsname{#2}{#3}%
8348 \or % section
8349 \csname l@#1\endcsname{%
8350 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8351 }{#3}%
8352 \or % page
8353 \def\Hy@temp{#3}%
8354 \ifx\Hy@temp\ltx@empty
8355 \csname l@#1\endcsname{#2}{#3}%
8356 \else
8357 \csname l@#1\endcsname{{#2}}{%
8358 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8359 }%
8360 \fi
8361 \else % all
8362 \def\Hy@temp{#3}%
8363 \ifx\Hy@temp\ltx@empty
8364 \csname l@#1\endcsname{%
8365 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8366 }{}%
8367 \else
8368 \csname l@#1\endcsname{%
8369 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8370 }{%
8371 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8372 }%
8373 \fi
8374 \fi
8375 \fi
8376 }

8377 \endpackage
8378 \if*check
8379 \checklatex
8380 \checkcommand\def\addcontentsline#1#2#3{%
8381 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8382 }
8383 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8384 \endcheck
8385 \if*package

```

41 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

8386 \let\H@definecounter\@definecounter
8387 \def\@definecounter#1{%
8388 \H@definecounter{#1}%
8389 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8390 }

```

But what if they have used the optional argument to e.g. `\newtheorem` to determine when the numbering is reset? OK, we'll trap that too.

```

8391 \let\H@newctr\@newctr
8392 \def\@newctr#1[#2]{%
8393 \H@newctr#1{#2}%
8394 \expandafter\gdef\csname theH#1\endcsname{%

```

```

8395 \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
8396 }%
8397 }

```

42 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```

8398 \@ifpackageloaded{amsmath}{%
8399 \def\Hy@make@anchor{%
8400 \Hy@MakeCurrentHrefAuto{AMS}%
8401 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8402 }%
8403 \def\Hy@make@df@tag@@#1{%
8404 \gdef\df@tag{%
8405 \maketag@@@{\Hy@make@anchor#1}%
8406 \def\@currentlabel{#1}%
8407 }%
8408 }%
8409 \def\Hy@make@df@tag@@@#1{%
8410 \gdef\df@tag{%
8411 \tagform@{\Hy@make@anchor#1}%
8412 \toks@{\xp{p@equation{#1}}}%
8413 \edef\@currentlabel{\the\toks@}%
8414 }%
8415 }%
8416 \let\HyOrg@make@df@tag@@\make@df@tag@@
8417 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8418 \let\make@df@tag@@\Hy@make@df@tag@@
8419 \let\make@df@tag@@@\Hy@make@df@tag@@@
8420 }{}

```

Only play with `\seteqlebal` if we are using pdf \TeX . Other drivers cause problems; requested by Michael Downes (AMS).

```

8421 \@ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
8422 \let\H@seteqlabel\@seteqlabel
8423 \def\@seteqlabel#1{%
8424 \H@seteqlabel{#1}%
8425 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8426 \Hy@raisedlink{%
8427 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8428 }%
8429 }%
8430 }{}

```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```

\let\H@tagform@\tagform@
\def\tagform@#1{%
\maketag@@@{\hyper@@anchor{\@currentHref}%
{(\ignorespaces#1\unskip)}}%
}

```

```
\def\eqref#1{\textup{\H@tagform@{\ref{#1}}}}
```

42.1 \@addtoreset and \numberwithin patches

\@addtoreset puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command \theHcounter is redefined in order to add the parent counter.

```
8431 \let\HyOrg@addtoreset\@addtoreset
8432 \def\@addtoreset#1#2{%
8433   \HyOrg@addtoreset{#1}{#2}%
8434   \expandafter\xdef\csname theH#1\endcsname{%
8435     \expandafter\noexpand
8436     \csname the\@ifundefined{theH#2}{H#2\endcsname
8437     .\noexpand\the\noexpand\value{#1}%
8438   }%
8439 }
```

\numberwithin A appropriate definition of hyperref's companion counter (\theH...) is added for correct link names.

```
8440 \</package>
8441 \< *check>
8442 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8443 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8444   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8445     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8446       \@addtoreset{#2}{#3}%
8447       \@xp\xdef\csname the#2\endcsname{%
8448         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8449       }%
8450     }%
8451   }%
8452 }%
8453 \</check>
8454 \< *package>
8455 \@ifpackageloaded{amsmath}{%
8456   \@ifpackagelater{amsmath}[1999/12/14]{%
8457     \renewcommand*\numberwithin[3][\arabic]{%
8458       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8459         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8460           \HyOrg@addtoreset{#2}{#3}%
8461           \@xp\xdef\csname the#2\endcsname{%
8462             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8463           }%
8464           \@xp\xdef\csname theH#2\endcsname{%
8465             \@xp\@nx
8466             \csname the\@ifundefined{theH#3}{H#3\endcsname
8467             .\@nx#1{#2}%
8468           }%
8469         }%
8470       }%
8471     }%
8472   }{%
8473     \Hy@WarningNoLine{%
8474       \string\numberwithin\space of package 'amsmath' %
8475       only fixed\MessageBreak
8476       for version 2000/06/06 v2.12 or newer%
```



```

8477 }%
8478 }%
8479 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8480 \ifHy@hyperfigures
8481 \let\Hy@Gin@setfile\Gin@setfile
8482 \def\Gin@setfile#1#2#3{%
8483 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8484 }%
8485 \fi
8486 \Hy@DisableOption{hyperfigures}

```

44 hyperindex entries

Internal command names are prefixed with `\HyInd@`.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the `|` feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the `|` specifier for something like boldening entries. That would make `Makeindex` fail (cannot have two `|` specifiers). The solution is for the author to use generic coding, and put in the requisite `\hyperpage` in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```

8487 \ifHy@hyperindex
8488 \def\HyInd@ParenLeft{({}%
8489 \def\HyInd@ParenRight{)}}%
8490 \def\hyperindexformat#1#2{%
8491 \let\HyOrg@hyperpage\hyperpage
8492 \let\hyperpage\@firstofone
8493 #1{\HyOrg@hyperpage{#2}}%
8494 \let\hyperpage\HyOrg@hyperpage
8495 }%
8496 \Hy@nextfalse
8497 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8498 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8499 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8500 \begingroup
8501 \lccode'\|=\expandafter'\HyInd@EncapChar\relax
8502 \lccode'\|/\='\\relax
8503 \lowercase{\endgroup
8504 \ifHy@next
8505 \let\HyInd@org@wrindex\@wrindex
8506 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\\}%
8507 \def\HyInd@@wrindex#1#2|#3|#4\\{%
8508 \ifx\\#3\\%
8509 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8510 \else
8511 \HyInd@@@wrindex{#1}{#2}#3\\%
8512 \fi
8513 }%
8514 \def\HyInd@@@wrindex#1#2#3#4\\{%

```

```

8515 \def\Hy@temp@A{#3}%
8516 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8517 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8518 \relax
8519 \HyInd@org@wrindex{#1}{%
8520 #2|hyperindexformat{/#3#4}%
8521 }%
8522 \else
8523 \ifx\\#4\\%
8524 \ifx\Hy@temp@A\HyInd@ParenRight
8525 \HyInd@org@wrindex{#1}{#2|#3}%
8526 \else
8527 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8528 \fi
8529 \else
8530 \HyInd@org@wrindex{#1}{%
8531 #2|#3hyperindexformat{/#4}%
8532 }%
8533 \fi
8534 \fi
8535 }%
8536 \else
8537 \def\@wrindex#1{\@@wrindex#1||\}%
8538 \def\@@wrindex#1|#2|#3\\{%
8539 \if@filesw
8540 \ifx\\#2\\%
8541 \protected@write\@indexfile{}{%
8542 \string\indexentry{#1|hyperpage}{\thepage}%
8543 }%
8544 \else
8545 \HyInd@@@wrindex{#1}#2\\%
8546 \fi
8547 \fi
8548 \endgroup
8549 \@esphack
8550 }%
8551 \def\HyInd@@@wrindex#1#2#3\\{%
8552 \def\Hy@temp@A{#2}%
8553 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8554 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8555 \relax
8556 \protected@write\@indexfile{}{%
8557 \string\indexentry{%
8558 #1|hyperindexformat{/#2#3}%
8559 }{\thepage}%
8560 }%
8561 \else
8562 \ifx\\#3\\%
8563 \ifx\Hy@temp@A\HyInd@ParenRight
8564 \protected@write\@indexfile{}{%
8565 \string\indexentry{#1|#2}{\thepage}%
8566 }%
8567 \else
8568 \protected@write\@indexfile{}{%
8569 \string\indexentry{#1|#2hyperpage}{\thepage}%
8570 }%
8571 \fi

```

```

8572     \else
8573     \protected@write\@indexfile{}\{
8574     \string\indexentry{
8575     #1|#2hyperindexformat{/#3}%
8576     }\thepage}%
8577     }%
8578     \fi
8579     \fi
8580     }%
8581     \fi
8582     }%
8583     \fi
8584 \Hy@DisableOption{hyperindex}
8585 \Hy@DisableOption{encap}

```

`\nohyperpage` The definition of `\nohyperpage` is just a precaution. It is used to mark code that does not belong to a page number, but `\nohyperpage` is never executed.

```

8586 \def\nohyperpage#1{#1}

```

This again is quite flaky, but allow for the common situation of a page range separated by en-rule. We split this into two different hyperlinked pages.

```

8587 \def\hyperpage#1{%
8588   \HyInd@hyperpage#1\nohyperpage{}\@nil
8589 }
8590 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8591   \HyInd@@hyperpage{#1}%
8592   #2%
8593   \def\Hy@temp{#3}%
8594   \ifx\Hy@temp\@empty
8595     \else
8596     \ltx@ReturnAfterFi{%
8597       \HyInd@hyperpage#3\@nil
8598     }%
8599     \fi
8600 }
8601 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8602 \def\@hyperpage#1--#2--#3\{\%
8603   \ifx\#2\%
8604     \@commahyperpage{#1}%
8605   \else
8606     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8607   \fi
8608 }
8609 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
8610 \def\@commahyperpage#1, #2,#3\{\%
8611   \ifx\#2\%
8612     \HyInd@pagelink{#1}%
8613   \else
8614     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8615   \fi
8616 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

8617 \def\HyInd@pagelink#1{%
8618   \begingroup
8619   \toks@={}%

```

```

8620 \HyInd@removespaces#1 \@nil
8621 \endgroup
8622 }
8623 \def\HyInd@removespaces#1 #2\@nil{%
8624 \toks@=\expandafter{\the\toks@#1}%
8625 \ifx\#2\%
8626 \edef\x{\the\toks@}%
8627 \ifx\x\@empty
8628 \else
8629 \hyperlink{page.\the\toks@}{\the\toks@}%
8630 \fi
8631 \else
8632 \ltx@ReturnAfterFi{%
8633 \HyInd@removespaces#2\@nil
8634 }%
8635 \fi
8636 }

```

45 Compatibility with foiltex

```

8637 \@ifclassloaded{foils}{%
8638 \providecommand*\ext@table{lot}%
8639 \providecommand*\ext@figure{lof}%
8640 }{}

```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

8641 \@ifclassloaded{seminar}{%
8642 \Hy@seminarslidestrue
8643 \providecommand\theHslide{\arabic{slide}}%
8644 }{%
8645 \Hy@seminarslidesfalse
8646 }
8647 \@ifpackageloaded{slidesec}{%
8648 \providecommand\theHslidesection {\arabic{slidesection}}%
8649 \providecommand\theHslidesubsection{%
8650 \theHslidesection.\arabic{slidesubsection}}%
8651 }%
8652 \def\slide@heading[#1]#2{%
8653 \H@refstepcounter{slidesection}%
8654 \@addtoreset{slidesubsection}{slidesection}%
8655 \addtocontents{los}{%
8656 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8657 {\@SCTR}{slideheading.\theslide\theslide\theslide}%
8658 }%
8659 \def\Hy@tempa{#2}%
8660 \ifx\Hy@tempa\@empty
8661 \else
8662 {%
8663 \edef\@currentlabel{%
8664 \csname p@slidesection\endcsname\theslide\theslide\theslide
8665 }%
8666 \makeslideheading{#2}%
8667 }%

```

```

8668 \fi
8669 \gdef\theslideheading{#1}%
8670 \gdef\theslidesubheading{}%
8671 \ifHy@bookmarksnumbered
8672 \def\Hy@slidetitle{\theslidesection\space #1}%
8673 \else
8674 \def\Hy@slidetitle{#1}%
8675 \fi
8676 \ifHy@hypertexnames
8677 \ifHy@naturalnames
8678 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8679 \Hy@writebookmark
8680 {\theslidesection}%
8681 {\Hy@slidetitle}%
8682 {slideheading.\theslidesection}%
8683 {1}%
8684 {toc}%
8685 \else
8686 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8687 \Hy@writebookmark
8688 {\theslidesection}%
8689 {\Hy@slidetitle}%
8690 {slideheading.\theHslidesection}%
8691 {1}%
8692 {toc}%
8693 \fi
8694 \else
8695 \Hy@GlobalStepCount\Hy@linkcounter
8696 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8697 \Hy@writebookmark
8698 {\theslidesection}%
8699 {\Hy@slidetitle}%
8700 {slideheading.\the\Hy@linkcounter}%
8701 {1}%
8702 {toc}%
8703 \fi
8704 }%
8705 \def\slide@subheading[#1]#2{%
8706 \H@refstepcounter{slidesubsection}%
8707 \addtocontents{los}{%
8708 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8709 {\@SCTR}{slideheading.\theslidesubsection}%
8710 }%
8711 \def\Hy@tempa{#2}%
8712 \ifx\Hy@tempa\@empty
8713 \else
8714 {%
8715 \edef\@currentlabel{%
8716 \csname p@slidesubsection\endcsname\theslidesubsection
8717 }%
8718 \makeslidesubheading{#2}%
8719 }%
8720 \fi
8721 \gdef\theslidesubheading{#1}%
8722 \ifHy@bookmarksnumbered
8723 \def\Hy@slidetitle{\theslidesubsection\space #1}%
8724 \else

```

```

8725 \def\Hy@slidetitle{#1}%
8726 \fi
8727 \ifHy@hypertextnames
8728 \ifHy@naturalnames
8729 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8730 \Hy@writebookmark
8731 {\theslidesubsection}%
8732 {\Hy@slidetitle}%
8733 {slideheading.\theslidesubsection}%
8734 {2}%
8735 {toc}%
8736 \else
8737 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8738 \Hy@writebookmark
8739 {\theslidesubsection}%
8740 {\Hy@slidetitle}%
8741 {slideheading.\theHslidesubsection}%
8742 {2}%
8743 {toc}%
8744 \fi
8745 \else
8746 \Hy@GlobalStepCount\Hy@linkcounter
8747 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8748 \Hy@writebookmark
8749 {\theslidesubsection}%
8750 {\Hy@slidetitle}%
8751 {slideheading.\the\Hy@linkcounter}%
8752 {1}%
8753 {toc}%
8754 \fi
8755 }%
8756 \providecommand*\listslidenamelist{List of Slides}%
8757 \def\listofslides{%
8758 \section*{%
8759 \listslidenamelist
8760 \@mkboth{%
8761 \expandafter\MakeUppercase\listslidenamelist
8762 }{%
8763 \expandafter\MakeUppercase\listslidenamelist
8764 }%
8765 }%
8766 \def\l@slide##1##2##3##4{%
8767 \slide@undottedcline{%
8768 \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
8769 }{}%
8770 }%
8771 \let\l@subslide\l@slide
8772 \@startlos
8773 }%
8774 \def\slide@contents{%
8775 \def\l@slide##1##2##3##4{%
8776 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8777 }%
8778 \let\l@subslide\@gobblefour
8779 \@startlos
8780 }%
8781 \def\Slide@contents{%

```

```

8782 \def\l@slide##1##2##3##4{%
8783 \ifcase\lslide@flag
8784 \message{##1 ** \the\c@slidesection}%
8785 \ifnum##1>\c@slidesection
8786 \def\lslide@flag{1}%
8787 {%
8788 \large
8789 \slide@cline{%
8790 \slidenumberline{$\rightarrow\bullet$}%
8791 {\hyperlink{##4}{##2}}}%
8792 }{##3}%
8793 }%
8794 \else
8795 {%
8796 \large
8797 \slide@cline{%
8798 \slidenumberline{$\surd\;\bullet$}%
8799 {\hyperlink{##4}{##2}}}%
8800 }{##3}%
8801 }%
8802 \fi
8803 \or
8804 \def\lslide@flag{2}%
8805 {%
8806 \large
8807 \slide@cline{%
8808 \slidenumberline{$\bullet$}%
8809 {\hyperlink{##4}{##2}}}%
8810 }{##3}%
8811 }%
8812 \or
8813 {%
8814 \large
8815 \slide@cline{%
8816 \slidenumberline{$\bullet$}%
8817 {\hyperlink{##4}{##2}}}%
8818 }{##3}%
8819 }%
8820 \fi
8821 }%
8822 \def\l@subslide##1##2##3##4{%
8823 \ifnum\lslide@flag=1 %
8824 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
8825 \fi
8826 }%
8827 \def\lslide@flag{0}%
8828 \@startlos
8829 }%
8830 }-}

```

This breaks TeX4ht, so leave it to last. Emend `\@setref` to put out a hypertext link as well as its normal text (which is used as an anchor). (`\endinput` have to be on the same line like `\fi`, or you have to use `\expandafter` before.)

```

8831 \ifHy@texht
8832 \expandafter\endinput
8833 \fi
8834 \let\real@setref\@setref
8835 \def\@setref#1#2#3{% curname, extract group, refname

```

```

8836 \ifx#1\relax
8837   \protect\G@refundefinedtrue
8838   \nfss@text{\reset@font\bfseries ??}%
8839   \@latex@warning{%
8840     Reference ‘#3’ on page \thepage \space undefined%
8841   }%
8842 \else
8843   \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8844 \fi
8845 }

```

`\Hy@setref@link` extracts the reference information entries, because `\hyper@link` does not expand arguments for the automatic link type detection.

```

8846 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8847   \begingroup
8848   \toks0={\hyper@link{#5}{#4}}%
8849   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8850   \edef\x{\endgroup
8851     \the\toks0 {\the\toks1 }%
8852   }%
8853   \x
8854 }
8855 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8856   \ifx#1\relax
8857     \protect\G@refundefinedtrue
8858     \nfss@text{\reset@font\bfseries ??}%
8859     \@latex@warning{%
8860       Reference ‘#3’ on page \thepage \space undefined%
8861     }%
8862   \else
8863     \protect\hyper@link
8864     {\expandafter\@fifthoffive#1}%
8865     {page.\expandafter\@secondoffive#1}%
8866     {\expandafter\@secondoffive#1}%
8867   \fi
8868 }
8869 </package>
8870 <*check>
8871 \checklatex
8872 \checkcommand\def\@setref#1#2#3{%
8873   \ifx#1\relax
8874     \protect\G@refundefinedtrue
8875     \nfss@text{\reset@font\bfseries ??}%
8876     \@latex@warning{%
8877       Reference ‘#3’ on page \thepage \space undefined%
8878     }%
8879   \else
8880     \expandafter#2#1\null
8881   \fi
8882 }
8883 </check>
8884 <*package>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

8885 \def\HyRef@StarSetRef#1{%
8886   \begingroup
8887   \Hy@safe@activetrue

```



```

8888 \edef\x{#1}%
8889 \@onelevel@sanitize\x
8890 \edef\x{\endgroup
8891 \noexpand\HyRef@@StarSetRef
8892 \expandafter\noexpand\csname r@\x\endcsname{\x}%
8893 }%
8894 \x
8895 }
8896 \def\HyRef@@StarSetRef#1#2#3{%
8897 \ifx#1\@undefined
8898 \let#1\relax
8899 \fi
8900 \real@setref#1#3{#2}%
8901 }
8902 \def\@refstar#1{%
8903 \HyRef@StarSetRef{#1}\@firstoffive
8904 }
8905 \def\@pagerefstar#1{%
8906 \HyRef@StarSetRef{#1}\@secondoffive
8907 }
8908 \def\@namerefstar#1{%
8909 \HyRef@StarSetRef{#1}\@thirdoffive
8910 }
8911 \Hy@AtBeginDocument{%
8912 \@ifpackageloaded{varioref}{%
8913 \def\@Refstar#1{%
8914 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8915 }%
8916 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8917 \MakeUppercase#1%
8918 }%
8919 \DeclareRobustCommand*\Ref}{%
8920 \@ifstar\@Refstar\HyRef@Ref
8921 }%
8922 \def\HyRef@Ref#1{%
8923 \hyperref[{#1}]{\Ref*{#1}}%
8924 }%
8925 \def\Vr@f#1{%
8926 \leavevmode\unskip\vref@space
8927 \hyperref[{#1}]{%
8928 \Ref*{#1}%
8929 \let\vref@space\nobreakspace
8930 \@vpageref[\unskip]{#1}%
8931 }%
8932 }%
8933 \def\vr@f#1{%
8934 \leavevmode\unskip\vref@space
8935 \begingroup
8936 \let\T@pageref\@pagerefstar
8937 \hyperref[{#1}]{%
8938 \ref*{#1}%
8939 \vpageref[\unskip]{#1}%
8940 }%
8941 \endgroup
8942 }%
8943 }{}%
8944 }

```

```

8945 \DeclareRobustCommand*\autopageref}{%
8946   \@ifstar{%
8947     \HyRef@autopagerefname\pageref*%
8948   }\HyRef@autopageref
8949 }
8950 \def\HyRef@autopageref#1{%
8951   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
8952 }
8953 \def\HyRef@autopagerefname{%
8954   \ltx@ifundefined{pageautorefname}{%
8955     \ltx@ifundefined{pagename}{%
8956       \Hy@Warning{No autoref name for 'page'}%
8957     }{%
8958       \pagename\nobreakspace
8959     }%
8960   }{%
8961     \pageautorefname\nobreakspace
8962   }%
8963 }

```

\leavevmode is added to make package wrapfigure happy, if \autoref starts a paragraph.

```

8964 \DeclareRobustCommand*\autoref}{%
8965   \leavevmode
8966   \@ifstar{\HyRef@autoref\@gobbletwo}{\HyRef@autoref\hyper@@link}%
8967 }
8968 \def\HyRef@autoref#1#2{%
8969   \begingroup
8970     \Hy@safe@activestrue
8971     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8972   \endgroup
8973 }
8974 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8975   \HyRef@ShowKeysRef{#2}%
8976   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8977   \edef\HyRef@thisref{%
8978     \expandafter\@fourthoffive#1\@empty\@empty\@empty
8979   }%
8980   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8981   \Hy@safe@activesfalse
8982   #3{%
8983     \expandafter\@fifthoffive#1\@empty\@empty\@empty
8984   }{%
8985     \expandafter\@fourthoffive#1\@empty\@empty\@empty
8986   }{%
8987     \HyRef@currentHtag
8988     \expandafter\@firstoffive#1\@empty\@empty\@empty
8989     \null
8990   }%
8991   \else
8992     \protect\G@refundefinedtrue
8993     \nfss@text{\reset@font\bfseries ??}%
8994     \@latex@warning{%
8995       Reference ‘#2’ on page \thepage\space undefined%
8996     }%
8997   \fi
8998 }
8999 \def\HyRef@testreftype#1.#2\{\%

```

```

9000 \ltx@ifundefined{#1autorefname}{%
9001   \ltx@ifundefined{#1name}{%
9002     \HyRef@StripStar#1\\*\\\@nil{#1}%
9003     \ltx@ifundefined{\HyRef@name autorefname}{%
9004       \ltx@ifundefined{\HyRef@name name}{%
9005         \def\HyRef@currentHtag{%
9006           \Hy@Warning{No autoref name for '#1'}%
9007         }%
9008         \edef\HyRef@currentHtag{%
9009           \expandafter\noexpand\csname\HyRef@name name\endcsname
9010           \noexpand~%
9011         }%
9012       }%
9013     }%
9014     \edef\HyRef@currentHtag{%
9015       \expandafter\noexpand
9016       \csname\HyRef@name autorefname\endcsname
9017       \noexpand~%
9018     }%
9019   }%
9020 }%
9021 \edef\HyRef@currentHtag{%
9022   \expandafter\noexpand\csname#1name\endcsname
9023   \noexpand~%
9024 }%
9025 }%
9026 }%
9027 \edef\HyRef@currentHtag{%
9028   \expandafter\noexpand\csname#1autorefname\endcsname
9029   \noexpand~%
9030 }%
9031 }%
9032 }
9033 \def\HyRef@StripStar#1*\\#2\@nil#3{%
9034   \def\HyRef@name{#2}%
9035   \ifx\HyRef@name\HyRef@CaseStar
9036     \def\HyRef@name{#1}%
9037   \else
9038     \def\HyRef@name{#3}%
9039   \fi
9040 }
9041 \def\HyRef@CaseStar{*\\}
9042 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@showkeysRef

```

9043 \let\HyRef@showkeysRef\@gobble
9044 \def\HyRef@showkeysInit{%
9045   \begingroup\expandafter\expandafter\expandafter\endgroup
9046   \expandafter\ifx\csname SK@@label\endcsname\relax
9047   \else
9048     \ifx\SK@ref\@empty
9049     \else
9050       \def\HyRef@showkeysRef{%
9051         \SK@\SK@@ref
9052       }%
9053     \fi

```

```

9054 \fi
9055 }
9056 \@ifpackageloaded{showkeys}{%
9057   \HyRef@ShowKeysInit
9058 }{%
9059   \Hy@AtBeginDocument{%
9060     \@ifpackageloaded{showkeys}{%
9061       \HyRef@ShowKeysInit
9062     }{%
9063     }%
9064 }

```

Defaults for the names that `\autoref` uses.

```

9065 \providecommand*\AMSautorefname{\equationautorefname}
9066 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9067 \providecommand*\Itemautorefname{\itemautorefname}
9068 \providecommand*\itemautorefname{item}
9069 \providecommand*\equationautorefname{Equation}
9070 \providecommand*\footnoteautorefname{footnote}
9071 \providecommand*\itemautorefname{item}
9072 \providecommand*\figureautorefname{Figure}
9073 \providecommand*\tableautorefname{Table}
9074 \providecommand*\partautorefname{Part}
9075 \providecommand*\appendixautorefname{Appendix}
9076 \providecommand*\chapterautorefname{chapter}
9077 \providecommand*\sectionautorefname{section}
9078 \providecommand*\subsectionautorefname{subsection}
9079 \providecommand*\subsubsectionautorefname{subsubsection}
9080 \providecommand*\paragraphautorefname{paragraph}
9081 \providecommand*\subparagraphautorefname{subparagraph}
9082 \providecommand*\FancyVerbLineautorefname{line}
9083 \providecommand*\theoremautorefname{Theorem}
9084 \providecommand*\pageautorefname{page}
9085 </package>

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdfTeX offers `\pdfescapestring`.

```

9086 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9087 \begingroup\expandafter\expandafter\expandafter\endgroup
9088 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9089   \begingroup
9090     \catcode'\| =0 %
9091     \@makeother\| %
9092     |@firstofone{| \endgroup
9093     |def|Hy@pstringdef#1#2{%
9094       |begingroup
9095       |edef~{|string~}%

```

```

9096 |xdef\Hy@gtemp{#2}%
9097 |endgroup
9098 |let#1\Hy@gtemp
9099 |@onelevel@sanitize#1%
9100 |edef#1{|expandafter\Hy@ExchangeBackslash#1\|@nil}%
9101 |edef#1{|expandafter\Hy@ExchangeLeftParenthesis#1(|@nil}%
9102 |edef#1{|expandafter\Hy@ExchangeRightParenthesis#1)|@nil}%
9103 }%
9104 |def\Hy@ExchangeBackslash#1\#2|@nil{%
9105 #1%
9106 |ifx|\#2|\%%
9107 |else
9108 \\\%
9109 |ltx@ReturnAfterFi{%
9110 |Hy@ExchangeBackslash#2|@nil
9111 }%
9112 |fi
9113 }%
9114 }%
9115 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9116 #1%
9117 \ifx\#2\%%
9118 \else
9119 \@backslashchar(%
9120 \ltx@ReturnAfterFi{%
9121 \Hy@ExchangeLeftParenthesis#2\@nil
9122 }%
9123 \fi
9124 }%
9125 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9126 #1%
9127 \ifx\#2\%%
9128 \else
9129 \@backslashchar)%
9130 \ltx@ReturnAfterFi{%
9131 \Hy@ExchangeRightParenthesis#2\@nil
9132 }%
9133 \fi
9134 }%
9135 \else
9136 \def\Hy@pstringdef#1#2{%
9137 \begingroup
9138 \edef~{\string~}%
9139 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9140 \endgroup
9141 \let#1\Hy@gtemp
9142 }%
9143 \fi
9144 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9145 <*pdfTeX>
9146 \providecommand*\XR@ext}{pdf}
9147 \Hy@setbreaklinks{true}
9148 \def\HyPat@ObjRef{%
9149 [0-9]*[1-9][0-9]* 0 R%

```

9150 }

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option pdfversion.

- pdfT_EX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfT_EX 1.30, 2005-08-081: \pdfminorversion

```
9151 \let\Hy@pdfminorversion\relax
9152 \begingroup\expandafter\expandafter\expandafter\endgroup
9153 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9154 \begingroup\expandafter\expandafter\expandafter\endgroup
9155 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9156 \else
9157 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9158 \fi
9159 \else
9160 \def\Hy@pdfminorversion{\pdfminorversion}%
9161 \fi
9162 \@ifundefined{Hy@pdfminorversion}{%
9163 \PackageInfo{hyperref}{%
9164 PDF version is not set, because pdfTeX is too old (<1.10a)%
9165 }%
9166 }{%
9167 \ifHy@ocgcolorlinks
9168 \ifnum\Hy@pdfminorversion<5 %
9169 \kvsetkeys{Hyp}{pdfversion=1.5}%
9170 \fi
9171 \fi
9172 \ifHy@setpdfversion
9173 \ifnum\Hy@pdfversion<5 %
9174 \ltx@ifundefined{pdfobjcompresslevel}{%
9175 }{%
9176 \ifHy@verbose
9177 \Hy@InfoNoLine{%
9178 PDF object streams are disabled, because they are%
9179 \MessageBreak
9180 not supported in requested PDF version %
9181 1.\Hy@pdfversion
9182 }%
9183 \fi
9184 \pdfobjcompresslevel=\ltx@zero
9185 }%
9186 \fi
9187 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9188 \else
9189 \let\Hy@temp\ltx@empty
9190 \def\Hy@temp@A#1#2{%
9191 \ifnum#1>\ltx@zero
9192 \edef\Hy@temp{%
9193 \Hy@temp
9194 \space\space
9195 \the#1\space #2%
9196 \ifnum#1=\ltx@one\else s\fi
9197 \MessageBreak
9198 }%
```

```

9199 \fi
9200 }%
9201 \Hy@temp@A\pdflastobj{PDF object}%
9202 \Hy@temp@A\pdflastxform{form XObject}%
9203 \Hy@temp@A\pdflastximage{image XObject}%
9204 \Hy@temp@A\pdflastannot{annotation}%
9205 \ltx@ifundefined{pdflastlink}{%
9206 }{%
9207 \Hy@temp@A\pdflastlink{link}%
9208 }%
9209 \ifx\Hy@temp\ltx@empty
9210 \Hy@pdfminorversion=\Hy@pdfversion\relax
9211 \else
9212 \let\Hy@temp@A\ltx@empty
9213 \ifnum\Hy@pdfversion=4 %
9214 \IfFileExists{pdf14.sty}{%
9215 \def\Hy@temp@A{%
9216 \MessageBreak
9217 Or \string\RequirePackage{pdf14} can be used%
9218 \MessageBreak
9219 before \string\documentclass\space as shortcut%
9220 }%
9221 }{}%
9222 \fi
9223 \Hy@WarningNoLine{%
9224 The PDF version number could not be set,\MessageBreak
9225 because some PDF objects are already written:%
9226 \MessageBreak
9227 \Hy@temp
9228 The version should be set as early as possible:%
9229 \MessageBreak
9230 \space\space
9231 \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9232 \string\relax
9233 \ifnum\Hy@pdfversion<5 %
9234 \ltx@ifundefined{pdfobjcompresslevel}{%
9235 }{%
9236 \MessageBreak
9237 \space\space
9238 \string\pdfobjcompresslevel=0\string\relax
9239 }%
9240 \fi
9241 \Hy@temp@A
9242 }%
9243 \fi
9244 \fi
9245 \PackageInfo{hyperref}{%
9246 \expandafter\string\Hy@pdfminorversion
9247 :=\number\Hy@pdfversion\space
9248 }%
9249 \fi
9250 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9251 }
9252 \Hy@DisableOption{pdfversion}%
9253 \ifHy@ocgcolorlinks
9254 \pdf@ifdraftmode{}{%
9255 \immediate\pdfobj{%

```

```

9256 <<%
9257 /Type/OCG%
9258 /Name(View)%
9259 /Usage<<%
9260 /Print<<%
9261 /PrintState/OFF%
9262 >>%
9263 /View<<%
9264 /ViewState/ON%
9265 >>%
9266 >>%
9267 >>%
9268 }%
9269 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
9270 \immediate\pdfobj{%
9271 <<%
9272 /Type/OCG%
9273 /Name(Print)%
9274 /Usage<<%
9275 /Print<<%
9276 /PrintState/ON%
9277 >>%
9278 /View<<%
9279 /ViewState/OFF%
9280 >>%
9281 >>%
9282 >>%
9283 }%
9284 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
9285 \immediate\pdfobj{%
9286 [%
9287 \OBJ@OCG@view\space\OBJ@OCG@print
9288 ]%
9289 }%
9290 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
9291 \pdfcatalog{%
9292 /OCProperties<<%
9293 /OCGs \OBJ@OCGs
9294 /D<<%
9295 /OFF[\OBJ@OCG@print]%
9296 /AS[%
9297 <<%
9298 /Event/View%
9299 /OCGs \OBJ@OCGs
9300 /Category[/View]%
9301 >>%
9302 <<%
9303 /Event/Print%
9304 /OCGs \OBJ@OCGs
9305 /Category[/Print]%
9306 >>%
9307 <<%
9308 /Event/Export%
9309 /OCGs \OBJ@OCGs
9310 /Category[/Print]%
9311 >>%
9312 ]%

```



```

9313     >>%
9314     >>%
9315 }%
9316 \begingroup
9317 \edef\x{\endgroup
9318 \pdfpageresources{%
9319 \the\pdfpageresources
9320 /Properties<<%
9321 /OCView \OBJ@OCG@view
9322 /OCPrint \OBJ@OCG@print
9323 >>%
9324 }%
9325 }%
9326 \x
9327 }%
9328 \Hy@AtBeginDocument{%
9329 \def\Hy@colorlink#1{%
9330 \begingroup
9331 \ifHy@ocgcolorlinks
9332 \def\Hy@ocgcolor{#1}%
9333 \setbox0=\hbox\bgroup\color@begingroup
9334 \else
9335 \HyColor@UseColor#1%
9336 \fi
9337 }%
9338 \def\Hy@endcolorlink{%
9339 \ifHy@ocgcolorlinks
9340 \color@endgroup\egroup
9341 \mbox{%
9342 \pdfliteral page{/OC/OCPrint BDC}%
9343 \rlap{\copy0}%
9344 \pdfliteral page{EMC/OC/OCView BDC}%
9345 \begingroup
9346 \expandafter\HyColor@UseColor\Hy@ocgcolor
9347 \box0 %
9348 \endgroup
9349 \pdfliteral page{EMC}%
9350 }%
9351 \fi
9352 \endgroup
9353 }%
9354 }%
9355 \else
9356 \Hy@DisableOption{ocgcolorlinks}%
9357 \fi

```

First, allow for some changes and additions to pdftex syntax:

```

9358 \def\setpdfinkmargin#1{\pdfinkmargin#1}
9359 \ifx\pdfstartlink\@undefined% less than version 14
9360 \let\pdfstartlink\pdfannotlink
9361 \let\pdfinkmargin\@tempdima
9362 \let\pdfxform\pdfform
9363 \let\pdfastxform\pdfastform
9364 \let\pdfrefxform\pdfrefform
9365 \else
9366 \pdfinkmargin1pt %
9367 \fi

```

First set up the default linking

```
9368 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
9369 \Hy@WrapperDef\new@pdfink#1{%
9370   \ifhmode
9371     \@savsf\spacefactor
9372   \fi
9373   \Hy@SaveLastskip
9374   \Hy@VerboseAnchor{#1}%
9375   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9376   \Hy@DestName\Hy@pstringDest\@pdfview
9377   \Hy@RestoreLastskip
9378   \ifhmode
9379     \spacefactor\@savsf
9380   \fi
9381 }
9382 \let\pdf@endanchor\@empty
```

`\Hy@DestName` Wrap the call of `\pdfdest name` in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```
9383 \def\Hy@DestName#1#2{%
9384   \pdfdest name{#1}#2\relax
9385 }
```

Now the links; the interesting part here is the set of attributes which define how the link looks. We probably want to add a border and color it, but there are other choices. This directly translates to PDF code, so consult the manual for how to change this. We will add an interface at some point.

```
9386 \providecommand*\@pdfborder{0 0 1}
9387 \providecommand*\@pdfborderstyle{}
9388 \def\Hy@undefinedname{UNDEFINED}
9389 \def\find@pdfink#1#2{%
9390   \leavevmode
9391   \protected@edef\Hy@testname{#2}%
9392   \ifx\Hy@testname\@empty
9393     \Hy@Warning{%
9394       Empty destination name,\MessageBreak
9395       using ‘\Hy@undefinedname’%
9396     }%
9397     \let\Hy@testname\Hy@undefinedname
9398   \else
9399     \Hy@pstringdef\Hy@testname{%
9400       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9401     }%
9402   \fi
9403   \Hy@StartlinkName{%
9404     \ifHy@pdfa /F 4\fi
9405     \Hy@setpdfborder
9406     \ifx\@pdfhighlight\@empty
9407       \else
9408         /H\@pdfhighlight
9409       \fi
9410     \ifx\CurrentBorderColor\relax
9411       \else
9412         /C[\CurrentBorderColor]%
9413     \fi
```

```

9414 } \Hy@testname
9415 \expandafter \Hy@colorlink \csname @#1color\endcsname
9416 }
9417 \def \Hy@StartlinkName#1#2{%
9418 \pdfstartlink attr{#1}goto name{#2}\relax
9419 }
9420 \def \close@pdfink{%
9421 \Hy@endcolorlink
9422 \Hy@VerboseLinkStop
9423 \pdfendlink
9424 }
9425 \def \hyper@anchor#1{%
9426 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9427 }
9428 \def \hyper@anchorstart#1{%
9429 \new@pdfink{#1}%
9430 \Hy@activeanchortrue
9431 }
9432 \def \hyper@anchorend{%
9433 \pdf@endanchor
9434 \Hy@activeanchorfalse
9435 }
9436 \def \hyper@linkstart#1#2{%
9437 \Hy@VerboseLinkStart{#1}{#2}%
9438 \ltx@ifundefined{@#1bordercolor}{%
9439 \let\CurrentBorderColor\relax
9440 }{%
9441 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9442 }%
9443 \find@pdfink{#1}{#2}%
9444 }
9445 \def \hyper@linkend{\close@pdfink}
9446 \def \hyper@link#1#2#3{%
9447 \Hy@VerboseLinkStart{#1}{#2}%
9448 \ltx@ifundefined{@#1bordercolor}{%
9449 \let\CurrentBorderColor\relax
9450 }{%
9451 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9452 }%
9453 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9454 \close@pdfink
9455 }
9456 \let\CurrentBorderColor\@linkbordercolor
9457 \def \hyper@linkurl#1#2{%
9458 \begingroup
9459 \Hy@pstringdef\Hy@pstringURI{#2}%
9460 \hyper@chars
9461 \leavevmode
9462 \pdfstartlink
9463 attr{%
9464 \Hy@setpdfborder
9465 \ifx\@pdfhighlight\@empty
9466 \else
9467 /H\@pdfhighlight
9468 \fi
9469 \ifx\@urlbordercolor\relax
9470 \else

```

```

9471      /C[\@urlbordercolor]%
9472      \fi
9473  }%
9474  user{%
9475      /Subtype/Link%
9476      \ifHy@pdfa /F 4\fi
9477      /A<<%
9478      /Type/Action%
9479      /S/URI%
9480      /URI(\Hy@pstringURI)%
9481      \ifHy@href@ismap
9482      /IsMap true%
9483      \fi
9484      \Hy@href@nextactionraw
9485      >>%
9486  }%
9487      \relax
9488      \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9489      \close@pdflink
9490  \endgroup
9491  }
9492  \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9493      \begingroup
9494      \def\Hy@pstringF{#2}%
9495      \Hy@CleanupFile\Hy@pstringF
9496      \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9497      \Hy@pstringdef\Hy@pstringD{#3}%
9498      \Hy@MakeRemoteAction
9499      \leavevmode
9500      \pdfstartlink
9501      attr{%
9502          \Hy@setpdfborder
9503          \ifx\@pdfhighlight\@empty
9504              \else
9505              /H\@pdfhighlight
9506          \fi
9507          \ifx\@filebordercolor\relax
9508              \else
9509              /C[\@filebordercolor]%
9510          \fi
9511      }%
9512      user {%
9513          /Subtype/Link%
9514          \ifHy@pdfa /F 4\fi
9515          /A<<%
9516          /F(\Hy@pstringF)%
9517          /S/GoToR%
9518          \Hy@SetNewWindow

```

If #3 is empty, page 0; if its a number, Page number, otherwise a named destination.

```
\afterassignment\xxx\count@=0\foo!
```

```

\def\xxx#1!{%
  \ifx\xxx#1\xxx
    foo was an integer
  \else
    it wasnt

```

```

\fi}

9519 \ifx\|#3\%
9520 /D[\Hy@href@page\@pdfremotestartview]%
9521 \else
9522 /D(\Hy@pstringD)%
9523 \fi
9524 \Hy@href@nextactionraw
9525 >>%
9526 }%
9527 \relax
9528 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9529 \close@pdflink
9530 \endgroup
9531 }
9532 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9533 \begingroup
9534 \Hy@pstringdef\Hy@pstringF{#1}%
9535 \Hy@pstringdef\Hy@pstringP{#3}%
9536 \leavevmode
9537 \pdfstartlink
9538 attr{%
9539 \Hy@setpdfborder
9540 \ifx\@pdfhighlight\@empty
9541 \else
9542 /H\@pdfhighlight
9543 \fi
9544 \ifx\@runbordercolor\relax
9545 \else
9546 /C\@runbordercolor}%
9547 \fi
9548 }%
9549 user {%
9550 /Subtype/Link%
9551 \ifHy@pdfa /F 4\fi
9552 /A<<%
9553 /F(\Hy@pstringF)%
9554 /S/Launch%
9555 \Hy@SetNewWindow
9556 \ifx\|#3\%
9557 \else
9558 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9559 \fi
9560 \Hy@href@nextactionraw
9561 >>%
9562 }%
9563 \relax
9564 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9565 \close@pdflink
9566 \endgroup
9567 }

\@pdfproducer

9568 \ifx\@pdfproducer\relax
9569 \begingroup\expandafter\expandafter\expandafter\endgroup
9570 \expandafter\ifx\csname luatexversion\endcsname\relax
9571 \def\@pdfproducer{pdfTeX}%

```

```

9572 \ifx\TeXversion\@undefined
9573 \else
9574 \ifx\TeXversion\relax
9575 \else
9576 \ifnum\TeXversion>0 %
9577 \def\@pdfproducer{pdfTeX}%
9578 \fi
9579 \fi
9580 \fi
9581 \ifx\pdfTeXversion\@undefined
9582 \else
9583 \ifnum\pdfTeXversion<100 %
9584 \edef\@pdfproducer{%
9585 \@pdfproducer
9586 \the\pdfTeXversion.\pdfTeXrevision
9587 }%
9588 \else
9589 \ifnum\pdfTeXversion<130 %
9590 \edef\@pdfproducer{%
9591 \@pdfproducer-%
9592 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9593 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
9594 \pdfTeXrevision
9595 }%
9596 \else
9597 \ifnum\pdfTeXversion<140 %
9598 \else
9599 \def\@pdfproducer{pdfTeX}%
9600 \fi
9601 \edef\@pdfproducer{%
9602 \@pdfproducer-%
9603 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9604 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9605 \pdfTeXrevision
9606 }%
9607 \fi
9608 \fi
9609 \fi
9610 \else
9611 \begingroup
9612 \count@=\luatexversion
9613 \divide\count@ by 100 %
9614 \edef\x{\the\count@}%
9615 \count@=-\x\relax
9616 \multiply\count@ by 100 %
9617 \advance\count@ by \luatexversion
9618 \edef\x{\endgroup
9619 \def\noexpand\@pdfproducer{%
9620 LuaTeX-\x.\the\count@.\luatexrevision
9621 }%
9622 }%
9623 \x
9624 \fi
9625 \fi

```

\PDF@SetupDox

```

9626 \def\PDF@SetupDoc{%
9627 \ifx\@pdfpagescrop\@empty

```

```

9628 \else
9629 \edef\process@me{%
9630 \pdfpagesattr={%
9631 /CropBox[\@pdfpagescrop]%
9632 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
9633 \else
9634 ^^J\the\pdfpagesattr
9635 \fi
9636 }%
9637 }%
9638 \process@me
9639 \fi
9640 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9641 \pdfcatalog{%
9642 /PageMode/\@pdfpagemode
9643 \ifx\@baseurl\@empty
9644 \else
9645 /URI<</Base(\Hy@pstringB)>>%
9646 \fi
9647 }%
9648 \ifx\@pdfstartpage\@empty
9649 \else
9650 \ifx\@pdfstartview\@empty
9651 \else
9652 openaction goto page\@pdfstartpage{\@pdfstartview}%
9653 \fi
9654 \fi
9655 \edef\Hy@temp{%
9656 \ifHy@pdftoolbar\else /HideToolbar true\fi
9657 \ifHy@pdfmenubar\else /HideMenubar true\fi
9658 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9659 \ifHy@pdffitwindow /FitWindow true\fi
9660 \ifHy@pdfcenterwindow /CenterWindow true\fi
9661 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9662 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9663 \Hy@UseNameKey{Direction}\@pdfdirection
9664 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9665 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9666 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9667 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9668 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9669 \Hy@UseNameKey{Duplex}\@pdfduplex
9670 \ifx\@pdfpicktraybypdfsize\@empty
9671 \else
9672 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9673 \fi
9674 \ifx\@pdfprintpagerange\@empty
9675 \else
9676 /PrintPageRange[\@pdfprintpagerange]%
9677 \fi
9678 \ifx\@pdfnumcopies\@empty
9679 \else
9680 /NumCopies \@pdfnumcopies
9681 \fi
9682 }%
9683 \pdfcatalog{%
9684 \ifx\Hy@temp\@empty

```

```

9685 \else
9686 /ViewerPreferences<<\Hy@temp>>%
9687 \fi
9688 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9689 \ifx\@pdflang\@empty
9690 \else
9691 /Lang(\@pdflang)%
9692 \fi
9693 }%
9694 }

```

\PDF@FinishDoc

```

9695 \def\PDF@FinishDoc{%
9696 \pdf@ifdraftmode{ }{%
9697 \Hy@UseMaketitleInfos
9698 \HyInfo@GenerateAddons
9699 \pdfinfo{%
9700 /Author(\@pdfauthor)%
9701 /Title(\@pdftitle)%
9702 /Subject(\@pdfsubject)%
9703 /Creator(\@pdfcreator)%
9704 \ifx\@pdfcreationdate\@empty
9705 \else
9706 /CreationDate(\@pdfcreationdate)%
9707 \fi
9708 \ifx\@pdfmoddate\@empty
9709 \else
9710 /ModDate(\@pdfmoddate)%
9711 \fi
9712 \ifx\@pdfproducer\relax
9713 \else
9714 /Producer(\@pdfproducer)%
9715 \fi
9716 /Keywords(\@pdfkeywords)%
9717 \ifx\@pdftrapped\@empty
9718 \else
9719 /Trapped/\@pdftrapped
9720 \fi
9721 \HyInfo@Addons
9722 }%
9723 }%
9724 \Hy@DisableOption{pdfauthor}%
9725 \Hy@DisableOption{pdftitle}%
9726 \Hy@DisableOption{pdfsubject}%
9727 \Hy@DisableOption{pdfcreator}%
9728 \Hy@DisableOption{pdfcreationdate}%
9729 \Hy@DisableOption{pdfmoddate}%
9730 \Hy@DisableOption{pdfproducer}%
9731 \Hy@DisableOption{pdfkeywords}%
9732 \Hy@DisableOption{pdftrapped}%
9733 \Hy@DisableOption{pdfinfo}%
9734 }

```

\hyper@pagetransition \@pdfpagetransition is initialized with \relax. So it indicates, if option pdfpagetransition is used. First previous /Trans entries are removed. If a new /Trans key exists, it is appended to \pdfpageattr.

```

9735 \def\hyper@pagetransition{%

```



```

9736 \ifx\@pdfpagetransition\relax
9737 \else
9738 \expandafter\Hy@RemoveTransPageAttr
9739 \the\pdfpageattr^^J/Trans{}}>>\END
9740 \ifx\@pdfpagetransition\@empty
9741 \else
9742 \edef\@processme{%
9743 \global\pdfpageattr{%
9744 \the\pdfpageattr
9745 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9746 }%
9747 }%
9748 \@processme
9749 \fi
9750 \fi
9751 }

```

\Hy@RemoveTransPageAttr Macro `\Hy@RemoveTransPageAttr` removes a `/Trans` entry from `\pdfpageattr`. It is called with the end marker `^^J/Trans{}}>>\END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument **#2** and shows, whether the parameter text catches a really `/Trans` object or the end marker.

```

9752 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9753 \ifx\#2\%
9754 \global\pdfpageattr{#1}%
9755 \else
9756 \Hy@RemoveTransPageAttr#1#4\END
9757 \fi
9758 }

```

\hyper@pageduration `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpage-duration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

9759 \def\hyper@pageduration{%
9760 \ifx\@pdfpageduration\relax
9761 \else
9762 \expandafter
9763 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{}} \END
9764 \ifx\@pdfpageduration\@empty
9765 \else
9766 \edef\@processme{%
9767 \global\pdfpageattr{%
9768 \the\pdfpageattr
9769 ^^J/Dur \@pdfpageduration\space
9770 }%
9771 }%
9772 \@processme
9773 \fi
9774 \fi
9775 }

```

\Hy@RemoveDurPageAttr Macro `\Hy@RemoveDurPageAttr` removes a `/Dur` entry from `\pdfpageattr`. It is called with the end marker `^^J/Dur{}} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument **#2** and shows, whether the parameter text catches a really `/Dur` object or the end marker.

```

9776 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%

```

```

9777 \ifx\|#2\|%
9778 \global\pdfpageattr{#1}%
9779 \else
9780 \Hy@RemoveDurPageAttr#1#4\END
9781 \fi
9782 }

```

`\hyper@pagehidden` The boolean value of the key `/Hid` is stored in switch `\ifHy@pdfpagehidden`. First previous `/Hid` entries are removed, then the new one is appended, if the value is true (the PDF default is false).

```

9783 \def\hyper@pagehidden{%
9784 \ifHy@useHidKey
9785 \expandafter
9786 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
9787 \ifHy@pdfpagehidden
9788 \edef\@processme{%
9789 \global\pdfpageattr{%
9790 \the\pdfpageattr
9791 ^^J/Hid true % SPACE
9792 }%
9793 }%
9794 \@processme
9795 \fi
9796 \fi
9797 }

```

`\Hy@RemoveHidPageAttr` Macro `\Hy@RemoveHidPageAttr` removes a `/Hid` entry from `\pdfpageattr`. It is called with the end marker `^^J/Hid{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Hid` object or the end marker.

```

9798 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
9799 \ifx\|#2\|%
9800 \global\pdfpageattr{#1}%
9801 \else
9802 \Hy@RemoveHidPageAttr#1#4\END
9803 \fi
9804 }

9805 \pdf@ifdraftmode{}{%
9806 \g@addto@macro\Hy@EveryPageHook{%
9807 \hyper@pagetransition
9808 \hyper@pageduration
9809 \hyper@pagehidden
9810 }%
9811 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

9812 </pdfTeX>
9813 <{*pdfTeX|xetex>
9814 \Hy@AtBeginDocument{%
9815 \ifHy@setpagesize
9816 \expandafter\@firstofone
9817 \else
9818 \expandafter\@gobble
9819 \fi
9820 {%

```

```

9821 \ifclassloaded{seminar}{%
9822 (*pdfTeX)
9823 \setlength{\pdfhorigin}{1truein}%
9824 \setlength{\pdfvorigin}{1truein}%
9825 /pdfTeX)
9826 \ifportrait
9827 \ifdim\paperwidth=\z@
9828 \else
9829 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9830 \fi
9831 \ifdim\paperheight=\z@
9832 \else
9833 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9834 \fi
9835 \else
9836 \ifdim\paperheight=\z@
9837 \else
9838 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9839 \fi
9840 \ifdim\paperwidth=\z@
9841 \else
9842 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9843 \fi
9844 \fi
9845 }{%
9846 \ltx@ifundefined{stockwidth}{%
9847 \ifdim\paperwidth>\z@
9848 \setlength{\pdfpagewidth}{\paperwidth}%
9849 \fi
9850 \ifdim\paperheight>\z@
9851 \setlength{\pdfpageheight}{\paperheight}%
9852 \fi
9853 }{%
9854 \ifdim\stockwidth>\z@
9855 \setlength{\pdfpagewidth}{\stockwidth}%
9856 \fi
9857 \ifdim\stockheight>\z@
9858 \setlength{\pdfpageheight}{\stockheight}%
9859 \fi
9860 }%
9861 }%
9862 }%
9863 \Hy@DisableOption{setpagesize}%
9864 }
9865 /pdfTeX | xetex)
9866 (*pdfTeX)
9867 \def\Acrobatmenu#1#2{%
9868 \Hy@Acrobatmenu{#1}{#2}{%
9869 \leavevmode
9870 \EdefEscapeName\Hy@temp@menu{#1}%
9871 \pdfstartlink
9872 attr{%
9873 \Hy@setpdfborder
9874 \ifx\@pdfhighlight\@empty
9875 \else
9876 /H\@pdfhighlight
9877 \fi

```

```

9878 \ifx\@menubordercolor\relax
9879 \else
9880 /C[\@menubordercolor]%
9881 \fi
9882 }%
9883 user{%
9884 /Subtype/Link%
9885 \ifHy@pdfa /F 4\fi
9886 /A<<%
9887 /S/Named%
9888 /N/\Hy@temp@menu
9889 \Hy@href@nextactionraw
9890 >>%
9891 }%
9892 \relax
9893 \Hy@colorlink\@menucolor#2%
9894 \close@pdfink
9895 }%
9896 }

```

47.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package 'atbegshi' `\AtBeginShipoutFirst` does not add a additional box layer.

```

9897 \def\Hy@FixNotFirstPage{%
9898 \gdef\Hy@FixNotFirstPage{%
9899 \setbox\AtBeginShipoutBox=\hbox{%
9900 \copy\AtBeginShipoutBox
9901 }%
9902 }%
9903 }
9904 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
9905 }{%
9906 \AtBeginShipout{\Hy@FixNotFirstPage}%
9907 }
9908 \pdfTeX

```

47.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: `html:<base href = "href_string">`

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the \TeX file — the \TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

9909 \*hypertext
9910 \providecommand*\XR@ext\{dvi}
9911 \let\PDF@FinishDoc\ltx@empty
9912 \def\PDF@SetupDoc{%
9913   \ifx\@baseurl\@empty
9914   \else
9915     \special{html:<base href="\@baseurl">}%
9916   \fi
9917 }
9918 \Hy@WrapperDef\hyper@anchor#1{%
9919   \Hy@SaveLastskip
9920   \Hy@VerboseAnchor{#1}%
9921   \begingroup
9922     \let\protect=\string
9923     \hyper@chars
9924     \special{html:<a name=%
9925       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9926   \endgroup
9927   \Hy@activeanchortrue
9928   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9929   \special{html:</a>}%
9930   \Hy@activeanchorfalse
9931   \Hy@RestoreLastskip
9932 }
9933 \Hy@WrapperDef\hyper@anchorstart#1{%
9934   \Hy@SaveLastskip
9935   \Hy@VerboseAnchor{#1}%
9936   \begingroup
9937     \hyper@chars
9938     \special{html:<a name=%
9939       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9940   \endgroup
9941   \Hy@activeanchortrue
9942 }
9943 \def\hyper@anchorend{%
9944   \special{html:</a>}%

```

```

9945 \Hy@activeanchorfalse
9946 \Hy@RestoreLastskip
9947 }
9948 \def\@urltype{url}
9949 \def\hyper@linkstart#1#2{%
9950 \Hy@VerboseLinkStart{#1}{#2}%
9951 \expandafter\Hy@colorlink\csname @#1color\endcsname
9952 \def\Hy@tempa{#1}%
9953 \ifx\Hy@tempa\@urltype
9954 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9955 \else
9956 \begingroup
9957 \hyper@chars
9958 \special{html:<a href=%
9959 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
9960 \endgroup
9961 \fi
9962 }
9963 \def\hyper@linkend{%
9964 \special{html:</a>}%
9965 \Hy@endcolorlink
9966 }
9967 \def\hyper@linkfile#1#2#3{%
9968 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
9969 }
9970 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why \LaTeX constructs make this totally foul up, and make us revert to basic \TeX . I do not know.

```

9971 \leavevmode
9972 \ifHy@raiselinks
9973 \Hy@SaveSpaceFactor
9974 \Hy@SaveSavedSpaceFactor
9975 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9976 \Hy@RestoreSavedSpaceFactor
9977 \@linkdim\dp\@tempboxa
9978 \lower\@linkdim\hbox{%
9979 \hyper@chars
9980 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9981 }%
9982 \Hy@colorlink\@urlcolor
9983 \Hy@RestoreSpaceFactor
9984 #1%
9985 \Hy@SaveSpaceFactor
9986 \@linkdim\ht\@tempboxa

```

Because of the interaction with the `dvi` processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new `dvips` (Jan 1997).

```

9987 \advance\@linkdim by -6.5\p@
9988 \raise\@linkdim\hbox{\special{html:</a>}}%
9989 \Hy@endcolorlink
9990 \Hy@RestoreSpaceFactor
9991 \else
9992 \begingroup
9993 \hyper@chars
9994 \special{html:<a href=\hyper@quote#2\hyper@quote>}%

```

```

9995 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9996 \special{html:</a>}%
9997 \Hy@endcolorlink
9998 \endgroup
9999 \fi
10000 }

```

Very poor implementation of `\hyper@link` without considering `#1`.

```

10001 \def\hyper@link#1#2#3{%
10002 \Hy@VerboseLinkStart{#1}{#2}%
10003 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
10004 }

10005 \def\hyper@image#1#2{%
10006 \begingroup
10007 \hyper@chars
10008 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10009 \endgroup
10010 }
10011 </hypertex>
10012 <*\dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file `dviwindo` hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the `hyperref` package if the default `c:/netscape/netscape` is not suitable) `Dviwindo` could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the `hypertex` cfg. For `dviwindo`, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```

10013 \providecommand*\XR@ext{dvi}
10014 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10015 \Hy@WrapperDef\hyper@anchor#1{%
10016 \Hy@SaveLastskip
10017 \Hy@VerboseAnchor{#1}%
10018 \begingroup
10019 \let\protect=\string
10020 \special{mark: #1}%
10021 \endgroup
10022 \Hy@activeanchortrue
10023 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10024 \Hy@activeanchorfalse
10025 \Hy@RestoreLastskip
10026 }
10027 \Hy@WrapperDef\hyper@anchorstart#1{%
10028 \Hy@SaveLastskip
10029 \Hy@VerboseAnchor{#1}%
10030 \special{mark: #1}%
10031 \Hy@activeanchortrue
10032 }
10033 \def\hyper@anchorend{%
10034 \Hy@activeanchorfalse

```

```

10035 \Hy@RestoreLastskip
10036 }
10037 \def\hyper@linkstart#1#2{%
10038 \Hy@VerboseLinkStart{#1}{#2}%
10039 \expandafter\Hy@colorlink\csname @#1color\endcsname
10040 \special{button: %
10041 10000000 %
10042 \number\baselineskip\space
10043 #2%
10044 }%
10045 }
10046 \def\hyper@linkend{%
10047 \Hy@endcolorlink
10048 }
10049 \def\hyper@link#1#2#3{%
10050 \Hy@VerboseLinkStart{#1}{#2}%
10051 \leavevmode
10052 \ifHy@raiselinks
10053 \Hy@SaveSpaceFactor
10054 \Hy@SaveSavedSpaceFactor
10055 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10056 \Hy@RestoreSavedSpaceFactor
10057 \@linkdim\dp\@tempboxa
10058 \lower\@linkdim\hbox{%
10059 \special{button: %
10060 \number\wd\@tempboxa\space
10061 \number\ht\@tempboxa\space
10062 #2%
10063 }%
10064 \expandafter\Hy@colorlink\csname @#1color\endcsname
10065 \Hy@RestoreSpaceFactor
10066 #3\Hy@xspace@end
10067 \Hy@SaveSpaceFactor
10068 \Hy@endcolorlink
10069 }%
10070 \@linkdim\ht\@tempboxa
10071 \advance\@linkdim by -6.5\p@
10072 \raise\@linkdim\hbox{}%
10073 \Hy@RestoreSpaceFactor
10074 \else
10075 \special{button: %
10076 \number\wd\@tempboxa\space
10077 \number\ht\@tempboxa\space
10078 #2%
10079 }%
10080 \expandafter\Hy@colorlink\csname @#1color\endcsname
10081 #3\Hy@xspace@end
10082 \Hy@endcolorlink
10083 \fi
10084 }
10085 \def\hyper@linkurl#1#2{%
10086 \begingroup
10087 \hyper@chars
10088 \leavevmode
10089 \ifHy@raiselinks
10090 \Hy@SaveSpaceFactor
10091 \Hy@SaveSavedSpaceFactor

```



```

10092 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10093 \Hy@RestoreSavedSpaceFactor
10094 \@linkdim\dp\@tempboxa
10095 \lower\@linkdim\hbox{%
10096 \special{button: %
10097 \number\wd\@tempboxa\space
10098 \number\ht\@tempboxa\space
10099 launch: \wwwbrowser\space
10100 #2%
10101 }%
10102 \Hy@colorlink\@urlcolor
10103 \Hy@RestoreSpaceFactor
10104 #1\Hy@xspace@end
10105 \Hy@SaveSpaceFactor
10106 \Hy@endcolorlink
10107 }%
10108 \@linkdim\ht\@tempboxa
10109 \advance\@linkdim by -6.5\p@
10110 \raise\@linkdim\hbox{}%
10111 \Hy@RestoreSpaceFactor
10112 \else
10113 \special{button: %
10114 \number\wd\@tempboxa\space
10115 \number\ht\@tempboxa\space
10116 launch: \wwwbrowser\space
10117 #2%
10118 }%
10119 \Hy@colorlink\@urlcolor
10120 #1\Hy@xspace@end
10121 \Hy@endcolorlink
10122 \fi
10123 \endgroup
10124 }
10125 \def\hyper@linkfile#1#2#3{%
10126 \begingroup
10127 \hyper@chars
10128 \leavevmode
10129 \ifHy@raiselinks
10130 \Hy@SaveSpaceFactor
10131 \Hy@SaveSavedSpaceFactor
10132 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10133 \Hy@RestoreSavedSpaceFactor
10134 \@linkdim\dp\@tempboxa
10135 \lower\@linkdim\hbox{%
10136 \special{button: %
10137 \number\wd\@tempboxa\space
10138 \number\ht\@tempboxa\space
10139 #3,%
10140 file: #2%
10141 }%
10142 \Hy@colorlink\@filecolor
10143 \Hy@RestoreSpaceFactor
10144 #1\Hy@xspace@end
10145 \Hy@SaveSpaceFactor
10146 \Hy@endcolorlink
10147 }%
10148 \@linkdim\ht\@tempboxa

```

```

10149 \advance\@linkdim by -6.5\p@
10150 \raise\@linkdim\hbox{}%
10151 \Hy@RestoreSpaceFactor
10152 \else
10153 \special{button: %
10154 \number\wd\@tempboxa\space
10155 \number\ht\@tempboxa\space
10156 #3,%
10157 file: #2%
10158 }%
10159 \Hy@colorlink\@filecolor
10160 #1\Hy@xspace@end
10161 \Hy@endcolorlink
10162 \fi
10163 \endgroup
10164 }
10165 \ifx\@pdfproducer\relax
10166 \def\@pdfproducer{dviwindo + Distiller}%
10167 \fi
10168 \HyInfo@AddonUnsupportedtrue
10169 \def\PDF@FinishDoc{%
10170 \Hy@UseMaketitleInfos
10171 \HyInfo@TrappedUnsupported
10172 \special{PDF: Keywords \@pdfkeywords}%
10173 \special{PDF: Title \@pdftitle}%
10174 \special{PDF: Creator \@pdfcreator}%
10175 \ifx\@pdfcreationdate\@empty
10176 \else
10177 \special{PDF: CreationDate \@pdfcreationdate}%
10178 \fi
10179 \ifx\@pdfmoddate\@empty
10180 \else
10181 \special{PDF: ModDate \@pdfmoddate}%
10182 \fi
10183 \special{PDF: Author \@pdfauthor}%
10184 \ifx\@pdfproducer\relax
10185 \else
10186 \special{PDF: Producer \@pdfproducer}%
10187 \fi
10188 \special{PDF: Subject \@pdfsubject}%
10189 \Hy@DisableOption{pdfauthor}%
10190 \Hy@DisableOption{pdftitle}%
10191 \Hy@DisableOption{pdfsubject}%
10192 \Hy@DisableOption{pdfcreator}%
10193 \Hy@DisableOption{pdfcreationdate}%
10194 \Hy@DisableOption{pdfmoddate}%
10195 \Hy@DisableOption{pdfproducer}%
10196 \Hy@DisableOption{pdfkeywords}%
10197 \Hy@DisableOption{pdftrapped}%
10198 \Hy@DisableOption{pdfinfo}%
10199 }
10200 \def\PDF@SetupDoc{%
10201 \ifx\@baseurl\@empty
10202 \else
10203 \special{PDF: Base \@baseurl}%
10204 \fi
10205 \ifx\@pdfpagescrop\@empty\else

```

```

10206 \special{PDF: BBox \@pdfpagescrop}%
10207 \fi
10208 \def\Hy@temp{}%
10209 \ifx\@pdfstartpage\@empty
10210 \else
10211 \ifx\@pdfstartview\@empty
10212 \else
10213 \edef\Hy@temp{%
10214 ,Page=\@pdfstartpage
10215 ,View=\@pdfstartview
10216 }%
10217 \fi
10218 \fi
10219 \edef\Hy@temp{%
10220 \noexpand\pdfmark{%
10221 pdfmark=/DOCVIEW,%
10222 PageMode=/\@pdfpagemode
10223 \Hy@temp
10224 }%
10225 }%
10226 \Hy@temp
10227 \ifx\@pdfpagescrop\@empty
10228 \else
10229 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10230 \fi
10231 \edef\Hy@temp{%
10232 \ifHy@pdftoolbar\else /HideToolbar true\fi
10233 \ifHy@pdfmenubar\else /HideMenubar true\fi
10234 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10235 \ifHy@pdffitwindow /FitWindow true\fi
10236 \ifHy@pdfcenterwindow /CenterWindow true\fi
10237 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10238 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10239 \Hy@UseNameKey{Direction}\@pdfdirection
10240 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10241 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10242 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10243 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10244 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10245 \Hy@UseNameKey{Duplex}\@pdfduplex
10246 \ifx\@pdfpicktraybypdfsize\@empty
10247 \else
10248 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10249 \fi
10250 \ifx\@pdfprintpagerange\@empty
10251 \else
10252 /PrintPageRange[\@pdfprintpagerange]%
10253 \fi
10254 \ifx\@pdfnumcopies\@empty
10255 \else
10256 /NumCopies \@pdfnumcopies
10257 \fi
10258 }%
10259 \pdfmark{pdfmark=/PUT,%
10260 Raw={%
10261 \string{Catalog\string}<<%
10262 \ifx\Hy@temp\@empty

```

```

10263     \else
10264     /ViewerPreferences<<\Hy@temp>>%
10265     \fi
10266     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10267     \ifx\@pdflang\@empty
10268     \else
10269     /Lang(\@pdflang)%
10270     \fi
10271     >>%
10272   }%
10273 }%
10274 }
10275 </dviwindo>
10276 <*dvipdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10277 \providecommand*\XR@ext\{pdf}
10278 \Hy@setbreaklinks{true}
10279 \def\HyPat@ObjRef{%
10280   @[\^ ]+}%
10281 }
10282 \newsavebox{\pdfm@box}
10283 \def\@pdfm@mark#1{\special{pdf:#1}}
10284 \Hy@WrapperDef\@pdfm@dest#1{%
10285   \Hy@SaveLastskip
10286   \Hy@VerboseAnchor{#1}%
10287   \begingroup
10288   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10289   \def\x{XYZ}%
10290   \ifx\x\@pdfview
10291     \def\x{XYZ @xpos @ypos null}%
10292   \else
10293     \def\x{FitH}%
10294     \ifx\x\@pdfview
10295       \def\x{FitH @ypos}%
10296     \else
10297       \def\x{FitBH}%
10298       \ifx\x\@pdfview
10299         \def\x{FitBH @ypos}%
10300       \else
10301         \def\x{FitV}%
10302         \ifx\x\@pdfview
10303           \def\x{FitV @xpos}%
10304         \else
10305           \def\x{FitBV}%
10306           \ifx\x\@pdfview
10307             \def\x{FitBV @xpos}%
10308           \else
10309             \def\x{Fit}%
10310             \ifx\x\@pdfview
10311               \let\x\@pdfview
10312             \else
10313               \def\x{FitB}%
10314               \ifx\x\@pdfview
10315                 \let\x\@pdfview

```

```

10316         \else
10317         \def\x{FitR}%
10318         \ifx\x\@pdfview
10319         \Hy@Warning{'pdfview=FitR' is not supported}%
10320         \def\x{XYZ @xpos @ypos null}%
10321         \else
10322         \@onelevel@sanitize\@pdfview
10323         \Hy@Warning{%
10324         Unknown value '\@pdfview' for pdfview%
10325         }%
10326         \def\x{XYZ @xpos @ypos null}%
10327         \fi
10328         \fi
10329         \fi
10330         \fi
10331         \fi
10332         \fi
10333         \fi
10334         \fi
10335         \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10336     \endgroup
10337     \Hy@RestoreLastskip
10338 }
10339 \providecommand*\@pdfview{XYZ}
10340 \providecommand*\@pdfborder{0 0 1}
10341 \providecommand*\@pdfborderstyle{}
10342 \def\hyper@anchor#1{%
10343     \@pdfm@dest{#1}%
10344 }
10345 \def\hyper@anchorstart#1{%
10346     \Hy@activeanchortrue
10347     \@pdfm@dest{#1}%
10348 }
10349 \def\hyper@anchorend{%
10350     \Hy@activeanchorfalse
10351 }
10352 \newcounter{Hy@AnnotLevel}
10353 \ifHy@ocgcolorlinks
10354     \def\OBJ@OCG@view{@OCG@view}%
10355     \@pdfm@mark{%
10356         obj \OBJ@OCG@view <<%
10357         /Type/OCG%
10358         /Name(View)%
10359         /Usage<<%
10360         /Print<<%
10361         /PrintState/OFF%
10362         >>%
10363         /View<<%
10364         /ViewState/ON%
10365         >>%
10366         >>%
10367         >>%
10368     }%
10369     \@pdfm@mark{close \OBJ@OCG@view}%
10370     \def\OBJ@OCG@print{@OCG@print}%
10371     \@pdfm@mark{%
10372         obj \OBJ@OCG@print <<%

```

```

10373 /Type/OCG%
10374 /Name(Print)%
10375 /Usage<<%
10376 /Print<<%
10377 /PrintState/ON%
10378 >>%
10379 /View<<%
10380 /ViewState/OFF%
10381 >>%
10382 >>%
10383 >>%
10384 }%
10385 \@pdfm@mark{close \OBJ@OCG@print}%
10386 \def\OBJ@OCGs{@OCGs}%
10387 \@pdfm@mark{%
10388 obj \OBJ@OCGs [%
10389 \OBJ@OCG@view\space\OBJ@OCG@print
10390 ]%
10391 }%
10392 \@pdfm@mark{close \OBJ@OCGs}%
10393 \@pdfm@mark{%
10394 put @catalog <<%
10395 /OCProperties<<%
10396 /OCGs \OBJ@OCGs
10397 /D<<%
10398 /OFF[\OBJ@OCG@print]%
10399 /AS[%
10400 <<%
10401 /Event/View%
10402 /OCGs \OBJ@OCGs
10403 /Category[/View]%
10404 >>%
10405 <<%
10406 /Event/Print%
10407 /OCGs \OBJ@OCGs
10408 /Category[/Print]%
10409 >>%
10410 <<%
10411 /Event/Export%
10412 /OCGs \OBJ@OCGs
10413 /Category[/Print]%
10414 >>%
10415 ]%
10416 >>%
10417 >>%
10418 >>%
10419 }%
10420 \AtBeginShipout{%
10421 \setbox\AtBeginShipoutBox=\hbox{%
10422 \copy\AtBeginShipoutBox
10423 \@pdfm@mark{%
10424 put @resources <<%
10425 /Properties<<%
10426 /OCView \OBJ@OCG@view
10427 /OCPrint \OBJ@OCG@print
10428 >>%
10429 >>%

```

```

10430 }%
10431 }%
10432 }%
10433 \Hy@AtBeginDocument{%
10434 \def\Hy@colorlink#1{%
10435 \begingroup
10436 \ifHy@ocgcolorlinks
10437 \def\Hy@ocgcolor{#1}%
10438 \setbox0=\hbox\bgroup\color@begingroup
10439 \else
10440 \HyColor@UseColor#1%
10441 \fi
10442 }%
10443 \def\Hy@endcolorlink{%
10444 \ifHy@ocgcolorlinks
10445 \color@endgroup\egroup
10446 \mbox{%
10447 \@pdfm@mark{content /OC/OCPrint BDC}%
10448 \rlap{\copy0}%
10449 \@pdfm@mark{content EMC/OC/OCView BDC}%
10450 \begingroup
10451 \expandafter\HyColor@UseColor\Hy@ocgcolor
10452 \box0 %
10453 \endgroup
10454 \@pdfm@mark{content EMC}%
10455 }%
10456 \fi
10457 \endgroup
10458 }%
10459 }%
10460 \else
10461 \Hy@DisableOption{ocgcolorlinks}%
10462 \fi

10463 \def\Hy@BeginAnnot#1{%
10464 \stepcounter{Hy@AnnotLevel}%
10465 \ifnum\value{Hy@AnnotLevel}=\@ne
10466 #1%
10467 \fi
10468 }
10469 \def\Hy@endAnnot{%
10470 \ifnum\value{Hy@AnnotLevel}=\@ne
10471 \Hy@endcolorlink
10472 \@pdfm@mark{eann}%
10473 \fi
10474 \addtocounter{Hy@AnnotLevel}\m@ne
10475 }

10476 \def\Hy@undefinedname{UNDEFINED}
10477 \def\hyper@linkstart#1#2{%
10478 \Hy@VerboseLinkStart{#1}{#2}%
10479 \leavevmode
10480 \Hy@BeginAnnot{%
10481 \protected@edef\Hy@testname{#2}%
10482 \ifx\Hy@testname\@empty
10483 \Hy@Warning{%
10484 Empty destination name,\MessageBreak
10485 using '\Hy@undefinedname'%
10486 }%

```

```

10487 \let\Hy@testname\Hy@undefinedname
10488 \else
10489 \Hy@pstringdef\Hy@testname{%
10490 \expandafter\HyperDestNameFilter\expandafter{%
10491 \Hy@testname
10492 }%
10493 }%
10494 \fi
10495 \@pdfm@mark{%
10496 bann<<%
10497 /Type/Annot%
10498 /Subtype/Link%
10499 \ifHy@pdfa /F 4\fi
10500 \Hy@setpdfborder
10501 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10502 \else
10503 /C[\csname @#1bordercolor\endcsname]%
10504 \fi
10505 /A<<%
10506 /S/GoTo%
10507 /D(\Hy@testname)%
10508 \Hy@href@nextactionraw
10509 >>%
10510 >>%
10511 }%
10512 \expandafter\Hy@colorlink\csname @#1color\endcsname
10513 }%
10514 }
10515 \def\hyper@linkend{\Hy@EndAnnot}%
10516 \def\hyper@link#1#2#3{%
10517 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10518 }
10519 \def\hyper@linkfile#1#2#3{%
10520 \leavevmode
10521 \Hy@BeginAnnot{%
10522 \def\Hy@pstringF{#2}%
10523 \Hy@CleanupFile\Hy@pstringF
10524 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10525 \Hy@pstringdef\Hy@pstringD{#3}%
10526 \Hy@MakeRemoteAction
10527 \@pdfm@mark{%
10528 bann<<%
10529 /Type/Annot%
10530 /Subtype/Link%
10531 \ifHy@pdfa /F 4\fi
10532 \Hy@setpdfborder
10533 \ifx\@filebordercolor\relax
10534 \else
10535 /C[\@filebordercolor]%
10536 \fi
10537 /A<<%
10538 /S/GoToR%
10539 /F(\Hy@pstringF)%
10540 /D%
10541 \ifx\#3\%
10542 [\Hy@href@page\@pdfremotestartview]%
10543 \else

```



```

10544      (\Hy@pstringD)%
10545      \fi
10546      \Hy@SetNewWindow
10547      \Hy@href@nextactionraw
10548      >>%
10549      >>%
10550      }%
10551      \Hy@colorlink\@filecolor
10552      }%
10553      #1\Hy@xspace@end
10554      \Hy@endAnnot
10555      }
10556      \def\hyper@launch run:#1\#2#3{% filename, anchor text linkname
10557      \leavevmode
10558      \Hy@BeginAnnot{%
10559      \Hy@pstringdef\Hy@pstringF{#1}%
10560      \Hy@pstringdef\Hy@pstringP{#3}%
10561      \@pdfm@mark{%
10562      bann<<%
10563      /Type/Annot%
10564      /Subtype/Link%
10565      \ifHy@pdfa /F 4\fi
10566      \Hy@setpdfborder
10567      \ifx\@runbordercolor\relax
10568      \else
10569      /C[\@runbordercolor]%
10570      \fi
10571      /A<<%
10572      /F(\Hy@pstringF)%
10573      /S/Launch%
10574      \Hy@SetNewWindow
10575      \ifx\#3\%
10576      \else
10577      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10578      \fi
10579      \Hy@href@nextactionraw
10580      >>%
10581      >>%
10582      }%
10583      \Hy@colorlink\@runcolor
10584      }%
10585      #2\Hy@xspace@end
10586      \Hy@endAnnot
10587      }
10588      \def\hyper@linkurl#1#2{%
10589      \leavevmode
10590      \Hy@BeginAnnot{%
10591      \Hy@pstringdef\Hy@pstringURI{#2}%
10592      \@pdfm@mark{%
10593      bann<<%
10594      /Type/Annot%
10595      /Subtype/Link%
10596      \ifHy@pdfa /F 4\fi
10597      \Hy@setpdfborder
10598      \ifx\@urlbordercolor\relax
10599      \else
10600      /C[\@urlbordercolor]%

```

```

10601 \fi
10602 /A<<%
10603 /S/URI%
10604 /URI(\Hy@pstringURI)%
10605 \ifHy@href@ismap
10606 /IsMap true%
10607 \fi
10608 \Hy@href@nextactionraw
10609 >>%
10610 >>%
10611 }%
10612 \Hy@colorlink\@urlcolor
10613 }%
10614 #1\Hy@xspace@end
10615 \Hy@EndAnnot
10616 }
10617 \def\Acrobatmenu#1#2{%
10618 \Hy@Acrobatmenu{#1}{#2}{%
10619 \Hy@BeginAnnot{%
10620 \EdefEscapeName\Hy@temp@menu{#1}%
10621 \@pdfm@mark{%
10622 bann<<%
10623 /Type/Annot%
10624 /Subtype/Link%
10625 \ifHy@pdfa /F 4\fi
10626 \Hy@setpdfborder
10627 \ifx\@menubordercolor\relax
10628 \else
10629 /C[\@menubordercolor]%
10630 \fi
10631 /A<<%
10632 /S/Named%
10633 /N/\Hy@temp@menu
10634 \Hy@href@nextactionraw
10635 >>%
10636 >>%
10637 }%
10638 \Hy@colorlink\@menucolor
10639 }%
10640 #2\Hy@xspace@end
10641 \Hy@EndAnnot
10642 }%
10643 }
10644 \ifx\@pdfproducer\relax
10645 \def\@pdfproducer{dvipdfm}%

```

Detect XeTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

10646 \begingroup\expandafter\expandafter\expandafter\endgroup
10647 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10648 \else
10649 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10650 \fi
10651 \fi
10652 \def\PDF@FinishDoc{%
10653 \Hy@UseMaketitleInfos
10654 \HyInfo@GenerateAddons
10655 \@pdfm@mark{%
10656 docinfo<<%

```

```

10657 /Title(\@pdftitle)%
10658 /Subject(\@pdfsubject)%
10659 /Creator(\@pdfcreator)%
10660 \ifx\@pdfcreationdate\@empty
10661 \else
10662 /CreationDate(\@pdfcreationdate)%
10663 \fi
10664 \ifx\@pdfmoddate\@empty
10665 \else
10666 /ModDate(\@pdfmoddate)%
10667 \fi
10668 /Author(\@pdfauthor)%
10669 \ifx\@pdfproducer\relax
10670 \else
10671 /Producer(\@pdfproducer)%
10672 \fi
10673 /Keywords(\@pdfkeywords)%
10674 \ifx\@pdftrapped\@empty
10675 \else
10676 /Trapped/\@pdftrapped
10677 \fi
10678 \HyInfo@Addons
10679 >>%
10680 }%
10681 \Hy@DisableOption{pdfauthor}%
10682 \Hy@DisableOption{pdftitle}%
10683 \Hy@DisableOption{pdfsubject}%
10684 \Hy@DisableOption{pdfcreator}%
10685 \Hy@DisableOption{pdfcreationdate}%
10686 \Hy@DisableOption{pdfmoddate}%
10687 \Hy@DisableOption{pdfproducer}%
10688 \Hy@DisableOption{pdfkeywords}%
10689 \Hy@DisableOption{pdftrapped}%
10690 \Hy@DisableOption{pdfinfo}%
10691 }

10692 \def\PDF@SetupDoc{%
10693 \edef\Hy@temp{%
10694 \ifHy@pdftoolbar\else /HideToolbar true\fi
10695 \ifHy@pdfmenubar\else /HideMenubar true\fi
10696 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10697 \ifHy@pdffitwindow /FitWindow true\fi
10698 \ifHy@pdfcenterwindow /CenterWindow true\fi
10699 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10700 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10701 \Hy@UseNameKey{Direction}\@pdfdirection
10702 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10703 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10704 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10705 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10706 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10707 \Hy@UseNameKey{Duplex}\@pdfduplex
10708 \ifx\@pdfpicktraybypdfsize\@empty
10709 \else
10710 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10711 \fi
10712 \ifx\@pdfprintpagerange\@empty
10713 \else

```

```

10714 /PrintPageRange[\@pdfprintpagerange]%
10715 \fi
10716 \ifx\@pdfnumcopies\@empty
10717 \else
10718 /NumCopies \@pdfnumcopies
10719 \fi
10720 }%
10721 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10722 \@pdfm@mark{%
10723 docview<<%
10724 \ifx\@pdfstartpage\@empty
10725 \else
10726 \ifx\@pdfstartview\@empty
10727 \else
10728 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10729 \fi
10730 \fi
10731 \ifx\@baseurl\@empty
10732 \else
10733 /URI<</Base(\Hy@pstringB)>>%
10734 \fi
10735 /PageMode/\@pdfpagemode
10736 \ifx\Hy@temp\@empty
10737 \else
10738 /ViewerPreferences<<\Hy@temp>>%
10739 \fi
10740 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10741 \ifx\@pdflang\@empty
10742 \else
10743 /Lang(\@pdflang)%
10744 \fi
10745 >>%
10746 }%
10747 \ifx\@pdfpagescrop\@empty
10748 \else
10749 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10750 \fi
10751 }
10752 </dvipdfm | xetex>
10753 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

10754 \def\hyper@pagetransition{%
10755 \ifx\@pdfpagetransition\relax
10756 \else
10757 \ifx\@pdfpagetransition\@empty
10758 \else
10759 \special{pdf:put @thispage %
10760 <</Trans<</S/\@pdfpagetransition>>>>%
10761 }%
10762 \fi
10763 \fi
10764 }

```

\hyper@pageduration

```

10765 \def\hyper@pageduration{%
10766 \ifx\@pdfpageduration\relax

```

```

10767 \else
10768   \ifx\@pdfpageduration\@empty
10769   \else
10770     \special{pdf:put @thispage %
10771       <</Dur \@pdfpageduration>>%
10772     }%
10773   \fi
10774 \fi
10775 }

```

`\hyper@pagehidden`

```

10776 \def\hyper@pagehidden{%
10777   \ifHy@useHidKey
10778     \special{pdf:put @thispage %
10779       <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10780     }%
10781   \fi
10782 }

10783 \g@addto@macro\Hy@EveryPageBoxHook{%
10784   \hyper@pagetransition
10785   \hyper@pageduration
10786   \hyper@pagehidden
10787 }

10788 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method `\pdfpagewidth` and `\pdfpageheight` for setting the paper size.

```

10789 <*dvipdfm>
10790 \AtBeginShipoutFirst{%
10791   \ifHy@setpagesize
10792     \begingroup
10793       \@ifundefined{stockwidth}{%
10794         \ifdim\paperwidth>\z@
10795           \ifdim\paperheight>\z@
10796             \special{papersize=\the\paperwidth,\the\paperheight}%
10797           \fi
10798         \fi
10799       }{%
10800         \ifdim\stockwidth>\z@
10801           \ifdim\stockheight>\z@
10802             \special{papersize=\the\stockwidth,\the\stockheight}%
10803           \fi
10804         \fi
10805       }%
10806     \endgroup
10807   \fi
10808   \Hy@DisableOption{setpagesize}%
10809 }
10810 </dvipdfm>

```

47.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

10811 <*vtexhtml>
10812 \providecommand*\XR@ext{\htm}

```

```

10813 \RequirePackage{vtxhtml}
10814 \newif\if@Localurl
10815 \let\PDF@FinishDoc\ltx@empty
10816 \def\PDF@SetupDoc{%
10817   \ifx\@baseurl\@empty
10818   \else
10819     \special{!direct <base href="\@baseurl">}%
10820   \fi
10821 }
10822 \def\@urltype{url}
10823 \def\hyper@link#1#2#3{%
10824   \Hy@VerboseLinkStart{#1}{#2}%
10825   \leavevmode
10826   \special{!direct <a href=%
10827     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10828   #3\Hy@xspace@end
10829   \special{!direct </a>}%
10830 }
10831 \def\hyper@linkurl#1#2{%
10832   \begingroup
10833     \hyper@chars
10834     \leavevmode
10835     \MathBSuppress=1\relax
10836     \special{!direct <a href=%
10837       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10838     #1\Hy@xspace@end
10839     \MathBSuppress=0\relax
10840     \special{!direct </a>}%
10841   \endgroup
10842 }
10843 \def\hyper@linkfile#1#2#3{%
10844   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10845 }
10846 \def\hyper@linkstart#1#2{%
10847   \Hy@VerboseLinkStart{#1}{#2}%
10848   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10849     \@Localurltrue
10850     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10851   \else
10852     \@Localurlfalse
10853     \begingroup
10854       \hyper@chars
10855       \special{!aref \HyperDestNameFilter{#2}}%
10856     \endgroup
10857   \fi
10858 }
10859 \def\hyper@linkend{%
10860   \if@Localurl
10861     \special{!endaref}%
10862   \else
10863     \special{!direct </a>}%
10864   \fi
10865 }
10866 \Hy@WrapperDef\hyper@anchorstart#1{%
10867   \Hy@SaveLastskip
10868   \Hy@VerboseAnchor{#1}%
10869   \begingroup

```

```

10870 \hyper@chars
10871 \special{!aname #1}%
10872 \special{!direct <a name=%
10873     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10874 \endgroup
10875 \Hy@activeanchortrue
10876 }
10877 \def\hyper@anchorend{%
10878 \special{!direct </a>}%
10879 \Hy@activeanchorfalse
10880 \Hy@RestoreLastskip
10881 }
10882 \Hy@WrapperDef\hyper@anchor#1{%
10883 \Hy@SaveLastskip
10884 \Hy@VerboseAnchor{#1}%
10885 \begingroup
10886 \let\protect=\string
10887 \hyper@chars
10888 \leavevmode
10889 \special{!aname #1}%
10890 \special{!direct <a name=%
10891     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10892 \endgroup
10893 \Hy@activeanchortrue
10894 \bgroup\anchor@spot\egroup
10895 \special{!direct </a>}%
10896 \Hy@activeanchorfalse
10897 \Hy@RestoreLastskip
10898 }
10899 \def\@Form[#1]{%
10900 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10901 }
10902 \let\@endForm\ltx@empty
10903 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10904 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10905 }
10906 \def\@TextField[#1]#2{% parameters, label
10907 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10908 }
10909 \def\@CheckBox[#1]#2{% parameters, label
10910 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10911 }
10912 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10913 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10914 }
10915 \def\@PushButton[#1]#2{% parameters, label
10916 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10917 }
10918 \def\@Reset[#1]#2{%
10919 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10920 }
10921 \def\@Submit[#1]#2{%
10922 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10923 }
10924 </vtexhtml>
10925 <*\vtex>

```

VTex version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

10926 \ifx\mediaheight\@undefined
10927 \else
10928   \ifx\mediaheight\relax
10929   \else
10930     \ifHy@setpagesize
10931       \providecommand*\VTexInitMediaSize}{%
10932         \ltx@ifundefined{stockwidth}{%
10933           \ifdim\paperheight>0pt %
10934             \setlength\mediaheight\paperheight
10935           \fi
10936           \ifdim\paperheight>0pt %
10937             \setlength\mediawidth\paperwidth
10938           \fi
10939         }{%
10940           \ifdim\stockheight>0pt %
10941             \setlength\mediaheight\stockheight
10942           \fi
10943           \ifdim\stockwidth>0pt %
10944             \setlength\mediawidth\stockwidth
10945           \fi
10946         }%
10947       }%
10948     \Hy@AtBeginDocument{\VTexInitMediaSize}%
10949   \fi
10950   \Hy@DisableOption{setpagesize}%
10951 \fi
10952 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

10953 \providecommand*\@pdfview{xyz}
10954 \providecommand*\@pdfborder{0 0 1}
10955 \providecommand*\@pdfborderstyle{}
10956 \let\CurrentBorderColor\@linkbordercolor
10957 \Hy@WrapperDef\hyper@anchor#1{%
10958   \Hy@SaveLastskip
10959   \Hy@VerboseAnchor{#1}%
10960   \begingroup
10961     \let\protect=\string
10962     \hyper@chars
10963     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10964   \endgroup
10965   \Hy@activeanchortrue
10966   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10967   \Hy@activeanchorfalse
10968   \Hy@RestoreLastskip
10969 }
10970 \Hy@WrapperDef\hyper@anchorstart#1{%
10971   \Hy@SaveLastskip
10972   \Hy@VerboseAnchor{#1}%
10973   \begingroup
10974     \hyper@chars
10975     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10976   \endgroup
10977   \Hy@activeanchortrue
10978 }

```



```

10979 \def\hyper@anchorend{%
10980   \Hy@activeanchorfalse
10981   \Hy@RestoreLastskip
10982 }
10983 \def\@urltype{url}
10984 \def\Hy@undefinedname{UNDEFINED}
10985 \def\hyper@linkstart#1#2{%
10986   \Hy@VerboseLinkStart{#1}{#2}%
10987   \Hy@pstringdef\Hy@pstringURI{#2}%
10988   \expandafter\Hy@colorlink\csname @#1color\endcsname
10989   \ltx@ifundefined{#1bordercolor}{%
10990     \let\CurrentBorderColor\relax
10991   }{%
10992     \edef\CurrentBorderColor{%
10993       \csname @#1bordercolor\endcsname
10994     }%
10995   }%
10996   \def\Hy@tempa{#1}%
10997   \ifx\Hy@tempa\@urltype
10998     \special{!%
10999       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11000         \ifHy@href@ismap
11001           /IsMap true%
11002         \fi
11003         \Hy@href@nextactionraw
11004       >,%
11005       a=<%
11006         \ifHy@pdfa /F 4\fi
11007         \Hy@setpdfborder
11008         \ifx\CurrentBorderColor\relax
11009           \else
11010             /C [\CurrentBorderColor]%
11011           \fi
11012       >%
11013     }%
11014   \else
11015     \protected@edef\Hy@testname{#2}%
11016     \ifx\Hy@testname\@empty
11017       \Hy@Warning{%
11018         Empty destination name,\MessageBreak
11019         using '\Hy@undefinedname'%
11020       }%
11021       \let\Hy@testname\Hy@undefinedname
11022     \fi
11023     \special{!%
11024       aref \expandafter\HyperDestNameFilter
11025         \expandafter{\Hy@testname};%
11026       a=<%
11027         \ifHy@pdfa /F 4\fi
11028         \Hy@setpdfborder
11029         \ifx\CurrentBorderColor\relax
11030           \else
11031             /C [\CurrentBorderColor]%
11032           \fi
11033       >%
11034     }%
11035   \fi

```

```

11036 }
11037 \def\hyper@linkend{%
11038   \special{!endaref}%
11039   \Hy@endcolorlink
11040 }
11041 \def\hyper@linkfile#1#2#3{%
11042   \leavevmode
11043   \def\Hy@pstringF{#2}%
11044   \Hy@CleanupFile\Hy@pstringF
11045   \special{!%
11046     aref <%
11047     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11048     f=\Hy@pstringF>#3;%
11049     a=<%
11050     \ifHy@pdfa /F 4\fi
11051     \Hy@setpdfborder
11052     \ifx\@filebordercolor\relax
11053       \else
11054         /C [\@filebordercolor]%
11055       \fi
11056     >%
11057   }%
11058   \Hy@colorlink\@filecolor
11059   #1\Hy@xspace@end
11060   \Hy@endcolorlink
11061   \special{!endaref}%
11062 }
11063 \def\hyper@linkurl#1#2{%
11064   \begingroup
11065   \Hy@pstringdef\Hy@pstringURI{#2}%
11066   \hyper@chars
11067   \leavevmode
11068   \special{!%
11069     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11070     \ifHy@href@ismap
11071     /IsMap true%
11072     \fi
11073     \Hy@href@nextactionraw
11074     >;%
11075     a=<%
11076     \ifHy@pdfa /F 4\fi
11077     \Hy@setpdfborder
11078     \ifx\@urlbordercolor\relax
11079       \else
11080         /C [\@urlbordercolor]%
11081       \fi
11082     >%
11083   }%
11084   \Hy@colorlink\@urlcolor
11085   #1\Hy@xspace@end
11086   \Hy@endcolorlink
11087   \special{!endaref}%
11088   \endgroup
11089 }
11090 \def\hyper@link#1#2#3{%
11091   \Hy@VerboseLinkStart{#1}{#2}%
11092   \ltx@ifundefined{@#1bordercolor}{%

```

```

11093 \let\CurrentBorderColor\relax
11094 }{%
11095 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11096 }%
11097 \leavevmode
11098 \protected@edef\Hy@testname{#2}%
11099 \ifx\Hy@testname\@empty
11100 \Hy@Warning{%
11101 Empty destination name,\MessageBreak
11102 using '\Hy@undefinedname'%
11103 }%
11104 \let\Hy@testname\Hy@undefinedname
11105 \fi
11106 \special{!%
11107 aref \expandafter\HyperDestNameFilter
11108 \expandafter{\Hy@testname};%
11109 a=<%
11110 \ifHy@pdfa /F 4\fi
11111 \Hy@setpdfborder
11112 \ifx\CurrentBorderColor\relax
11113 \else
11114 /C [\CurrentBorderColor]%
11115 \fi
11116 >%
11117 }%
11118 \expandafter
11119 \Hy@colorlink\csname @#1color\endcsname
11120 #3\Hy@xspace@end
11121 \Hy@endcolorlink
11122 \special{!endaref}%
11123 }
11124 \def\hyper@image#1#2{%
11125 \hyper@linkurl{#2}{#1}%
11126 }
11127 \def\@hyper@launch run:#1\#2#3{%
11128 \Hy@pstringdef\Hy@pstringF{#1}%
11129 \Hy@pstringdef\Hy@pstringP{#3}%
11130 \leavevmode
11131 \special{!aref %
11132 <u=%
11133 /Type/Action%
11134 /S/Launch%
11135 /F(\Hy@pstringF)%
11136 \Hy@SetNewWindow
11137 \ifx\#3\%
11138 \else
11139 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11140 \fi
11141 \Hy@href@nextactionraw
11142 >;%
11143 a=<%
11144 \ifHy@pdfa /F 4\fi
11145 \Hy@setpdfborder
11146 \ifx\@runbordercolor\relax
11147 \else
11148 /C[\@runbordercolor]%
11149 \fi

```

```

11150 >%
11151 }%
11152 \Hy@colorlink\@runcolor
11153 #2\Hy@xspace@end
11154 \Hy@endcolorlink
11155 \special{!endaref}%
11156 }
11157 \def\Acrobatmenu#1#2{%
11158 \EdefEscapeName\Hy@temp@menu{#1}%
11159 \Hy@Acrobatmenu{#1}{#2}{%
11160 \special{!%
11161 aref <u=/S /Named /N /\Hy@temp@menu>;%
11162 a=<%
11163 \ifHy@pdfa /F 4\fi
11164 \Hy@setpdfborder
11165 \ifx\@menubordercolor\relax
11166 \else
11167 /C[\@menubordercolor]%
11168 \fi
11169 >%
11170 }%
11171 \Hy@colorlink\@menucolor
11172 #2\Hy@xspace@end
11173 \Hy@endcolorlink
11174 \special{!endaref}%
11175 }%
11176 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for VTeX 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{..}{..}` *globally*.

```

11177 \ifnum\Hy@VTeXversion<702 %
11178 \else
11179 \def\hyper@pagetransition{%
11180 \ifx\@pdfpagetransition\relax
11181 \else
11182 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

11183 \else
11184 \hvtex@parse@trans\@pdfpagetransition
11185 \fi
11186 \fi
11187 }%

```

I have to write an “honest” parser to convert raw PDF code into VTeX \special. (AVK)

Syntax of VTeX `\special{!trans <transition_effect>}`:

```

<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                        <Dissolve_effect> | <Glitter_effect> |
                        <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]

```

```

<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>

```

Transition codes:

```

11188 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11189 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11190 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11191 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11192 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11193 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11194 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

11195 \def\hvtex@par@dimension{/Dm}%
11196 \def\hvtex@par@direction{/Di}%
11197 \def\hvtex@par@duration{/D}%
11198 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

11199 \def\hvtex@gettoken{%
11200   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11201 }%

```

Notice that tokens in the input buffer must be space delimited.

```

11202 \def\hvtex@gettoken@#1 #2\@nil{%
11203   \edef\hvtex@token{#1}%
11204   \edef\hvtex@buffer{#2}%
11205 }%
11206 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11207 \let\hvtex@trans@code\@empty
11208 \let\hvtex@param@dimension\@empty
11209 \let\hvtex@param@direction\@empty
11210 \let\hvtex@param@duration\@empty
11211 \let\hvtex@param@motion\@empty
11212 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11213 \hvtex@gettoken
11214 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11215   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11216   \else
11217     \hvtex@gettoken
11218   \fi
11219 \fi
11220 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11221 \hvtex@trans@params
11222 }%

```

Reentrant macro to parse optional parameters.

```

11223 \def\hvtex@trans@params{%
11224   \ifx\hvtex@buffer\@empty
11225   \else
11226     \hvtex@gettoken
11227     \let\hvtex@trans@par\hvtex@token
11228     \ifx\hvtex@buffer\@empty
11229     \else
11230       \hvtex@gettoken
11231       \ifx\hvtex@trans@par\hvtex@par@duration
/D is the effect duration in seconds. VTEX special takes it in milliseconds.
11232       \let\hvtex@param@duration\hvtex@token
11233       \else \ifx\hvtex@trans@par\hvtex@par@motion
/M can be either /I or /O
11234       \expandafter\edef\expandafter\hvtex@param@motion
11235       \expandafter{\expandafter\@gobble\hvtex@token}%
11236       \else \ifx\hvtex@trans@par\hvtex@par@dimension
/Dm can be either /H or /V
11237       \expandafter\edef\expandafter\hvtex@param@dimension
11238       \expandafter{\expandafter\@gobble\hvtex@token}%
11239       \else \ifx\hvtex@trans@par\hvtex@par@direction

```

Valid values for /Di are 0, 270, 315 (the Glitter effect) or 0, 90, 180, 270 (the Wipe effect).

```

11240       \let\hvtex@param@direction\hvtex@token
11241       \fi\fi\fi\fi
11242       \fi
11243       \fi
11244       \ifx\hvtex@buffer\@empty
11245       \let\next\hvtex@produce@trans
11246       \else
11247       \let\next\hvtex@trans@params
11248       \fi
11249       \next
11250 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11251 \def\hvtex@produce@trans{%
11252   \let\vtex@trans@special\@empty
11253   \if S\hvtex@trans@code
11254     \edef\vtex@trans@special{\hvtex@trans@code
11255       \hvtex@param@dimension\hvtex@param@motion}%
11256   \else\if B\hvtex@trans@code
11257     \edef\vtex@trans@special{%
11258       \hvtex@trans@code\hvtex@param@dimension
11259     }%
11260   \else\if X\hvtex@trans@code
11261     \edef\vtex@trans@special{%
11262       \hvtex@trans@code\hvtex@param@motion
11263     }%
11264   \else\if W\hvtex@trans@code
11265     \edef\vtex@trans@special{%
11266       \hvtex@trans@code\hvtex@param@direction
11267     }%
11268   \else\if D\hvtex@trans@code

```

```

11269 \let\vtex@trans@special\hvtex@trans@code
11270 \else\if R\hvtex@trans@code
11271 \let\vtex@trans@special\hvtex@trans@code
11272 \else\if G\hvtex@trans@code
11273 \edef\vtex@trans@special{%
11274 \hvtex@trans@code\hvtex@param@direction
11275 }%
11276 \fi\fi\fi\fi\fi\fi
11277 \ifx\vtex@trans@special\@empty
11278 \else
11279 \ifx\hvtex@param@duration\@empty
11280 \else
11281 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11282 \multiply\dimen@\@m
11283 \edef\vtex@trans@special{%
11284 \vtex@trans@special,\strip@pt\dimen@
11285 }%
11286 \fi

```

And all the mess is just for this.

```

11287 \special{!trans \vtex@trans@special}%
11288 \fi
11289 }%

11290 \def\hyper@pageduration{%
11291 \ifx\@pdfpageduration\relax
11292 \else
11293 \ifx\@pdfpageduration\@empty
11294 \special{!duration-}%
11295 \else
11296 \special{!duration \@pdfpageduration}%
11297 \fi
11298 \fi
11299 }%

11300 \def\hyper@pagehidden{%
11301 \ifHy@useHidKey
11302 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11303 \fi
11304 }%

11305 \g@addto@macro\Hy@EveryPageBoxHook{%
11306 \hyper@pagetransition
11307 \hyper@pageduration
11308 \hyper@pagehidden
11309 }%
11310 \fi

```

Caution: In opposite to the other drivers, the argument of `\special{!onopen #1}` is a reference name. The VTeX's postscript mode will work with a version higher than 7.0x.

The command `\VTeXOS` is defined since version 7.45. Magic values encode the operating system:

- 1: WinTel
- 2: Linux
- 3: OS/2
- 4: MacOS
- 5: MacOS/X

```

11311 \ifx\@pdfproducer\relax
11312 \def\@pdfproducer{VTeX}%
11313 \ifnum\Hy@VTeXversion>\z@
11314 \count@\VTeXversion
11315 \divide\count@ 100 %
11316 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11317 \multiply\count@ -100 %
11318 \advance\count@\VTeXversion
11319 \edef\@pdfproducer{%
11320 \@pdfproducer
11321 .\ifnum\count@<10 0\fi\the\count@
11322 \ifx\VTeXOS\@undefined\else
11323 \ifnum\VTeXOS>0 %
11324 \ifnum\VTeXOS<6 %
11325 \space(%
11326 \ifcase\VTeXOS
11327 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11328 \fi
11329 )%
11330 \fi
11331 \fi
11332 \fi
11333 ,\space
11334 \ifnum\OpMode=\@one PDF\else PS\fi
11335 \space backend%
11336 \ifx\gexmode\@undefined\else
11337 \ifnum\gexmode>\z@\space with GeX\fi
11338 \fi
11339 }%
11340 \fi
11341 \fi

```

Current `!pdfinfo` key syntax:

Key	Field	Type
a	A uthor	String
b	C rop B ox	String
c	C reator	String
k	K eywords	String
l	P age L ayout	PS
p	P age M ode	PS
r	P roducer	String
s	S ubject	String
t	T itle	String
u	U RI	PS
v	V iew P references	PS

Note: PS objects that are dicts are in <<.>>> (yuck; no choice).

```

11342 \def\PDF@SetupDoc{%
11343 \ifx\@pdfpagescrop\@empty
11344 \else
11345 \special{!pdfinfo b=<\@pdfpagescrop>}%
11346 \fi
11347 \ifx\@pdfstartpage\@empty
11348 \else
11349 \ifx\@pdfstartview\@empty
11350 \else
11351 \special{!onopen Page\@pdfstartpage}%
11352 \fi

```



```

11353 \fi
11354 \special{!pdfinfo p=</\@pdfpagemode>}%
11355 \ifx\@baseurl\@empty
11356 \else
11357 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11358 \fi
11359 \special{!pdfinfo v=<<<%
11360 \ifHy@pdftoolbar\else /HideToolbar true\fi
11361 \ifHy@pdfmenubar\else /HideMenubar true\fi
11362 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11363 \ifHy@pdfwindow /FitWindow true\fi
11364 \ifHy@pdfcenterwindow /CenterWindow true\fi
11365 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11366 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11367 \Hy@UseNameKey{Direction}\@pdfdirection
11368 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11369 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11370 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11371 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11372 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11373 \Hy@UseNameKey{Duplex}\@pdfduplex
11374 \ifx\@pdfpicktraybypdfsize\@empty
11375 \else
11376 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11377 \fi
11378 \ifx\@pdfprintpagerange\@empty
11379 \else
11380 /PrintPageRange[\@pdfprintpagerange]%
11381 \fi
11382 \ifx\@pdfnumcopies\@empty
11383 \else
11384 /NumCopies \@pdfnumcopies
11385 \fi
11386 >>>}%
11387 \ifx\@pdfpagelayout\@empty
11388 \else
11389 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11390 \fi
11391 }%
11392 \HyInfo@AddonUnsupportedtrue
11393 \define@key{Hyp}{pdfcreationdate}{%
11394 \Hy@Warning{%
11395 VTeX does not support pdfcreationdate.\MessageBreak
11396 Therefore its setting is ignored%
11397 }%
11398 }
11399 \define@key{Hyp}{pdfmoddate}{%
11400 \Hy@Warning{%
11401 VTeX does not support pdfmoddate.\MessageBreak
11402 Therefore its setting is ignored%
11403 }%
11404 }
11405 \def\PDF@FinishDoc{%
11406 \Hy@UseMaketitleInfos
11407 \HyInfo@TrappedUnsupported
11408 \special{!pdfinfo a=<\@pdfauthor>}%
11409 \special{!pdfinfo t=<\@pdftitle>}%

```

```

11410 \special{!pdfinfo s=<\pdfsubject>}%
11411 \special{!pdfinfo c=<\pdfcreator>}%
11412 \ifx\pdfproducer\relax
11413 \else
11414 \special{!pdfinfo r=<\pdfproducer>}%
11415 \fi
11416 \special{!pdfinfo k=<\pdfkeywords>}%
11417 \Hy@DisableOption{pdfauthor}%
11418 \Hy@DisableOption{pdftitle}%
11419 \Hy@DisableOption{pdfsubject}%
11420 \Hy@DisableOption{pdfcreator}%
11421 \Hy@DisableOption{pdfcreationdate}%
11422 \Hy@DisableOption{pdfmoddate}%
11423 \Hy@DisableOption{pdfproducer}%
11424 \Hy@DisableOption{pdfkeywords}%
11425 \Hy@DisableOption{pdftrapped}%
11426 \Hy@DisableOption{pdfinfo}%
11427 }
11428 </vtx>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

11429 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11430 <package>\providecommand*{\Hy@DistillerDestFix}{%
11431 <*pdfmark | dviwindo>
11432 \def\Hy@DistillerDestFix{%
11433 \begingroup
11434 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11435 \ifnum \@ifundefined{OpMode}{0}{%
11436 \ifundefined{gexmode}{0}{%
11437 \ifnum\gexmode>0 \OpMode\else 0\fi
11438 }}>1 %
11439 \def\x##1{%
11440 \immediate\special{!##1}%
11441 }%
11442 \fi
11443 \x{%
11444 /product where{%
11445 pop %
11446 product(Distiller)search{%
11447 pop pop pop %
11448 version(.)search{%
11449 exch pop exch pop%
11450 (3011)eq{%
11451 gsave %

```

```

11452      newpath 0 0 moveto closepath clip%
11453      /Courier findfont 10 scalefont setfont %
11454      72 72 moveto(.)show %
11455      grestore%
11456      }if%
11457      }{pop}ifelse%
11458      }{pop}ifelse%
11459      }if%
11460      }%
11461      \endgroup
11462  }
11463  </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

```

\@pdfproducer   for document information
\literalps@out  PostScript output
\headerps@out   PostScript output that goes in the header area

```

and the correct definitions of the following PostScript procedures:

```

H.S      start of anchor, link or rect
#1 H.A   end of anchor, argument=baselineskip in pt
#1 H.L   end of link, argument=baselineskip in pt
H.R      end of rect
H.B      raw rect code

```

```

11464 (*pdfmark)
11465 \Hy@breaklinks@unsupported
11466 \def\HyPat@ObjRef{%
11467   \{[~{}]+~\}%
11468 }
11469 \Hy@WrapperDef\hyper@anchor#1{%
11470   \Hy@SaveLastskip
11471   \Hy@VerboseAnchor{#1}%
11472   \begingroup
11473     \pdfmark[\anchor@spot]{%
11474       pdfmark=/DEST,%
11475       linktype=anchor,%
11476       View=/\@pdfview \@pdfviewparams,%
11477       DestAnchor={#1}%
11478     }%
11479   \endgroup
11480   \Hy@RestoreLastskip
11481 }
11482 \ltx@ifundefined{hyper@anchorstart}{~}{\endinput}
11483 \Hy@WrapperDef\hyper@anchorstart#1{%
11484   \Hy@SaveLastskip
11485   \Hy@VerboseAnchor{#1}%
11486   \literalps@out{H.S}%
11487   \Hy@AllowHyphens
11488   \xdef\hyper@currentanchor{#1}%
11489   \Hy@activeanchortrue
11490 }
11491 \def\hyper@anchorend{%
11492   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%

```

```

11493 \pdfmark{%
11494   pdfmark=/DEST,%
11495   linktype=anchor,%
11496   View=/\@pdfview \@pdfviewparams,%
11497   DestAnchor=\hyper@currentanchor,%
11498 }%
11499 \Hy@activeanchorfalse
11500 \Hy@RestoreLastskip
11501 }
11502 \def\hyper@linkstart#1#2{%
11503   \Hy@VerboseLinkStart{#1}{#2}%
11504   \ifHy@breaklinks
11505   \else
11506     \leavevmode
11507     \ifmmode
11508       \def\Hy@LinkMath{$}%
11509     \else
11510       \let\Hy@LinkMath\ltx@empty
11511     \fi
11512     \Hy@SaveSpaceFactor
11513     \hbox\bgroup
11514     \Hy@RestoreSpaceFactor
11515     \Hy@LinkMath
11516   \fi
11517   \expandafter\Hy@colorlink\csname @#1color\endcsname
11518   \literalps@out{H.S}%
11519   \Hy@AllowHyphens
11520   \xdef\hyper@currentanchor{#2}%
11521   \gdef\hyper@currentlinktype{#1}%
11522 }
11523 \def\hyper@linkend{%
11524   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11525   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11526     \let\Hy@tempcolor\relax
11527   }{%
11528     \edef\Hy@tempcolor{%
11529       \csname @\hyper@currentlinktype bordercolor\endcsname
11530     }%
11531   }%
11532   \pdfmark{%
11533     pdfmark=/ANN,%
11534     linktype=link,%
11535     Subtype=/Link,%
11536     PDFAFflags=4,%
11537     Dest=\hyper@currentanchor,%
11538     AcroHighlight=\@pdfhighlight,%
11539     Border=\@pdfborder,%
11540     BorderStyle=\@pdfborderstyle,%
11541     Color=\Hy@tempcolor,%
11542     Raw=H.B%
11543   }%
11544   \Hy@endcolorlink
11545   \ifHy@breaklinks
11546   \else
11547     \Hy@LinkMath
11548     \Hy@SaveSpaceFactor
11549     \egroup

```

```

11550 \Hy@RestoreSpaceFactor
11551 \fi
11552 }

```

We have to allow for `\baselineskip` having an optional stretch and shrink (you meet this in slide packages, for instance), so we need to strip off the junk. David Carlisle, of course, wrote this bit of code.

```

11553 \begingroup
11554 \catcode'P=12 %
11555 \catcode'T=12 %
11556 \lowercase{\endgroup
11557 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11558 }
11559 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11560 \def\hyper@pagetransition{%
11561 \ifx\@pdfpagetransition\relax
11562 \else
11563 \ifx\@pdfpagetransition\@empty
11564 % 1. Does an old entry have to be deleted?
11565 % 2. If 1=yes, how to delete?
11566 \else
11567 \pdfmark{%
11568 pdfmark=/PUT,%
11569 Raw={%
11570 \string{ThisPage\string}%
11571 <</Trans << /S /\@pdfpagetransition\space >> >>%
11572 }%
11573 }%
11574 \fi
11575 \fi
11576 }

```

`\hyper@pageduration`

```

11577 \def\hyper@pageduration{%
11578 \ifx\@pdfpageduration\relax
11579 \else
11580 \ifx\@pdfpageduration\@empty
11581 % 1. Does an old entry have to be deleted?
11582 % 2. If 1=yes, how to delete?
11583 \else
11584 \pdfmark{%
11585 pdfmark=/PUT,%
11586 Raw={%
11587 \string{ThisPage\string}%
11588 <</Dur \@pdfpageduration>>%
11589 }%
11590 }%
11591 \fi
11592 \fi
11593 }

```

`\hyper@pagehidden`

```

11594 \def\hyper@pagehidden{%
11595 \ifHy@useHidKey
11596 \pdfmark{%

```

```

11597 pdfmark=/PUT,%
11598 Raw={%
11599 \string{ThisPage\string}%
11600 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11601 }%
11602 }%
11603 \fi
11604 }

11605 \g@addto@macro\Hy@EveryPageBoxHook{%
11606 \hyper@pagetransition
11607 \hyper@pageduration
11608 \hyper@pagehidden
11609 }

11610 \def\hyper@image#1#2{%
11611 \hyper@linkurl{#2}{#1}%
11612 }
11613 \def\Hy@undefinedname{UNDEFINED}
11614 \def\hyper@link#1#2#3{%
11615 \Hy@VerboseLinkStart{#1}{#2}%
11616 \ltx@ifundefined{#1bordercolor}{%
11617 \let\Hy@tempcolor\relax
11618 }{%
11619 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11620 }%
11621 \begingroup
11622 \protected@edef\Hy@testname{#2}%
11623 \ifx\Hy@testname\@empty
11624 \Hy@Warning{%
11625 Empty destination name,\MessageBreak
11626 using '\Hy@undefinedname'%
11627 }%
11628 \let\Hy@testname\Hy@undefinedname
11629 \fi
11630 \pdfmark[{#3}]{%
11631 Color=\Hy@tempcolor,%
11632 linktype={#1},%
11633 AcroHighlight=\@pdfhighlight,%
11634 Border=\@pdfborder,%
11635 BorderStyle=\@pdfborderstyle,%
11636 pdfmark=/ANN,%
11637 Subtype=/Link,%
11638 PDFAFlags=4,%
11639 Dest=\Hy@testname
11640 }%
11641 \endgroup
11642 }

11643 \newtoks\pdf@docset
11644 \def\PDF@FinishDoc{%
11645 \Hy@UseMaketitleInfos
11646 \Hy@Info@GenerateAddons
11647 \let\Hy@temp\@empty
11648 \ifx\@pdfcreationdate\@empty
11649 \else
11650 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11651 \fi
11652 \ifx\@pdfmoddate\@empty
11653 \else

```

```

11654 \expandafter\def\expandafter\Hy@temp\expandafter{%
11655 \Hy@temp
11656 ModDate=\@pdfmoddate,%
11657 }%
11658 \fi
11659 \ifx\@pdfproducer\relax
11660 \else
11661 \expandafter\def\expandafter\Hy@temp\expandafter{%
11662 \Hy@temp
11663 Producer=\@pdfproducer,%
11664 }%
11665 \fi
11666 \expandafter
11667 \pdfmark\expandafter{%
11668 \Hy@temp
11669 pdfmark=/DOCINFO,%
11670 Title=\@pdftitle,%
11671 Subject=\@pdfsubject,%
11672 Creator=\@pdfcreator,%
11673 Author=\@pdfauthor,%
11674 Keywords=\@pdfkeywords,%
11675 Trapped=\@pdftrapped
11676 }%
11677 \ifx\HyInfo@Addons\@empty
11678 \else
11679 \pdfmark{%
11680 pdfmark=/DOCINFO,%
11681 Raw={\HyInfo@Addons}%
11682 }%
11683 \fi
11684 \Hy@DisableOption{pdfauthor}%
11685 \Hy@DisableOption{pdftitle}%
11686 \Hy@DisableOption{pdfsubject}%
11687 \Hy@DisableOption{pdfcreator}%
11688 \Hy@DisableOption{pdfcreationdate}%
11689 \Hy@DisableOption{pdfmoddate}%
11690 \Hy@DisableOption{pdfproducer}%
11691 \Hy@DisableOption{pdfkeywords}%
11692 \Hy@DisableOption{pdftrapped}%
11693 \Hy@DisableOption{pdfinfo}%
11694 }
11695 \def\PDF@SetupDoc{%
11696 \def\Hy@temp{}%
11697 \ifx\@pdfstartpage\@empty
11698 \else
11699 \ifx\@pdfstartview\@empty
11700 \else
11701 \edef\Hy@temp{%
11702 ,Page=\@pdfstartpage
11703 ,View=\@pdfstartview
11704 }%
11705 \fi
11706 \fi
11707 \edef\Hy@temp{%
11708 \noexpand\pdfmark{%
11709 pdfmark=/DOCVIEW,%
11710 PageMode=/\@pdfpagemode

```

```

11711 \Hy@temp
11712 }%
11713 }%
11714 \Hy@temp
11715 \ifx\@pdfpagescrop\@empty
11716 \else
11717 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11718 \fi
11719 \edef\Hy@temp{%
11720 \ifHy@pdftoolbar\else /HideToolbar true\fi
11721 \ifHy@pdfmenubar\else /HideMenubar true\fi
11722 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11723 \ifHy@pdfwindow /FitWindow true\fi
11724 \ifHy@pdfcenterwindow /CenterWindow true\fi
11725 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11726 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11727 \Hy@UseNameKey{Direction}\@pdfdirection
11728 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11729 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11730 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11731 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11732 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11733 \Hy@UseNameKey{Duplex}\@pdfduplex
11734 \ifx\@pdfpicktraybypdfsize\@empty
11735 \else
11736 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11737 \fi
11738 \ifx\@pdfprintpagerange\@empty
11739 \else
11740 /PrintPageRange[\@pdfprintpagerange]%
11741 \fi
11742 \ifx\@pdfnumcopies\@empty
11743 \else
11744 /NumCopies \@pdfnumcopies
11745 \fi
11746 }%
11747 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11748 \pdfmark{%
11749 pdfmark=/PUT,%
11750 Raw={%
11751 \string{Catalog\string}<<%
11752 \ifx\Hy@temp\@empty
11753 \else
11754 /ViewerPreferences<<\Hy@temp>>%
11755 \fi
11756 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11757 \ifx\@pdflang\@empty
11758 \else
11759 /Lang(\@pdflang)%
11760 \fi
11761 \ifx\@baseurl\@empty
11762 \else
11763 /URI<</Base(\Hy@pstringB)>>%
11764 \fi
11765 >>%
11766 }%
11767 }%

```



```

11768 }
11769 </pdfmark>
11770 <*pdfmarkbase>

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

11771 \newif\ifHy@pdfmarkerror
11772 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11773 \def\pdfmark@[#1]#2{%
11774   \Hy@pdfmarkerrorfalse
11775   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11776   \@processme
11777   \let\pdf@type\relax
11778   \kvsetkeys{PDF}{#2}%
11779   \ifHy@pdfmarkerror
11780   \else
11781     \ifx\pdf@type\relax
11782       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11783       \ifx\#1\%
11784         \else
11785           \pdf@rect{#1}%
11786         \fi
11787       \else
11788         \ifx\#1\%
11789           \literalps@out{%
11790             [\the\pdf@toks\space\pdf@type\space pdfmark%
11791             ]}%
11792         \else
11793           \ltx@ifundefined{@\pdf@linktype color}{%
11794             \Hy@colorlink\@linkcolor
11795           }{%
11796             \expandafter\Hy@colorlink
11797               \csname @\pdf@linktype color\endcsname
11798           }%
11799           \pdf@rect{#1}%
11800           \literalps@out{%
11801             [\the\pdf@toks\space\pdf@type\space pdfmark%
11802             ]}%
11803           \Hy@endcolorlink
11804         \fi
11805       \fi
11806     \fi
11807 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

11808 \newsavebox{\pdf@box}
11809 \providecommand*{\Hy@setouterhbox}{\sbox}
11810 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11811 \def\Hy@DEST{/DEST}
11812 \def\pdf@rect#1{%
11813   \begingroup
11814     \chardef\x=1 %
11815     \def\Hy@temp{#1}%
11816     \ifx\Hy@temp\ltx@empty
11817       \chardef\x=0 %
11818     \else
11819       \def\y{\anchor@spot}%
11820       \ifx\Hy@temp\y
11821         \def\y{\relax}%
11822       \ifx\anchor@spot\y
11823         \chardef\x=0 %
11824       \fi
11825     \fi
11826   \fi
11827 \expandafter\endgroup
11828 \ifcase\x
11829   \literalps@out{H.S}%
11830   \literalps@out{H.R}%
11831 \else
11832   \leavevmode
11833   \Hy@SaveSpaceFactor
11834   \ifmmode
11835     \def\Hy@LinkMath{$}%
11836   \else
11837     \let\Hy@LinkMath\ltx@empty
11838   \fi
11839   \ifHy@breaklinks
11840     \Hy@setouterhbox\pdf@box{%
11841       \Hy@RestoreSpaceFactor
11842       \Hy@LinkMath
11843       \Hy@AllowHyphens#1\Hy@xspace@end
11844       \Hy@LinkMath
11845       \Hy@SaveSpaceFactor
11846     }%
11847   \else
11848     \sbox\pdf@box{%
11849       \Hy@RestoreSpaceFactor
11850       \Hy@LinkMath
11851       #1\Hy@xspace@end
11852       \Hy@LinkMath
11853       \Hy@SaveSpaceFactor
11854     }%
11855   \fi
11856   \dimen@{\ht\pdf@box}
11857   \ifdim\dp\pdf@box=\z@
11858     \literalps@out{H.S}%
11859   \else
11860     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11861   \fi

```

If the text has to be horizontal mode stuff then just unbox the saved box like this, which saves executing it twice, which can mess up counters etc (thanks DPC...).

```

11862 \ifHy@breaklinks
11863 \ifhmode
11864 \Hy@breaklinkshbox\pdf@box
11865 \else
11866 \box\pdf@box
11867 \fi
11868 \else
11869 \expandafter\box\pdf@box
11870 \fi

```

but if it can have multiple paragraphs you'd need one of these, but in that case the measured box size would be wrong anyway.

```

\ifHy@breaklinks#1\else\box\pdf@box\fi
\ifHy@breaklinks{#1}\else\box\pdf@box\fi

11871 \ifdim\dimen@=\z@
11872 \literalps@out{H.R}%
11873 \else
11874 \raise\dimen@\hbox{\literalps@out{H.R}}%
11875 \fi
11876 \Hy@RestoreSpaceFactor
11877 \fi
11878 \ifx\pdf@type\Hy@DEST
11879 \else
11880 \pdf@addtoksx{H.B}%
11881 \fi
11882 }

```

All the supplied material is stored in a token list; since I do not feel sure I quite understand these, things may not work as expected with expansion. We'll have to experiment.

```

11883 \newtoks\pdf@toks
11884 \newtoks\pdf@defaulttoks
11885 \pdf@defaulttoks={}
11886 \def\pdf@addtoks#1#2{%
11887 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11888 \@processme
11889 }
11890 \def\pdf@addtoksx#1{%
11891 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11892 \@processme
11893 }
11894 \def\PDFdefaults#1{%
11895 \pdf@defaulttoks={#1}%
11896 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11897 % what is the type of pdfmark?
11898 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11899 % what is the link type?
11900 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11901 \def\pdf@linktype{link}
11902 % parameter is a stream of PDF
11903 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11904 % parameter is a name
11905 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}

```

```

11906 % parameter is a array
11907 \define@key{PDF}{Border}{%
11908   \edef\Hy@temp{#1}%
11909   \ifx\Hy@temp\@empty
11910   \else
11911     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11912   \fi
11913 }
11914 \let\Hy@BorderArrayPatch\@empty
11915 % parameter is a dictionary
11916 \define@key{PDF}{BorderStyle}{%
11917   \edef\Hy@temp{#1}%
11918   \ifx\Hy@temp\@empty
11919   \else
11920     \pdf@addtoks{<<#1>>}{BS}%
11921   \fi
11922 }
11923 % parameter is a array
11924 \define@key{PDF}{Color}{%
11925   \ifx\relax#1\relax
11926   \else
11927     \pdf@addtoks{[#1]}{Color}% hash-ok
11928   \fi
11929 }
11930 % parameter is a string
11931 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11932 % parameter is a integer
11933 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11934 % parameter is a array
11935 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11936 % parameter is a string
11937 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11938 % parameter is a string or file
11939 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11940 % parameter is a destination
11941 \define@key{PDF}{Dest}{%
11942   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11943   \ifx\Hy@pstringDest\@empty
11944     \Hy@pdfmarkerrortrue
11945     \Hy@Warning{Destination with empty name ignored}%
11946   \else
11947     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11948   \fi
11949 }
11950 \define@key{PDF}{DestAnchor}{%
11951   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11952   \ifx\Hy@pstringDest\@empty
11953     \Hy@pdfmarkerrortrue
11954     \Hy@Warning{Destination with empty name ignored}%
11955   \else
11956     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11957   \fi
11958 }
11959 % parameter is a string
11960 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11961 % parameter is a string
11962 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}

```

```

11963 % parameter is a int
11964 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11965 \define@key{PDF}{PDFAFlags}{%
11966   \ifHy@pdfa
11967     \pdf@addtoks{#1}{F}%
11968   \fi
11969 }
11970 % parameter is a name
11971 \define@key{PDF}{AcroHighlight}{%
11972   \begingroup
11973     \edef\x{#1}%
11974     \expandafter\endgroup\ifx\x\@empty
11975       \else
11976         \pdf@addtoks{#1}{H}%
11977       \fi
11978 }
11979 % parameter is a string
11980 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
11981 % parameter is a string
11982 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
11983 % parameter is a string
11984 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
11985 % parameter is a string
11986 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
11987 % parameter is a Boolean
11988 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11989 % parameter is a integer or name
11990 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11991 % parameter is a name
11992 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11993 % parameter is a string
11994 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
11995 % parameter is a array
11996 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
11997 % parameter is a integer
11998 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11999 % parameter is a name
12000 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12001 % parameter is a string
12002 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
12003 % parameter is a string
12004 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
12005 % parameter is a string
12006 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
12007 % parameter is an array
12008 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
12009 % parameter is a string
12010 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12011 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
12012 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
12013 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
12014 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12015 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
12016 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
12017 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
12018 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}

```

```

12019 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12020 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12021 \define@key{PDF}{Trapped}{%
12022   \edef\Hy@temp{#1}%
12023   \ifx\Hy@temp\@empty
12024   \else
12025     \pdf@addtoks{/#1}{Trapped}%
12026   \fi
12027 }
12028
12029 </pdfmarkbase>
12030 <*pdfmark>
12031 \def\Acrobatmenu#1#2{%
12032   \EdefEscapeName\Hy@temp@menu{#1}%
12033   \Hy@Acrobatmenu{#1}{#2}{%
12034     \pdfmark[{#2}]{%
12035       linktype=menu,%
12036       pdfmark=/ANN,%
12037       AcroHighlight=\@pdfhighlight,%
12038       Border=\@pdfborder,%
12039       BorderStyle=\@pdfborderstyle,%
12040       Color=\@menubordercolor,%
12041       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12042       Subtype=/Link,%
12043       PDFAFlags=4%
12044     }%
12045   }%
12046 }

```

And now for some useful examples:

```

12047 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
12048 \def\PDFNextPage@[#1]#2{%
12049   \pdfmark[{#2}]{%
12050     #1,%
12051     Border=\@pdfborder,%
12052     BorderStyle=\@pdfborderstyle,%
12053     Color=.2 .1 .5,%
12054     pdfmark=/ANN,%
12055     Subtype=/Link,%
12056     PDFAFlags=4,%
12057     Page=/Next%
12058   }%
12059 }
12060 \def\PDFPreviousPage{%
12061   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12062 }
12063 \def\PDFPreviousPage@[#1]#2{%
12064   \pdfmark[{#2}]{%
12065     #1,%
12066     Border=\@pdfborder,%
12067     BorderStyle=\@pdfborderstyle,%
12068     Color=.4 .4 .1,%
12069     pdfmark=/ANN,%
12070     Subtype=/Link,%
12071     PDFAFlags=4,%
12072     Page=/Prev%
12073   }%
12074 }

```

```

12075 \def\PDFOpen#1{%
12076   \pdfmark{#1,pdfmark=/DOCVIEW}%
12077 }

```

This will only work if you use Distiller 2.1 or higher.

```

12078 \def\hyper@linkurl#1#2{%
12079   \begingroup
12080   \Hy@pstringdef\Hy@pstringURI{#2}%
12081   \hyper@chars
12082   \leavevmode
12083   \pdfmark[{#1}]{%
12084     pdfmark=/ANN,%
12085     linktype=url,%
12086     AcroHighlight=\@pdfhighlight,%
12087     Border=\@pdfborder,%
12088     BorderStyle=\@pdfborderstyle,%
12089     Color=\@urlbordercolor,%
12090     Action={<<%
12091       /Subtype/URI%
12092       /URI(\Hy@pstringURI)%
12093       \ifHy@href@ismap
12094         /IsMap true%
12095       \fi
12096     >>},%
12097     Subtype=/Link,%
12098     PDFAFlags=4%
12099   }%
12100   \endgroup
12101 }
12102 \def\hyper@linkfile#1#2#3{%
12103   \begingroup
12104   \def\Hy@pstringF{#2}%
12105   \Hy@CleanupFile\Hy@pstringF
12106   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12107   \Hy@pstringdef\Hy@pstringD{#3}%
12108   \Hy@MakeRemoteAction
12109   \leavevmode
12110   \pdfmark[{#1}]{%
12111     pdfmark=/ANN,%
12112     Subtype=/Link,%
12113     PDFAFlags=4,%
12114     AcroHighlight=\@pdfhighlight,%
12115     Border=\@pdfborder,%
12116     BorderStyle=\@pdfborderstyle,%
12117     linktype=file,%
12118     Color=\@filebordercolor,%
12119     Action={%
12120       <<%
12121       /S/GoToR%
12122       \Hy@SetNewWindow
12123       /F(\Hy@pstringF)%
12124       /D%
12125       \ifx\#3\%
12126         [\Hy@href@page\@pdfremotestartview]%
12127       \else
12128         (\Hy@pstringD)cvn%
12129       \fi
12130       \Hy@href@nextactionraw

```

```

12131     >>%
12132   }%
12133 }%
12134 \endgroup
12135 }
12136 \def\@hyper@launch run:#1\#2#3{%
12137   \begingroup
12138   \Hy@pstringdef\Hy@pstringF{#1}%
12139   \Hy@pstringdef\Hy@pstringP{#3}%
12140   \leavevmode
12141   \pdfmark[{#2}]{%
12142     pdfmark=/ANN,%
12143     Subtype=/Link,%
12144     PDFAFlags=4,%
12145     AcroHighlight=\@pdfhighlight,%
12146     Border=\@pdfborder,%
12147     BorderStyle=\@pdfborderstyle,%
12148     linktype=run,%
12149     Color=\@runbordercolor,%
12150     Action={%
12151       <<%
12152         /S/Launch%
12153         \Hy@SetNewWindow
12154         /F(\Hy@pstringF)%
12155         \ifx\#3\%
12156         \else
12157           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12158         \fi
12159         \Hy@href@nextactionraw
12160       >>%
12161     }%
12162   }%
12163 \endgroup
12164 }
12165 \pdfmark

```

Unfortunately, some parts of the `pdfmark` PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

47.9 Rokicki's dvips

dvips thinks in 10ths of a big point, its coordinate space is resolution dependent, and its y axis starts at the top of the page. Other drivers can and will be different!

The work is done in `SDict`, because we add in some header definitions in a moment.

```

12166 \(*dvips)
12167 \providecommand*\XR@ext}{pdf}
12168 \let\Hy@raisedlink\ltx@empty
12169 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12170 \def\headerps@out#1{\special{! #1}}%
12171 \input{pdfmark.def}%
12172 \ifx\@pdfproducer\relax
12173   \def\@pdfproducer{dvips + Distiller}%
12174 \fi
12175 \providecommand*\@pdfborder{0 0 1}
12176 \providecommand*\@pdfborderstyle{}
12177 \providecommand*\@pdfview{XYZ}

```



```

12178 \providecommand*\@pdfviewparams{ H.V}
12179 \def\Hy@BorderArrayPatch{BorderArrayPatch}

12180 \g@addto@macro\Hy@FirstPageHook{%
12181   \headerps@out{%

```

Unless I am going mad, this *appears* to be the relationship between the default coordinate system (PDF), and dvips;

```

/DvipsToPDF { .01383701 div Resolution div } def
/PDFToDvips { .01383701 mul Resolution mul } def

```

the latter's coordinates are resolution dependent, but what that .01383701 is, who knows? well, almost everyone except me, I expect...And yes, Maarten Gelderman <mgelderman@econ.vu.nl> points out that its 1/72.27 (the number of points to an inch, big points to inch is 1/72). This also suggests that the code would be more understandable (and exact) if 0.013 div would be replaced by 72.27 mul, so here we go. If this isn't right, I'll revert it.

```

12182   /DvipsToPDF{72.27 mul Resolution div} def%
12183   /PDFToDvips{72.27 div Resolution mul} def%
12184   /BPToDvips{72 div Resolution mul}def%

```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```

12185   /BorderArrayPatch{%
12186     [exch{%
12187       dup dup type/integertype eq exch type/realtype eq or%
12188       {BPToDvips}if%
12189     }forall]%
12190   }def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

12191   /HyperBorder {1 PDFToDvips} def%
12192   /H.V {pdf@hoff pdf@voff null} def%
12193   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates

```

12194   /H.S {%
12195     currentpoint %
12196     HyperBorder add /pdf@lly exch def %
12197     dup DvipsToPDF 72 add /pdf@hoff exch def %
12198     HyperBorder sub /pdf@llx exch def%
12199   } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current `baselineskip` is, and convert it to the dvips coordinate system.

Argument: `baselineskip` in pt. The x and y coordinates of the current point, minus the `baselineskip`

```

12200   /H.L {%
12201     2 sub dup%
12202     /HyperBasePt exch def %
12203     PDFToDvips /HyperBaseDvips exch def %

```

```

12204     currentpoint %
12205     HyperBaseDvips sub /pdf@ury exch def%
12206     /pdf@urx exch def%
12207   } def%
12208   /H.A {%
12209     H.L %
12210 % | /pdf@voff| = the distance from the top of the page to a point
12211 % | \baselineskip| above the current point in PDF coordinates
12212     currentpoint exch pop %
12213     vsize 72 sub exch DvipsToPDF %
12214     HyperBasePt sub % baseline skip
12215     sub /pdf@voff exch def%
12216   } def%
12217   /H.R {%
12218     currentpoint %
12219     HyperBorder sub /pdf@ury exch def %
12220     HyperBorder add /pdf@urx exch def %
12221 % | /pdf@voff| = the distance from the top of the page to the current point, in
12222 % PDF coordinates
12223     currentpoint exch pop vsize 72 sub %
12224     exch DvipsToPDF sub /pdf@voff exch def%
12225   } def%
12226 }%
12227 }
12228 \AtBeginShipoutFirst{%
12229   \ifHy@setpagesize
12230     \begingroup
12231       \@ifundefined{stockwidth}{{%
12232         \ifdim\paperwidth>\z@
12233           \ifdim\paperheight>\z@
12234             \special{papersize=\the\paperwidth,\the\paperheight}%
12235           \fi
12236         \fi
12237       }{%
12238         \ifdim\stockwidth>\z@
12239           \ifdim\stockheight>\z@
12240             \special{papersize=\the\stockwidth,\the\stockheight}%
12241           \fi
12242         \fi
12243       }%
12244     \endgroup
12245   \fi
12246   \Hy@DisableOption{setpagesize}%
12247 }
12248 </dvips>

```

47.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

12249 <*vtexpdfmark>
12250 \providecommand*{\XR@ext}{pdf}
12251 \let\Hy@raisedlink\ltx@empty
12252 \def\literalps@out#1{\special{pS:#1}}%
12253 \def\headerps@out#1{\immediate\special{pS:#1}}%

```

```

12254 \input{pdfmark.def}%
12255 \ifx\@pdfproducer\relax
12256   \ifnum\OpMode=\@one
12257     \def\@pdfproducer{VTeX}%
12258   \else
12259     \def\@pdfproducer{VTeX + Distiller}%
12260   \fi
12261 \fi
12262 \providecommand*\@pdfborder{0 0 1}
12263 \providecommand*\@pdfborderstyle{}
12264 \providecommand*\@pdfview{XYZ}
12265 \providecommand*\@pdfviewparams{ H.V}

12266 \g@addto@macro\Hy@FirstPageHook{%
12267   \headerps@out{%
12268     /vsize {\Hy@pageheight} def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

12269   /HyperBorder {1} def%
12270   /H.V {pdf@hoff pdf@voff null} def%
12271   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12272   /H.S {%
12273     currentpoint %
12274     HyperBorder sub%
12275     /pdf@lly exch def %
12276     dup 72 add /pdf@hoff exch def %
12277     HyperBorder sub%
12278     /pdf@llx exch def%
12279   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12280   /H.L {%
12281     2 sub%
12282     /HyperBasePt exch def %
12283     currentpoint %
12284     HyperBasePt add HyperBorder add%
12285     /pdf@ury exch def %
12286     HyperBorder add%
12287     /pdf@urx exch def%
12288   } def%
12289   /H.A {%
12290     H.L %
12291     currentpoint exch pop %
12292     vsize 72 sub exch %
12293     HyperBasePt add add%
12294     /pdf@voff exch def%
12295   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12296   /H.R {%
12297     currentpoint %
12298     HyperBorder add%
12299     /pdf@ury exch def %

```

```

12300   HyperBorder add%
12301   /pdf@urx exch def %
12302   currentpoint exch pop vsize 72 sub add%
12303   /pdf@voff exch def%
12304   } def%
12305 }%
12306 }
12307 </vtxpdfmark>

```

47.11 Textures

```

12308 <*textures>
12309 \providecommand*{\XR@ext}{pdf}

```

At the suggestion of Jacques Distler (distler@golem.ph.utexas.edu), try to derive a suitable driver for Textures. This was initially a copy of dvips, with some guesses about Textures behaviour. Ross Moore (ross@maths.mq.edu.au) has added modifications for better compatibility, and to support use of pdfmark.

Start by defining a macro that expands to the end-of-line character. This will be used to format the appearance of PostScript code, to enhance readability, and avoid excessively long lines which might otherwise become broken to bad places.

`\Hy@ps@CR` The macro `\Hy@ps@CR` contains the end-of-line character.

```

12310 \begingroup
12311   \obeylines %
12312   \gdef\Hy@ps@CR{\noexpand
12313   }%
12314 \endgroup %

```

Textures has two types of `\special` command for inserting PostScript code directly into the dvi output. The ‘postscript’ way preserves TeX’s idea of where on the page the `\special` occurred, but it wraps the contents with a `save-restore` pair, and adjusts the user-space coordinate system for local drawing commands. The ‘rawpostscript’ way simply inserts code, without regard for the location on the page.

Thus, to put arbitrary PostScript coding at a fixed location requires using *both* `\special` constructions. It works by pushing the device-space coordinates onto the operand stack, where they can be used to transform back to the correct user-space coordinates for the whole page, within a ‘rawpostscript’ `\special`.

```

12315 \def\literalps@out#1{%
12316   \special{postscript 0 0 transform}%
12317   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12318 }%
12319 %

```

The ‘prepostscript’ is a 3rd kind of `\special`, used for inserting definitions into the dictionaries, before page-building begins. These are to be available for use on all pages.

```

12320 \def\headerps@out#1{%
12321   \special{%
12322     prepostscript TeXdict begin\Hy@ps@CR
12323     #1\Hy@ps@CR
12324     end%
12325   }%
12326 }%
12327 %

```

To correctly support the `pdfmark` method, for embedding PDF definitions with `.ps` files in a non-intrusive way, an appropriate definition needs to be made *before* the file `pdfmark.def` is read. Other parameters are best set afterwards.

```

12328 \g@addto@macro\Hy@FirstPageHook{%
12329   \headerps@out{%
12330     /betterpdfmark {%
12331       systemdict begin %
12332         dup /BP eq%
12333         {cleartomark gsave nulldevice []%
12334           {dup /EP eq%
12335             {cleartomark cleartomark grestore}%
12336             {cleartomark}%
12337             ifelse%
12338           }ifelse %
12339         end%
12340       }def\Hy@ps@CR
12341     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12342   }% end of \headerps@out
12343 }% end of \AtBeginShipoutFirst
12344 %
12345 \input{pdfmark.def}%
12346 %
12347 \ifx\@pdfproducer\relax
12348   \def\@pdfproducer{Textures + Distiller}%
12349 \fi
12350 \providecommand*\@pdfborder{0 0 1}
12351 \providecommand*\@pdfborderstyle{}
12352 \providecommand*\@pdfview{XYZ}
12353 \providecommand*\@pdfviewparams{ H.V}
12354 %

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. The `Rect` pair are called at the LL and UR corners of a box known to \TeX .

```

12355 \Hy@AtBeginDocument{%
12356   \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12357     /vsize {\Hy@pageheight} def%
12358     /DvipsToPDF {} def%
12359     /PDFToDvips {} def%
12360     /BPToDvips {} def%
12361     /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12362     /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12363     /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12364     /H.S {%
12365       currentpoint %
12366       HyperBorder add /pdf@lly exch def %
12367       dup DvipsToPDF 72 add /pdf@hoff exch def %
12368       HyperBorder sub /pdf@llx exch def%
12369     } def\Hy@ps@CR
12370     /H.L {%
12371       2 sub %
12372       PDFToDvips /HyperBase exch def %

```

```

12373     currentpoint %
12374     HyperBase sub /pdf@ury exch def%
12375     /pdf@urx exch def%
12376   } def\Hy@ps@CR
12377   /H.A {%
12378     H.L %
12379     currentpoint exch pop %
12380     vsize 72 sub exch DvipsToPDF %
12381     HyperBase sub % baseline skip
12382     sub /pdf@voff exch def%
12383   } def\Hy@ps@CR
12384   /H.R {%
12385     currentpoint %
12386     HyperBorder sub /pdf@ury exch def %
12387     HyperBorder add /pdf@urx exch def %
12388     currentpoint exch pop vsize 72 sub %
12389     exch DvipsToPDF sub /pdf@voff exch def%
12390   } def\Hy@ps@CR
12391 }%
12392 }

12393 \Hy@AtBeginDocument{%
12394   \ifHy@colorlinks
12395     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12396   \fi
12397 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertex.def` with what is established by loading `pdfmark.def`, or any other driver.

```

12398 \expandafter\let\expandafter\keepPDF@SetupDoc
12399   \csname PDF@SetupDoc\endcsname
12400 \def\PDF@SetupDoc{%
12401   \ifx\@baseurl\@empty
12402   \else
12403     \special{html:<base href="\@baseurl">}%
12404   \fi
12405   \keepPDF@SetupDoc
12406 }
12407 \Hy@WrapperDef\hyper@anchor#1{%
12408   \Hy@SaveLastskip
12409   \Hy@VerboseAnchor{#1}%
12410   \begingroup
12411     \let\protect=\string
12412     \special{html:<a name=%
12413       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12414   \endgroup
12415   \Hy@activeanchortrue
12416   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12417   \special{html:</a>}%
12418   \Hy@activeanchorfalse
12419   \Hy@RestoreLastskip
12420 }
12421 \Hy@WrapperDef\hyper@anchorstart#1{%
12422   \Hy@SaveLastskip
12423   \Hy@VerboseAnchor{#1}%
12424   \begingroup
12425   \hyper@chars

```

```

12426 \special{html:<a name=%
12427 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12428 \endgroup
12429 \Hy@activeanchortrue
12430 }
12431 \def\hyper@anchorend{%
12432 \special{html:</a>}%
12433 \Hy@activeanchorfalse
12434 \Hy@RestoreLastskip
12435 }
12436 \def\@urltype{url}
12437 \def\hyper@linkstart#1#2{%
12438 \Hy@VerboseLinkStart{#1}{#2}%
12439 \expandafter\Hy@colorlink\csname @#1color\endcsname
12440 \def\Hy@tempa{#1}%
12441 \ifx\Hy@tempa\@urltype
12442 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12443 \else
12444 \begingroup
12445 \hyper@chars
12446 \special{%
12447 html:<a href=%
12448 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12449 }%
12450 \endgroup
12451 \fi
12452 }
12453 \def\hyper@linkend{%
12454 \special{html:</a>}%
12455 \Hy@endcolorlink
12456 }
12457 \def\hyper@linkfile#1#2#3{%
12458 \hyper@linkurl{#1}{%
12459 \Hy@linkfileprefix#2\ifx\#3\\ \else\##3\fi
12460 }%
12461 }
12462 \def\hyper@linkurl#1#2{%
12463 \leavevmode
12464 \ifHy@raiselinks
12465 \Hy@SaveSpaceFactor
12466 \Hy@SaveSavedSpaceFactor
12467 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12468 \Hy@RestoreSavedSpaceFactor
12469 \@linkdim\dp\@tempboxa
12470 \lower\@linkdim\hbox{%
12471 \hyper@chars
12472 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12473 }%
12474 \Hy@colorlink\@urlcolor
12475 \Hy@RestoreSpaceFactor
12476 #1\Hy@xspace@end
12477 \Hy@SaveSpaceFactor
12478 \@linkdim\ht\@tempboxa
12479 \advance\@linkdim by -6.5\p@
12480 \raise\@linkdim\hbox{\special{html:</a>}}%
12481 \Hy@endcolorlink
12482 \Hy@RestoreSpaceFactor

```

```

12483 \else
12484 \begingroup
12485 \hyper@chars
12486 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12487 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12488 \special{html:</a>}%
12489 \Hy@endcolorlink
12490 \endgroup
12491 \fi
12492 }

```

Very poor implementation of \hyper@link without considering #1.

```

12493 \def\hyper@link#1#2#3{%
12494 \Hy@VerboseLinkStart{#1}{#2}%
12495 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
12496 }
12497 \def\hyper@image#1#2{%
12498 \begingroup
12499 \hyper@chars
12500 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12501 \endgroup
12502 }
12503 </textures>

```

47.12 dvipsone

```

12504 % \subsection{dvipsone driver}
12505 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12506 % |\special| commands.
12507 (*dvipsone)
12508 \providecommand*\XR@ext}{pdf}
12509 \let\Hy@raisedlink\ltx@empty
12510 \providecommand*\@pdfborder{0 0 1}
12511 \providecommand*\@pdfborderstyle{}
12512 \def\literalps@out#1{\special{ps:#1}}%
12513 \def\headerps@out#1{\special{headertext=#1}}%
12514 \input{pdfmark.def}%
12515 \ifx\@pdfproducer\relax
12516 \def\@pdfproducer{dvipsone + Distiller}%
12517 \fi
12518 \HyInfo@AddonUnsupportedtrue
12519 \def\PDF@FinishDoc{%
12520 \Hy@UseMaketitleInfos
12521 \HyInfo@TrappedUnsupported
12522 \special{PDF: Keywords \@pdfkeywords}%
12523 \special{PDF: Title \@pdftitle}%
12524 \special{PDF: Creator \@pdfcreator}%
12525 \ifx\@pdfcreationdate\@empty
12526 \else
12527 \special{PDF: CreationDate \@pdfcreationdate}%
12528 \fi
12529 \ifx\@pdfmoddate\@empty
12530 \else
12531 \special{PDF: ModDate \@pdfmoddate}%
12532 \fi
12533 \special{PDF: Author \@pdfauthor}%
12534 \ifx\@pdfproducer\relax
12535 \else

```



```

12536 \special{PDF: Producer \@pdfproducer}%
12537 \fi
12538 \special{PDF: Subject \@pdfsubject}%
12539 \Hy@DisableOption{pdfauthor}%
12540 \Hy@DisableOption{pdftitle}%
12541 \Hy@DisableOption{pdfsubject}%
12542 \Hy@DisableOption{pdfcreator}%
12543 \Hy@DisableOption{pdfcreationdate}%
12544 \Hy@DisableOption{pdfmoddate}%
12545 \Hy@DisableOption{pdfproducer}%
12546 \Hy@DisableOption{pdfkeywords}%
12547 \Hy@DisableOption{pdftrapped}%
12548 \Hy@DisableOption{pdfinfo}%
12549 }
12550 \def\PDF@SetupDoc{%
12551 \def\Hy@temp{}%
12552 \ifx\@pdfstartpage\@empty
12553 \else
12554 \ifx\@pdfstartview\@empty
12555 \else
12556 \edef\Hy@temp{%
12557 ,Page=\@pdfstartpage
12558 ,View=\@pdfstartview
12559 }%
12560 \fi
12561 \fi
12562 \edef\Hy@temp{%
12563 \noexpand\pdfmark{%
12564 pdfmark=/DOCVIEW,%
12565 PageMode=/\@pdfpagemode
12566 \Hy@temp
12567 }%
12568 }%
12569 \Hy@temp
12570 \ifx\@pdfpagescrop\@empty
12571 \else
12572 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12573 \fi
12574 \edef\Hy@temp{%
12575 \ifHy@pdftoolbar\else /HideToolbar true\fi
12576 \ifHy@pdfmenubar\else /HideMenubar true\fi
12577 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12578 \ifHy@pdfwindow /FitWindow true\fi
12579 \ifHy@pdfcenterwindow /CenterWindow true\fi
12580 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12581 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12582 \Hy@UseNameKey{Direction}\@pdfdirection
12583 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12584 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12585 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12586 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12587 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12588 \Hy@UseNameKey{Duplex}\@pdfduplex
12589 \ifx\@pdfpicktraybypdfsize\@empty
12590 \else
12591 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12592 \fi

```

```

12593 \ifx\@pdfprintpagerange\@empty
12594 \else
12595 /PrintPageRange[\@pdfprintpagerange]%
12596 \fi
12597 \ifx\@pdfnumcopies\@empty
12598 \else
12599 /NumCopies \@pdfnumcopies
12600 \fi
12601 }%
12602 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12603 \pdfmark{%
12604 pdfmark=/PUT,%
12605 Raw={%
12606 \string{Catalog\string}<<%
12607 \ifx\Hy@temp\@empty
12608 \else
12609 /ViewerPreferences<<\Hy@temp>>%
12610 \fi
12611 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12612 \ifx\@pdflang\@empty
12613 \else
12614 /Lang(\@pdflang)%
12615 \fi
12616 \ifx\@baseurl\@empty
12617 \else
12618 /URI<</Base(\Hy@pstringB)>>%
12619 \fi
12620 >>%
12621 }%
12622 }%
12623 }
12624 \providecommand*\@pdfview{XYZ}
12625 \providecommand*\@pdfviewparams{ %
12626 gsave revscl currentpoint grestore %
12627 72 add exch pop null exch null%
12628 }
12629 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The `Rect` pair are called at the LL and UR corners of a box known to \TeX .

```

12630 \g@addto@macro\Hy@FirstPageHook{%
12631 \headerps@out{%

```

`dvipsone` lives in scaled points; does this mean 65536 or 65781?

```

12632 /DvipsToPDF { 65781 div } def%
12633 /PDFToDvips { 65781 mul } def%
12634 /BPToDvips{65781 mul}def%
12635 /HyperBorder { 1 PDFToDvips } def%
12636 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

The values inside the `/Boder` array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```

12637 /BorderArrayPatch{%
12638 [exch{%
12639 dup dup type/integertype eq exch type/realtype eq or%

```

```

12640     {BPToDvips}if%
12641     }forall]%
12642 }def%

12643 /H.S {%
12644     currentpoint %
12645     HyperBorder add /pdf@lly exch def %
12646     dup DvipsToPDF 72 add /pdf@hoff exch def %
12647     HyperBorder sub /pdf@llx exch def%
12648 } def%
12649 /H.L {%
12650     2 sub %
12651     PDFToDvips /HyperBase exch def %
12652     currentpoint %
12653     HyperBase sub /pdf@ury exch def%
12654     /pdf@urx exch def%
12655 } def%
12656 /H.A {%
12657     H.L %
12658     currentpoint exch pop %
12659     HyperBase sub % baseline skip
12660     DvipsToPDF /pdf@voff exch def%
12661 } def%
12662 /H.R {%
12663     currentpoint %
12664     HyperBorder sub /pdf@ury exch def %
12665     HyperBorder add /pdf@urx exch def %
12666     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12667 } def%
12668 }%
12669 }
12670 </dvipsone>

```

47.13 TeX4ht

```

12671 <*tex4ht>
12672 \providecommand*\XR@ext}{html}
12673 \let\Hy@raisedlink\ltx@empty
12674 \@ifpackageloaded{tex4ht}{%
12675   \Hy@InfoNoLine{tex4ht is already loaded}%
12676 }{%
12677   \RequirePackage[hTeX4ht]{tex4ht}%
12678 }
12679 \hyperlinkfileprefix{}
12680 \let\PDF@FinishDoc\ltx@empty
12681 \def\PDF@SetupDoc{%
12682   \ifx\@baseurl\@empty
12683   \else
12684     \special{t4ht=<base href="\@baseurl">}%
12685   \fi
12686 }
12687 \Hy@WrapperDef\hyper@anchor#1{%
12688   \Hy@SaveLastskip
12689   \Hy@VerboseAnchor{#1}%
12690   \begingroup
12691     \let\protect=\string
12692     \special{t4ht=<a name=%
12693       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12694   \endgroup

```

```

12695 \Hy@activeanchortrue
12696 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12697 \special{t4ht=</a>}%
12698 \Hy@activeanchorfalse
12699 \Hy@RestoreLastskip
12700 }
12701 \Hy@WrapperDef\hyper@anchorstart#1{%
12702 \Hy@SaveLastskip
12703 \Hy@VerboseAnchor{#1}%
12704 \begingroup
12705 \hyper@chars\special{t4ht=<a name=%
12706 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12707 \endgroup
12708 \Hy@activeanchortrue
12709 }
12710 \def\hyper@anchorend{%
12711 \special{t4ht=</a>}%
12712 \Hy@activeanchorfalse
12713 \Hy@RestoreLastskip
12714 }
12715 \def\@urltype{url}
12716 \def\hyper@linkstart#1#2{%
12717 \Hy@VerboseLinkStart{#1}{#2}%
12718 \expandafter\Hy@colorlink\csname @#1color\endcsname
12719 \def\Hy@tempa{#1}%
12720 \ifx\Hy@tempa\@urltype
12721 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12722 \else
12723 \begingroup
12724 \hyper@chars
12725 \special{t4ht=<a href=%
12726 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12727 \endgroup
12728 \fi
12729 }
12730 \def\hyper@linkend{%
12731 \special{t4ht=</a>}%
12732 \Hy@endcolorlink
12733 }
12734 \def\hyper@linkfile#1#2#3{%
12735 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12736 }
12737 \def\hyper@linkurl#1#2{%
12738 \leavevmode
12739 \ifHy@raiselinks
12740 \Hy@SaveSpaceFactor
12741 \Hy@SaveSavedSpaceFactor
12742 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12743 \Hy@RestoreSavedSpaceFactor
12744 \@linkdim\dp\@tempboxa
12745 \lower\@linkdim\hbox{%
12746 \begingroup
12747 \hyper@chars
12748 \special{%
12749 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12750 }%
12751 \endgroup

```

```

12752 }%
12753 \Hy@colorlink\@urlcolor
12754 \Hy@RestoreSpaceFactor
12755 #1\Hy@xspace@end
12756 \Hy@SaveSpaceFactor
12757 \Hy@endcolorlink
12758 \@linkdim\ht\@tempboxa
12759 \advance\@linkdim by -6.5\p@
12760 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12761 \Hy@RestoreSpaceFactor
12762 \else
12763 \begingroup
12764 \hyper@chars
12765 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12766 \Hy@colorlink\@urlcolor
12767 #1\Hy@xspace@end
12768 \Hy@endcolorlink
12769 \special{t4ht=</a>}%
12770 \endgroup
12771 \fi
12772 }

```

Poor implementation of \hyper@link without considering #1.

```

12773 \def\hyper@link#1#2#3{%
12774 \Hy@VerboseLinkStart{#1}{#2}%
12775 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
12776 }
12777 \def\hyper@image#1#2{%
12778 \begingroup
12779 \hyper@chars
12780 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12781 \endgroup
12782 }
12783 \let\autoref\ref
12784 \ifx \rEFLiNK \UnDef
12785 \def\rEFLiNK #1#2{#2}%
12786 \fi
12787 \let\backref\ltx@gobble

```

Fix for tex4ht.

```

12788 \AtBeginDocument{%
12789 \expandafter
12790 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12791 \expandafter\def\csname Make:Label\endcsname#1#2{%
12792 \ifhmode
12793 \Hy@SaveSpaceFactor
12794 \else
12795 \global\Hy@SavedSpaceFactor=1000 %
12796 \fi
12797 \Hy@OrgMakeLabel{#1}{%
12798 \Hy@RestoreSpaceFactor
12799 #2\Hy@xspace@end%
12800 \Hy@SaveSpaceFactor
12801 }%
12802 \Hy@RestoreSpaceFactor
12803 }%
12804 }
12805 </tex4ht>
12806 <*tex4htcfg>

```

```

12807 \IfFileExists{\jobname.cfg}{\endinput}{}
12808 \Preamble{html}
12809   \begin{document}%
12810 \EndPreamble
12811 \def\TeX{\TeX}
12812 \def\OMEGA{\Omega}
12813 \def\LaTeX{\LaTeX}
12814 \def\LaTeXe{\LaTeX2e}
12815 \def\eTeX{e-TeX}
12816 \def\MF{Metafont}
12817 \def\MP{MetaPost}
12818 \</tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

12819 \<{*pdfmark}
12820 \long\def\@Form[#1]{%
12821 \g@addto@macro\Hy@FirstPageHook{%
12822   \headerps@out{%
12823     [%
12824       /__objdef{pdfDocEncoding}%
12825       /type/dict%
12826       /OBJ pdfmark%
12827       [%
12828         {pdfDocEncoding}%
12829         <<%
12830           /Type/Encoding%
12831           /Differences[%
12832             24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12833             /tilde %
12834             39/quotesingle %
12835             96/grave %
12836             128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12837             /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12838             /quotedblbase/quotedblleft/quotedblright/quoteleft%
12839             /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12840             /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12841             164/currency %
12842             166/brokenbar %
12843             168/dieresis/copyright/ordfeminine %
12844             172/logicalnot/.notdef/registered/macron/degree/plusminus%
12845             /twosuperior/threesuperior/acute/mu %
12846             183/periodcentered/cedilla/onesuperior/ordmasculine %
12847             188/onequarter/onehalf/threequarters %
12848             192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12849             /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12850             /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12851             /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12852             /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12853             /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12854             /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12855             /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
12856             /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12857             /ucircumflex/udieresis/yacute/thorn/ydieresis%
12858           ]%
12859         >>%

```

```

12860 /PUT pdfmark%
12861 [%
12862   /_objdef{ZaDb}%
12863   /type/dict%
12864 /OBJ pdfmark%
12865 [%
12866   {ZaDb}%
12867   <<%
12868     /Type/Font%
12869     /Subtype/Type1%
12870     /Name/ZaDb%
12871     /BaseFont/ZapfDingbats%
12872   >>%
12873 /PUT pdfmark%
12874 [%
12875   /_objdef{Helv}%
12876   /type/dict%
12877 /OBJ pdfmark%
12878 [%
12879   {Helv}%
12880   <<%
12881     /Type/Font%
12882     /Subtype/Type1%
12883     /Name/Helv%
12884     /BaseFont/Helvetica%
12885     /Encoding{pdfDocEncoding}%
12886   >>%
12887 /PUT pdfmark%
12888 [%
12889   /_objdef{aform}%
12890   /type/dict%
12891 /OBJ pdfmark%
12892 [%
12893   /_objdef{afields}%
12894   /type/array%
12895 /OBJ pdfmark%
12896 {%
12897   [%
12898     /BBox[0 0 100 100]%
12899     /_objdef{Check}%
12900 /BP pdfmark %
12901   1 0 0 setrgbcolor%
12902   /ZapfDingbats 80 selectfont %
12903   20 20 moveto%
12904   (4)show%
12905 [/EP pdfmark%
12906 [%
12907   /BBox[0 0 100 100]%
12908   /_objdef{Cross}%
12909 /BP pdfmark %
12910   1 0 0 setrgbcolor%
12911   /ZapfDingbats 80 selectfont %
12912   20 20 moveto%
12913   (8)show%
12914 [/EP pdfmark%
12915 [%
12916   /BBox[0 0 250 100]%

```

```

12917  /__objdef{Submit}%
12918  /BP pdfmark %
12919  0.6 setgray %
12920  0 0 250 100 rectfill %
12921  1 setgray %
12922  2 2 moveto %
12923  2 98 lineto %
12924  248 98 lineto %
12925  246 96 lineto %
12926  4 96 lineto %
12927  4 4 lineto %
12928  fill %
12929  0.34 setgray %
12930  248 98 moveto %
12931  248 2 lineto %
12932  2 2 lineto %
12933  4 4 lineto %
12934  246 4 lineto %
12935  246 96 lineto %
12936  fill%
12937  /Helvetica 76 selectfont %
12938  0 setgray %
12939  8 22.5 moveto%
12940  (Submit)show%
12941  [/EP pdfmark%
12942  [%
12943  /BBox[0 0 250 100]%
12944  /__objdef{SubmitP}%
12945  /BP pdfmark %
12946  0.6 setgray %
12947  0 0 250 100 rectfill %
12948  0.34 setgray %
12949  2 2 moveto %
12950  2 98 lineto %
12951  248 98 lineto %
12952  246 96 lineto %
12953  4 96 lineto %
12954  4 4 lineto %
12955  fill %
12956  1 setgray %
12957  248 98 moveto %
12958  248 2 lineto %
12959  2 2 lineto %
12960  4 4 lineto %
12961  246 4 lineto %
12962  246 96 lineto %
12963  fill%
12964  /Helvetica 76 selectfont %
12965  0 setgray %
12966  10 20.5 moveto%
12967  (Submit)show%
12968  [/EP pdfmark%
12969  } ?pdfmark%
12970  [%
12971  {aform}%
12972  <<%
12973  /Fields{afields}%

```



```

12974 /DR<<%
12975 /Font<<%
12976 /ZaDb{ZaDb}%
12977 /Helv{Helv}%
12978 >>%
12979 >>%
12980 /DA(/Helv 10 Tf 0 g)%
12981 /CO{corder}%
12982 \ifHy@pdfa
12983 \else
12984 \ifHyField@NeedAppearances
12985 /NeedAppearances true%
12986 \fi
12987 \fi
12988 >>%
12989 /PUT pdfmark%
12990 [%
12991 {Catalog}%
12992 <<%
12993 /AcroForm{aform}%
12994 >>%
12995 /PUT pdfmark%
12996 [%
12997 /_objdef{corder}%
12998 /type/array%
12999 /OBJ pdfmark% dps
13000 }}%
13001 \kvsetkeys{Form}{#1}%
13002 }
13003 \let\@endForm\ltx@empty
13004 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13005 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13006 }
13007 \edef\Fld@pageobjref{/P/string{ThisPage\string}}
13008 \def\@TextField[#1]#2{% parameters, label
13009 \def\Fld@name{#2}%
13010 \let\Fld@default\ltx@empty
13011 \let\Fld@value\@empty
13012 \def\Fld@width{\DefaultWidthofText}%
13013 \def\Fld@height{%
13014 \ifFld@multiline
13015 \DefaultHeightofTextMultiline
13016 \else
13017 \DefaultHeightofText
13018 \fi
13019 }%
13020 \begingroup
13021 \expandafter\HyField@SetKeys\expandafter{%
13022 \DefaultOptionsofText,#1%
13023 }%
13024 \HyField@FlagsText
13025 \ifFld@hidden\def\Fld@width{1sp}\fi
13026 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13027 \LayoutTextField{#2}{%
13028 \leavevmode
13029 \Hy@escapeform\PDFForm@Text
13030 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%

```

```

13031 pdfmark=/ANN,Raw={\PDFForm@Text}%
13032 }%
13033 }%
13034 \endgroup
13035 }
13036 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13037 \def\Fld@name{#2}%
13038 \let\Fld@default\relax
13039 \let\Fld@value\relax
13040 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13041 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13042 \begingroup
13043 \Fld@menulength=0 %
13044 \@tempdima\z@
13045 \@for\@curropt:=#3\do{%
13046 \expandafter\Fld@checkequals\@curropt==\%
13047 \Hy@StepCount\Fld@menulength
13048 \settowidth{\@tempdimb}{\@currDisplay}%
13049 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13050 }%
13051 \advance\@tempdima by 15\p@
13052 \begingroup
13053 \HyField@SetKeys{#1}%
13054 \edef\x{\endgroup
13055 \noexpand\expandafter
13056 \noexpand\HyField@SetKeys
13057 \noexpand\expandafter{%
13058 \expandafter\noexpand\csname DefaultOptionsof%
13059 \ifFld@radio
13060 Radio%
13061 \else
13062 \ifFld@combo
13063 \ifFld@popdown
13064 PopdownBox%
13065 \else
13066 ComboBox%
13067 \fi
13068 \else
13069 ListBox%
13070 \fi
13071 \fi
13072 \endcsname
13073 }%
13074 }\x
13075 \HyField@SetKeys{#1}%
13076 \ifFld@hidden\def\Fld@width{1sp}\fi
13077 \ifx\Fld@value\relax
13078 \let\Fld@value\Fld@default
13079 \fi
13080 \LayoutChoiceField{#2}{%
13081 \ifFld@radio
13082 \HyField@FlagsRadioButton
13083 \@@Radio{#3}%
13084 \else
13085 \begingroup
13086 \HyField@FlagsChoice
13087 \ifdim\Fld@width<\@tempdima

```

```

13088      \ifdim\@tempdima<1cm\@tempdima1cm\fi
13089      \edef\Fld@width{\the\@tempdima}%
13090      \fi
13091      \ifFld@combo
13092      \else
13093        \@tempdima=\the\Fld@menulength\Fld@charsize
13094        \advance\@tempdima by \Fld@borderwidth bp %
13095        \advance\@tempdima by \Fld@borderwidth bp %
13096        \edef\Fld@height{\the\@tempdima}%
13097      \fi
13098      \@@ListBox{#3}%
13099    \endgroup
13100  \fi
13101 }%
13102 \endgroup
13103 }
13104 \def\@@Radio#1{%
13105   \Fld@listcount=0 %
13106   \EdefEscapeName\Fld@default{\Fld@default}%
13107   \@for\@curropt:=#1\do{%
13108     \expandafter\Fld@checkequals\@curropt==\\%
13109     \EdefEscapeName\@currValue{\@currValue}%
13110     \Hy@StepCount\Fld@listcount
13111     \@currDisplay\space
13112     \Hy@escapeform\PDFForm@Radio
13113     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13114       pdfmark=/ANN,%
13115       Raw={%
13116         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13117       }%
13118     } % deliberate space between radio buttons
13119   }%
13120 }
13121 \newcount\Fld@listcount
13122 \def\@@ListBox#1{%
13123   \HyField@PDFChoices{#1}%
13124   \Hy@escapeform\PDFForm@List
13125   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13126     pdfmark=/ANN,Raw={\PDFForm@List}%
13127   }%
13128 }
13129 \def\@PushButton[#1]#2{% parameters, label
13130   \def\Fld@name{#2}%
13131   \begingroup
13132     \expandafter\HyField@SetKeys\expandafter{%
13133       \DefaultOptionsofPushButton,#1%
13134     }%
13135     \ifHy@pdfa
13136       \Hy@Error{%
13137         PDF/A: Push button with JavaScript is prohibited%
13138       }\@ehc
13139       \LayoutPushButtonField{%
13140         \leavevmode
13141         \MakeButtonField{#2}%
13142       }%
13143     \else
13144       \HyField@FlagsPushButton

```

```

13145 \ifFld@hidden\def\Fld@width{1sp}\fi
13146 \LayoutPushButtonField{%
13147 \leavevmode
13148 \Hy@escapeform\PDFForm@Push
13149 \pdfmark[\MakeButtonField{#2}]{%
13150 pdfmark=/ANN,Raw={\PDFForm@Push}%
13151 }%
13152 }%
13153 \fi
13154 \endgroup
13155 }
13156 \def\@Submit[#1]#2{%
13157 \def\Fld@width{\DefaultWidthofSubmit}%
13158 \def\Fld@height{\DefaultHeightofSubmit}%
13159 \begingroup
13160 \expandafter\HyField@SetKeys\expandafter{%
13161 \DefaultOptionsofSubmit,#1%
13162 }%
13163 \HyField@FlagsPushButton
13164 \HyField@FlagsSubmit
13165 \ifFld@hidden\def\Fld@width{1sp}\fi
13166 \Hy@escapeform\PDFForm@Submit
13167 \pdfmark[\MakeButtonField{#2}]{%
13168 pdfmark=/ANN,%
13169 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
13170 }%
13171 \endgroup
13172 }
13173 \def\@Reset[#1]#2{%
13174 \def\Fld@width{\DefaultWidthofReset}%
13175 \def\Fld@height{\DefaultHeightofReset}%
13176 \begingroup
13177 \expandafter\HyField@SetKeys\expandafter{%
13178 \DefaultOptionsofReset,#1%
13179 }%
13180 \leavevmode
13181 \ifHy@pdfa
13182 \Hy@Error{%
13183 PDF/A: Reset action is prohibited%
13184 }\@ehc
13185 \MakeButtonField{#2}%
13186 \else
13187 \HyField@FlagsPushButton
13188 \ifFld@hidden\def\Fld@width{1sp}\fi
13189 \Hy@escapeform\PDFForm@Reset
13190 \pdfmark[\MakeButtonField{#2}]{%
13191 pdfmark=/ANN,Raw={\PDFForm@Reset}%
13192 }%
13193 \fi
13194 \endgroup
13195 }%
13196 \def\@CheckBox[#1]#2{% parameters, label
13197 \def\Fld@name{#2}%
13198 \def\Fld@default{0}%
13199 \begingroup
13200 \def\Fld@width{\DefaultWidthofCheckBox}%
13201 \def\Fld@height{\DefaultHeightofCheckBox}%

```

```

13202 \expandafter\HyField@SetKeys\expandafter{%
13203 \DefaultOptionsofCheckBox,#1%
13204 }%
13205 \HyField@FlagsCheckBox
13206 \ifFld@hidden\def\Fld@width{1sp}\fi
13207 \LayoutCheckField{#2}{%
13208 \leavevmode
13209 \Hy@escapeform\PDFForm@Check
13210 \pdfmark{\MakeCheckField{\Fld@width}{\Fld@height}}{%
13211 pdfmark=/ANN,Raw={\PDFForm@Check}%
13212 }%
13213 }%
13214 \endgroup
13215 }
13216 \pdfmark>

```

48.2 HyperTeX

```

13217 \*hypertex>
13218 \def\@Form[#1]{%
13219 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13220 }
13221 \let\@endForm\ltx@empty
13222 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13223 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13224 }
13225 \def\@TextField[#1]#2{% parameters, label
13226 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13227 }
13228 \def\@CheckBox[#1]#2{% parameters, label
13229 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13230 }
13231 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13232 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13233 }
13234 \def\@PushButton[#1]#2{% parameters, label
13235 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13236 }
13237 \def\@Reset[#1]#2{%
13238 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13239 }
13240 \def\@Submit[#1]#2{%
13241 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13242 }
13243 \hypertex>

```

48.3 TeX4ht

```

13244 \*tex4ht>
13245 \def\@Form[#1]{%
13246 \kvsetkeys{Form}{#1}%
13247 \HCode{<form action="\Form@action" method="\Form@method">}%
13248 }
13249 \def\@endForm{\HCode{</form>}}
13250 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13251 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13252 }
13253 \def\@TextField[#1]#2{% parameters, label
13254 \let\Hy@reserved@a\@empty

```

```

13255 \def\Fld@name{#2}%
13256 \let\Fld@default\ltx@empty
13257 \bgroup
13258 \Field@toks={ }%
13259 \kvsetkeys{Field}{#1}%
13260 \HCode{<label for="\Fld@name">#2</label>}%
13261 \ifFld@password
13262 \@@PasswordField
13263 \else
13264 \@@TextField
13265 \fi
13266 \egroup
13267 }
13268 \def\@@PasswordField{%
13269 \HCode{%
13270 <input type="password" %
13271 id="\Fld@name" %
13272 name="\Fld@name" %
13273 \ifFld@hidden type="hidden" \fi
13274 value="\Fld@default" %
13275 \the\Field@toks
13276 >%
13277 }%
13278 }
13279 \def\@@TextField{%
13280 \ifFld@multiline
13281 \HCode{<textarea %
13282 \ifFld@readonly readonly \fi
13283 id="\Fld@name" %
13284 name="\Fld@name" %
13285 \ifFld@hidden type="hidden" \fi
13286 \the\Field@toks>%
13287 }%
13288 \Fld@default
13289 \HCode{</textarea>}%
13290 \else
13291 \HCode{<input type="text" %
13292 \ifFld@readonly readonly \fi
13293 id="\Fld@name" %
13294 name="\Fld@name" %
13295 \ifFld@hidden type="hidden" \fi
13296 value="\Fld@default" %
13297 \the\Field@toks>%
13298 }%
13299 \fi
13300 }
13301 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13302 \def\Fld@name{#2}%
13303 \let\Fld@default\ltx@empty
13304 \let\Hy@reserved@a\relax
13305 \begingroup
13306 \expandafter\Fld@findlength#3\\%
13307 \Field@toks={ }%
13308 \kvsetkeys{Field}{#1}%
13309 #2%
13310 \ifFld@radio
13311 \expandafter\@@Radio#3\\%

```

```

13312 \else
13313 \expandafter\@@Menu#3\\%
13314 \fi
13315 \endgroup
13316 }
13317 \def\Fld@findlength#1\\{%
13318 \Fld@menulength=0 %
13319 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13320 }
13321 \def\@@Menu#1\\{%
13322 \HCode{<select size="\the\Fld@menulength" %
13323 name="\Fld@name" %
13324 \the\Field@toks>%
13325 }%
13326 \@for\@curropt:=#1\do{%
13327 \expandafter\Fld@checkequals\@curropt==\\%
13328 \HCode{<option %
13329 \ifx\@curropt\Fld@default selected \fi
13330 value="\@currValue">\@currDisplay</option>%
13331 }%
13332 }%
13333 \HCode{</select>}%
13334 }
13335 \def\@@Radio#1\\{%
13336 \@for\@curropt:=#1\do{%
13337 \expandafter\Fld@checkequals\@curropt==\\%
13338 \HCode{<input type="radio" %
13339 \ifx\@curropt\Fld@default checked \fi
13340 name="\Fld@name" %
13341 value="\@currValue" %
13342 \the\Field@toks>%
13343 }%
13344 \@currDisplay
13345 }%
13346 }
13347 \def\@PushButton[#1]#2{% parameters, label
13348 \def\Fld@name{#2}%
13349 \bgroup
13350 \Field@toks={ }%
13351 \kvsetkeys{Field}{#1}%
13352 \HCode{<input type="button" %
13353 name="\Fld@name" %
13354 value="#2" %
13355 \the\Field@toks>%
13356 }%
13357 \HCode{</button>}%
13358 \egroup
13359 }
13360 \def\@Submit[#1]#2{%
13361 \HCode{<button type="submit">#2</button>}%
13362 }
13363 \def\@Reset[#1]#2{%
13364 \HCode{<button type="reset">#2</button>}%
13365 }
13366 \def\@CheckBox[#1]#2{% parameters, label
13367 \let\Hy@reserved@a\@empty
13368 \def\Fld@name{#2}%

```

```

13369 \def\Fld@default{0}%
13370 \bgroup
13371 \Field@toks={ }%
13372 \kvsetkeys{Field}{#1}%
13373 \HCode{<input type="checkbox" %
13374 \ifFld@checked checked \fi
13375 \ifFld@disabled disabled \fi
13376 \ifFld@readonly readonly \fi
13377 name="\Fld@name" %
13378 \ifFld@hidden type="hidden" \fi
13379 value="\Fld@default" %
13380 \the\Field@toks>%
13381 #2%
13382 }%
13383 \egroup
13384 }
13385 </tex4ht>

```

48.4 pdfTeX

```

13386 (*pdfTeX)
13387 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13388 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13389 }
13390 \def\MakeFieldObject#1#2{\sbox0{#1}%
13391 \immediate\pdfxform0 %
13392 \expandafter\edef\csname #2Object\endcsname{%
13393 \the\pdflastxform\space 0 R%
13394 }%
13395 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
13396 }%
13397 \let\HyField@afields\ltx@empty
13398 \begingroup\expandafter\expandafter\expandafter\endgroup
13399 \expandafter\ifx\csname pdflastlink\endcsname\relax
13400 \let\HyField@AddToFields\relax
13401 \PackageInfo{hyperref}{%
13402 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13403 \MessageBreak
13404 Adobe Reader/Acrobat accepts an empty /Field array,%
13405 \MessageBreak
13406 but other PDF viewers might complain%
13407 }%
13408 \else
13409 \let\HyField@AuxAddToFields\ltx@gobble
13410 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
13411 \Hy@AtBeginDocument{%
13412 \if@files
13413 \immediate\write\@mainaux{%
13414 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13415 }%
13416 \fi
13417 \let\HyField@AfterAuxOpen\@firstofone
13418 \def\HyField@AuxAddToFields#1{%
13419 \xdef\HyField@afields{%
13420 \ifx\HyField@afields\@empty
13421 \else
13422 \HyField@afields
13423 \space

```



```

13424     \fi
13425     #1 0 R%
13426   }%
13427 }%
13428 }%
13429 \def\HyField@AddToFields{%
13430   \expandafter\HyField@@AddToFields\expandafter{%
13431     \the\pdflastlink
13432   }%
13433 }%
13434 \def\HyField@@AddToFields#1{%
13435   \HyField@AfterAuxOpen{%
13436     \if@filesw
13437       \write\@mainaux{%
13438         \string\HyField@AuxAddToFields{#1}%
13439       }%
13440     \fi
13441   }%
13442 }%
13443 \fi
13444 \def\@Form[#1]{%
13445   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13446   \kvsetkeys{Form}{#1}%
13447   \pdf@ifdraftmode{}{%
13448     \Hy@FormObjects
13449     \ifnum\pdfTeXversion>13 %
13450       \pdfrefobj\OBJ@pdfdocencoding
13451       \pdfrefobj\OBJ@ZaDb
13452       \pdfrefobj\OBJ@Helv
13453     \fi
13454     \AtVeryEndDocument{%
13455       \immediate\pdfobj{%
13456         <<%
13457           /Fields[\HyField@afields]%
13458           /DR<<%
13459             /Font<<%
13460               /ZaDb \OBJ@ZaDb\space 0 R%
13461               /Helv \OBJ@Helv\space 0 R%
13462             >>%
13463           >>%
13464           /DA(/Helv 10 Tf 0 g)%
13465           \ifHy@pdfa
13466           \else
13467             \ifHyField@NeedAppearances
13468               /NeedAppearances true%
13469             \fi
13470           \fi
13471         >>%
13472       }%
13473       \edef\OBJ@acroform{\the\pdflastobj}%
13474       \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13475     }%
13476   }%
13477   \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

13478   \begingroup
13479   \fontfamily{pzd}%

```

```

13480 \fontencoding{U}%
13481 \fontseries{m}%
13482 \fontshape{n}%
13483 \selectfont
13484 \char123 %
13485 \endgroup
13486 }{Ding}%
13487 \MakeFieldObject{%
13488 \fbox{\textcolor{yellow}{\textsf{Submit}}}}%
13489 }{Submit}%
13490 \MakeFieldObject{%
13491 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}}%
13492 }{SubmitP}%
13493 }
13494 \let\@endForm\ltx@empty
13495 \let\HyAnn@AbsPageLabel\ltx@empty
13496 \let\Fld@pageobjref\ltx@empty
13497 \ltx@ifundefined{pdfpageref}{%
13498 }{%
13499 \ltx@ifpackageloaded{zref-abspage}{%
13500 \newcount\HyAnn@Count
13501 \HyAnn@Count=\ltx@zero
13502 \def\HyAnn@AbsPageLabel{%
13503 \global\advance\HyAnn@Count by\ltx@one
13504 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13505 \zref@refused{HyAnn@\the\HyAnn@Count}%
13506 }%
13507 \def\Fld@pageobjref{%
13508 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13509 }{%
13510 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13511 /P \pdfpageref
13512 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13513 \space 0 R%
13514 }{%
13515 }%
13516 }%
13517 }%
13518 }{%
13519 }%
13520 }
13521 \def\@TextField[#1]#2{% parameters, label
13522 \def\Fld@name{#2}%
13523 \let\Fld@default\ltx@empty
13524 \let\Fld@value\@empty
13525 \def\Fld@width{\DefaultWidthofText}%
13526 \def\Fld@height{%
13527 \iffld@multiline
13528 \DefaultHeightofTextMultiline
13529 \else
13530 \DefaultHeightofText
13531 \fi
13532 }%
13533 \begingroup
13534 \expandafter\HyField@SetKeys\expandafter{%
13535 \DefaultOptionsofText,#1%
13536 }%

```

```

13537 \PDFForm@Name
13538 \HyField@FlagsText
13539 \ifFld@hidden\def\Fld@width{1sp}\fi
13540 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13541 \LayoutTextField{#2}{%
13542 \leavevmode
13543 \HyAnn@AbsPageLabel
13544 \Hy@escapeform\PDFForm@Text
13545 \pdfstartlink user {\PDFForm@Text}\relax
13546 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13547 \HyField@AddToFields
13548 }%
13549 \endgroup
13550 }
13551 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13552 \def\Fld@name{#2}%
13553 \let\Fld@default\relax
13554 \let\Fld@value\relax
13555 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13556 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13557 \begingroup
13558 \Fld@menulength=0 %
13559 \@tempdima\z@
13560 \@for\@curropt:=#3\do{%
13561 \expandafter\Fld@checkequals\@curropt==\\%
13562 \Hy@StepCount\Fld@menulength
13563 \settowidth{\@tempdimb}{\@currDisplay}%
13564 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13565 }%
13566 \advance\@tempdima by 15\p@
13567 \begingroup
13568 \HyField@SetKeys{#1}%
13569 \edef\x{\endgroup
13570 \noexpand\expandafter
13571 \noexpand\HyField@SetKeys
13572 \noexpand\expandafter{%
13573 \expandafter\noexpand\csname DefaultOptionsof%
13574 \ifFld@radio
13575 Radio%
13576 \else
13577 \ifFld@combo
13578 \ifFld@popdown
13579 PopdownBox%
13580 \else
13581 ComboBox%
13582 \fi
13583 \else
13584 ListBox%
13585 \fi
13586 \fi
13587 \endcsname
13588 }%
13589 }\x
13590 \HyField@SetKeys{#1}%
13591 \PDFForm@Name
13592 \ifFld@hidden\def\Fld@width{1sp}\fi
13593 \ifx\Fld@value\relax

```

```

13594 \let\Fld@value\Fld@default
13595 \fi
13596 \LayoutChoiceField{#2}{%
13597 \ifFld@radio
13598 \HyField@FlagsRadioButton
13599 \@@Radio{#3}%
13600 \else
13601 \begingroup
13602 \HyField@FlagsChoice
13603 \ifdim\Fld@width<\@tempdima
13604 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13605 \edef\Fld@width{\the\@tempdima}%
13606 \fi
13607 \ifFld@combo
13608 \else
13609 \@tempdima=\the\Fld@menulength\Fld@charsize
13610 \advance\@tempdima by \Fld@borderwidth bp %
13611 \advance\@tempdima by \Fld@borderwidth bp %
13612 \edef\Fld@height{\the\@tempdima}%
13613 \fi
13614 \@@ListBox{#3}%
13615 \endgroup
13616 \fi
13617 }%
13618 \endgroup
13619 }
13620 \def\@@Radio#1{%
13621 \Fld@listcount=0 %
13622 \EdefEscapeName\Fld@default{\Fld@default}%
13623 \@for\@curropt:=#1\do{%
13624 \expandafter\Fld@checkequals\@curropt==\%
13625 \EdefEscapeName\@currValue{\@currValue}%
13626 \Hy@StepCount\Fld@listcount
13627 \@currDisplay\space
13628 \leavevmode
13629 \HyAnn@AbsPageLabel
13630 \Hy@escapeform\PDFForm@Radio
13631 \pdfstartlink user {%
13632 \PDFForm@Radio
13633 /AP<<%
13634 /N<<%

```

Laurent.Guillope@math.univ-nantes.fr (Laurent Guillope) persuades me that this was wrong: `/\Fld@name\the\Fld@listcount`. But I leave it here to remind me that it is untested.

```

13635 \/\@currValue\space \DingObject
13636 >>%
13637 >>%
13638 }%
13639 \relax
13640 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13641 \ifnum\Fld@listcount=1 %
13642 \HyField@AddToFields
13643 \fi
13644 \space % deliberate space between radio buttons
13645 }%
13646 }
13647 \newcount\Fld@listcount

```

```

13648 \def\@@ListBox#1{%
13649   \HyField@PDFChoices{#1}%
13650   \leavevmode
13651   \HyAnn@AbsPageLabel
13652   \Hy@escapeform\PDFForm@List
13653   \pdfstartlink user {\PDFForm@List}\relax
13654   \MakeChoiceField{\Fld@width}{\Fld@height}%
13655   \pdfendlink
13656   \HyField@AddToFields
13657 }
13658 \def\@PushButton[#1]#2{% parameters, label
13659   \def\Fld@name{#2}%
13660   \begingroup
13661     \expandafter\HyField@SetKeys\expandafter{%
13662       \DefaultOptionsofPushButton,#1%
13663     }%
13664     \PDFForm@Name
13665     \ifHy@pdfa
13666       \Hy@Error{%
13667         PDF/A: Push button with JavaScript is prohibited%
13668       }\@ehc
13669       \LayoutPushButtonField{%
13670         \leavevmode
13671         \MakeButtonField{#2}%
13672       }%
13673     \else
13674       \HyField@FlagsPushButton
13675       \ifFld@hidden\def\Fld@width{1sp}\fi
13676       \LayoutPushButtonField{%
13677         \leavevmode
13678         \HyAnn@AbsPageLabel
13679         \Hy@escapeform\PDFForm@Push
13680         \pdfstartlink user {\PDFForm@Push}\relax
13681         \MakeButtonField{#2}%
13682         \pdfendlink
13683         \HyField@AddToFields
13684       }%
13685     \fi
13686   \endgroup
13687 }
13688 \def\@Submit[#1]#2{%
13689   \def\Fld@width{\DefaultWidthofSubmit}%
13690   \def\Fld@height{\DefaultHeightofSubmit}%
13691   \begingroup
13692     \expandafter\HyField@SetKeys\expandafter{%
13693       \DefaultOptionsofSubmit,#1%
13694     }%
13695     \HyField@FlagsPushButton
13696     \HyField@FlagsSubmit
13697     \ifFld@hidden\def\Fld@width{1sp}\fi
13698     \leavevmode
13699     \HyAnn@AbsPageLabel
13700     \Hy@escapeform\PDFForm@Submit
13701     \pdfstartlink user {%
13702       \PDFForm@Submit
13703       /AP<</N \SubmitObject/D \SubmitPObject>>%
13704     }%

```

```

13705 \relax
13706 \MakeButtonField{#2}%
13707 \pdfendlink
13708 \HyField@AddToFields
13709 \endgroup
13710 }
13711 \def\@Reset[#1]#2{%
13712 \def\Fld@width{\DefaultWidthofReset}%
13713 \def\Fld@height{\DefaultHeightofReset}%
13714 \begingroup
13715 \expandafter\HyField@SetKeys\expandafter{%
13716 \DefaultOptionsofReset,#1%
13717 }%
13718 \leavevmode
13719 \ifHy@pdfa
13720 \Hy@Error{%
13721 PDF/A: Reset action is prohibited%
13722 }\@ehc
13723 \MakeButtonField{#2}%
13724 \else
13725 \HyField@FlagsPushButton
13726 \ifFld@hidden\def\Fld@width{1sp}\fi
13727 \HyAnn@AbsPageLabel
13728 \Hy@escapeform\PDFForm@Reset
13729 \pdfstartlink user {\PDFForm@Reset}\relax
13730 \MakeButtonField{#2}%
13731 \pdfendlink
13732 \HyField@AddToFields
13733 \fi
13734 \endgroup
13735 }
13736 \def\@CheckBox[#1]#2{% parameters, label
13737 \def\Fld@name{#2}%
13738 \def\Fld@default{0}%
13739 \begingroup
13740 \def\Fld@width{\DefaultWidthofCheckBox}%
13741 \def\Fld@height{\DefaultHeightofCheckBox}%
13742 \expandafter\HyField@SetKeys\expandafter{%
13743 \DefaultOptionsofCheckBox,#1%
13744 }%
13745 \PDFForm@Name
13746 \HyField@FlagsCheckBox
13747 \ifFld@hidden\def\Fld@width{1sp}\fi
13748 \LayoutCheckField{#2}{%
13749 \leavevmode
13750 \HyAnn@AbsPageLabel
13751 \Hy@escapeform\PDFForm@Check
13752 \pdfstartlink user {\PDFForm@Check}\relax
13753 \MakeCheckField{\Fld@width}{\Fld@height}%
13754 \pdfendlink
13755 \HyField@AddToFields
13756 }%
13757 \endgroup
13758 }
13759 \def\Hy@FormObjects{%
13760 \pdfobj {%
13761 <<%

```

13762 /Type/Encoding%
13763 /Differences[%
13764 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13765 /ring/tilde %
13766 39/quotesingle %
13767 96/grave %
13768 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13769 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13770 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13771 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13772 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13773 164/currency %
13774 166/brokenbar %
13775 168/dieresis/copyright/ordfeminine %
13776 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13777 /twosuperior/threesuperior/acute/mu %
13778 183/periodcentered/cedilla/onesuperior/ordmasculine %
13779 188/onequarter/onehalf/threequarters %
13780 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13781 /Cedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13782 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13783 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13784 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13785 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13786 /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13787 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13788 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13789 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13790]%
13791 >>%
13792 }%
13793 \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13794 \pdfobj{%
13795 <<%
13796 /Type/Font%
13797 /Subtype/Type1%
13798 /Name/ZaDb%
13799 /BaseFont/ZapfDingbats%
13800 >>%
13801 }%
13802 \xdef\OBJ@ZaDb{\the\pdfastobj}%
13803 \pdfobj{%
13804 <<%
13805 /Type/Font%
13806 /Subtype/Type1%
13807 /Name/Helv%
13808 /BaseFont/Helvetica%
13809 /Encoding \OBJ@pdfdocencoding\space 0 R%
13810 >>%
13811 }%
13812 \xdef\OBJ@Helv{\the\pdfastobj}%
13813 \global\let\Hy@FormObjects\relax
13814 }
13815 </pdftex>

48.5 dvipdfm, xetex

D. P. Story adapted the pdfTeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

13816 $\langle *dvipdfm | xetex \rangle$

\@Gauge

```
13817 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13818   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13819 }
```

\@Form

```
13820 \def\@Form[#1]{%
13821   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13822   \kvsetkeys{Form}{#1}%
13823   \Hy@FormObjects
13824   \@pdfm@mark{obj @afields []}%
13825   \@pdfm@mark{obj @corder []}%
13826   \@pdfm@mark{%
13827     obj @aform <<%
13828     /Fields @afields%
13829     /DR<<%
13830     /Font<<%
13831     /ZaDb @OBJZaDb%
13832     /Helv @OBJHelv%
13833     >>%
13834     >>%
13835     /DA(/Helv 10 Tf 0 g)%
13836     /CO @corder%
13837     \ifHy@pdfa
13838     \else
13839       \ifHyField@NeedAppearances
13840       /NeedAppearances true%
13841       \fi
13842       \fi
13843     >>%
13844   }%
13845   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13846 }
```

\@endForm

```
13847 \let\@endForm\ltx@empty
```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```
13848 \def\dvipdfm@setdim{%
13849   height \the\ht\pdfm@box\space
13850   width \the\wd\pdfm@box\space
13851   depth \the\dp\pdfm@box\space
13852 }
```

\HyField@AnnotCount

```
13853 \newcount\HyField@AnnotCount
13854 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
13855 \def\HyField@AdvanceAnnotCount{%
13856   \global\advance\HyField@AnnotCount\@ne
13857 }
```


\HyField@TheAnnotCount

```
13858 \def\HyField@TheAnnotCount{%
13859   \the\HyField@AnnotCount
13860 }
```

\Fld@pageobjref

```
13861 \def\Fld@pageobjref{/P @thispage}%
```

\@TextField

```
13862 \def\@TextField[#1]#2{% parameters, label
13863   \def\Fld@name{#2}%
13864   \let\Fld@default\ltx@empty
13865   \let\Fld@value\@empty
13866   \def\Fld@width{\DefaultWidthofText}%
13867   \def\Fld@height{%
13868     \ifFld@multiline
13869       \DefaultHeightofTextMultiline
13870     \else
13871       \DefaultHeightofText
13872     \fi
13873   }%
13874   \begingroup
13875     \expandafter\HyField@SetKeys\expandafter{%
13876       \DefaultOptionsofText,#1%
13877     }%
13878     \PDFForm@Name
13879     \HyField@FlagsText
13880     \ifFld@hidden\def\Fld@width{1sp}\fi
13881     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13882     \setbox\pdfm@box=\hbox{%
13883       \MakeTextField{\Fld@width}{\Fld@height}%
13884     }%
13885     \HyField@AdvanceAnnotCount
13886     \LayoutTextField{#2}{%
13887       \leavevmode
13888       \Hy@escapeform\PDFForm@Text
13889       \@pdfm@mark{%
13890         ann @text\HyField@TheAnnotCount\space
13891         \dvi pdfm@setdim << \PDFForm@Text >>%
13892       }%
13893     }%
13894     \unhbox\pdfm@box
13895     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
13896     % record in @afields array
13897   \endgroup
13898 }
```

\@ChoiceMenu

```
13899 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13900   \def\Fld@name{#2}%
13901   \let\Fld@default\relax
13902   \let\Fld@value\relax
13903   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13904   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13905   \begingroup
13906     \Fld@menulength=0 %
13907     \@tempdima\z@
```

```

13908 \@for\@curropt:=#3\do{%
13909 \expandafter\Fld@checkequals\@curropt==\\%
13910 \Hy@StepCount\Fld@menulength
13911 \settowidth{\@tempdimb}{\@currDisplay}%
13912 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13913 }%
13914 \advance\@tempdima by 15\p@
13915 \begingroup
13916 \HyField@SetKeys{#1}%
13917 \edef\x{\endgroup
13918 \noexpand\expandafter
13919 \noexpand\HyField@SetKeys
13920 \noexpand\expandafter{%
13921 \expandafter\noexpand\csname DefaultOptionsof%
13922 \ifFld@radio
13923 Radio%
13924 \else
13925 \ifFld@combo
13926 \ifFld@popdown
13927 PopdownBox%
13928 \else
13929 ComboBox%
13930 \fi
13931 \else
13932 ListBox%
13933 \fi
13934 \fi
13935 \endcsname
13936 }%
13937 }\x
13938 \HyField@SetKeys{#1}%
13939 \PDFForm@Name
13940 \ifFld@hidden\def\Fld@width{1sp}\fi
13941 \ifx\Fld@value\relax
13942 \let\Fld@value\Fld@default
13943 \fi
13944 \LayoutChoiceField{#2}{%
13945 \ifFld@radio
13946 \HyField@FlagsRadioButton
13947 \@@Radio{#3}%
13948 \else
13949 \begingroup
13950 \HyField@FlagsChoice
13951 \ifdim\Fld@width<\@tempdima
13952 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13953 \edef\Fld@width{\the\@tempdima}%
13954 \fi
13955 \ifFld@combo
13956 \else
13957 \@tempdima=\the\Fld@menulength\Fld@charsize
13958 \advance\@tempdima by \Fld@borderwidth bp %
13959 \advance\@tempdima by \Fld@borderwidth bp %
13960 \edef\Fld@height{\the\@tempdima}%
13961 \fi
13962 \@@ListBox{#3}%
13963 \endgroup
13964 \fi

```

```

13965 }%
13966 \endgroup
13967 }

```

\@@Radio

```

13968 \def\@@Radio#1{%
13969   \Fld@listcount=0 %
13970   \EdefEscapeName\Fld@default{\Fld@default}%
13971   \setbox\pdfm@box=\hbox{%
13972     \MakeRadioField{\Fld@width}{\Fld@height}%
13973   }%
13974   \@for\@curropt:=#1\do{%
13975     \expandafter\Fld@checkequals\@curropt==\%
13976     \EdefEscapeName\@currValue{\@currValue}%
13977     \Hy@StepCount\Fld@listcount
13978     \@currDisplay\space
13979     \leavevmode
13980     \Hy@escapeform\PDFForm@Radio
13981     \ifnum\Fld@listcount=1 %
13982       \HyField@AdvanceAnnotCount
13983     \fi
13984     \@pdfm@mark{%
13985       ann %
13986       \ifnum\Fld@listcount=1 %
13987         @radio\HyField@TheAnnotCount%
13988       \space
13989     \fi
13990     \dvipdfm@setdim
13991     <<%
13992     \PDFForm@Radio
13993     /AP<</N<</\@currValue /null>>>>%
13994     >>%
13995   }%
13996   \unhcopy\pdfm@box\space% deliberate space between radio buttons
13997   \ifnum\Fld@listcount=1 %
13998     \@pdfm@mark{%
13999       put @afields @radio\HyField@TheAnnotCount
14000     }%
14001   \fi
14002 }%
14003 }

```

\Fld@listcount

```

14004 \newcount\Fld@listcount

```

\@@Listbox

```

14005 \def\@@Listbox#1{%
14006   \HyField@PDFChoices{#1}%
14007   \setbox\pdfm@box=\hbox{%
14008     \MakeChoiceField{\Fld@width}{\Fld@height}%
14009   }%
14010   \leavevmode
14011   \Hy@escapeform\PDFForm@List
14012   \HyField@AdvanceAnnotCount
14013   \@pdfm@mark{%
14014     ann @list\HyField@TheAnnotCount\space
14015   \dvipdfm@setdim

```

```

14016 <<\PDFForm@List>>%
14017 }%
14018 \unhbox\pdfm@box
14019 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
14020 }

```

\@PushButton

```

14021 \def\@PushButton[#1]#2{% parameters, label
14022 \def\Fld@name{#2}%
14023 \begingroup
14024 \expandafter\HyField@SetKeys\expandafter{%
14025 \DefaultOptionsofPushButton,#1%
14026 }%
14027 \PDFForm@Name
14028 \ifHy@pdfa
14029 \Hy@Error{%
14030 PDF/A: Push button with JavaScript is prohibited%
14031 } \@ehc
14032 \LayoutPushButtonField{%
14033 \leavevmode
14034 \MakeButtonField{#2}%
14035 }%
14036 \else
14037 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14038 \HyField@FlagsPushButton
14039 \ifFld@hidden\def\Fld@width{1sp}\fi
14040 \HyField@AdvanceAnnotCount
14041 \LayoutPushButtonField{%
14042 \leavevmode
14043 \Hy@escapeform\PDFForm@Push
14044 \@pdfm@mark{%
14045 ann @push\HyField@TheAnnotCount\space
14046 \dvi pdfm@setdim
14047 <<\PDFForm@Push>>%
14048 }%
14049 }%
14050 \unhbox\pdfm@box
14051 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
14052 \fi
14053 \endgroup
14054 }

```

\@Submit

```

14055 \def\@Submit[#1]#2{%
14056 \def\Fld@width{\DefaultWidthofSubmit}%
14057 \def\Fld@height{\DefaultHeightofSubmit}%
14058 \begingroup
14059 \expandafter\HyField@SetKeys\expandafter{%
14060 \DefaultOptionsofSubmit,#1%
14061 }%
14062 \HyField@FlagsPushButton
14063 \HyField@FlagsSubmit
14064 \ifFld@hidden\def\Fld@width{1sp}\fi
14065 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14066 \leavevmode
14067 \Hy@escapeform\PDFForm@Submit
14068 \HyField@AdvanceAnnotCount

```

```

14069 \pdfmark{%
14070   ann @submit\HyField@TheAnnotCount\space
14071   \dvipdfm@setdim
14072   <<\PDFForm@Submit>>%
14073 }%
14074 \unhbox\pdfm@box%
14075 \pdfmark{put @afields @submit\HyField@TheAnnotCount}%
14076 \endgroup
14077 }

```

\@Reset

```

14078 \def\@Reset[#1]#2{%
14079   \def\Fld@width{\DefaultWidthofReset}%
14080   \def\Fld@height{\DefaultHeightofReset}%
14081   \begingroup
14082     \expandafter\HyField@SetKeys\expandafter{%
14083       \DefaultOptionsofReset,#1%
14084     }%
14085     \leavevmode
14086     \ifHy@pdfa
14087       \Hy@Error{%
14088         PDF/A: Reset action is prohibited%
14089       }\@ehc
14090       \MakeButtonField{#2}%
14091     \else
14092       \HyField@FlagsPushButton
14093       \ifFld@hidden\def\Fld@width{1sp}\fi
14094       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14095       \Hy@escapeform\PDFForm@Reset
14096       \HyField@AdvanceAnnotCount
14097       \pdfmark{%
14098         ann @reset\HyField@TheAnnotCount\space
14099         \dvipdfm@setdim
14100         <<\PDFForm@Reset>>%
14101       }%
14102       \unhbox\pdfm@box
14103       \pdfmark{put @afields @reset\HyField@TheAnnotCount}%
14104     \fi
14105   \endgroup
14106 }

```

\@CheckBox

```

14107 \def\@CheckBox[#1]#2{% parameters, label
14108   \def\Fld@name{#2}%
14109   \def\Fld@default{0}%
14110   \begingroup
14111     \def\Fld@width{\DefaultWidthofCheckBox}%
14112     \def\Fld@height{\DefaultHeightofCheckBox}%
14113     \expandafter\HyField@SetKeys\expandafter{%
14114       \DefaultOptionsofCheckBox,#1%
14115     }%
14116     \PDFForm@Name
14117     \HyField@FlagsCheckBox
14118     \ifFld@hidden\def\Fld@width{1sp}\fi
14119     \setbox\pdfm@box=\hbox{%
14120       \MakeCheckField{\Fld@width}{\Fld@height}%
14121     }%

```

```

14122 \HyField@AdvanceAnnotCount
14123 \LayoutCheckField{#2}{%
14124 \leavevmode
14125 \Hy@escapeform\PDFForm@Check
14126 \@pdfm@mark{%
14127 ann @check\HyField@TheAnnotCount\space
14128 \dvipdfm@setdim
14129 <<\PDFForm@Check>>%
14130 }%
14131 \unhbox\pdfm@box
14132 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
14133 }%
14134 \endgroup
14135 }

14136 \def\Hy@FormObjects{%
14137 \@pdfm@mark{obj @OBJpdfdocencoding%
14138 <<%
14139 /Type/Encoding%
14140 /Differences[%
14141 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14142 39/quotesingle %
14143 96/grave %
14144 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14145 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14146 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14147 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14148 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14149 164/currency %
14150 166/brokenbar %
14151 168/dieresis/copyright/ordfeminine %
14152 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14153 /twosuperior/threesuperior/acute/mu %
14154 183/periodcentered/cedilla/onesuperior/ordmasculine %
14155 188/onequarter/onehalf/threequarters %
14156 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14157 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14158 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14159 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14160 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14161 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14162 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14163 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14164 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14165 /thorn/ydieresis%
14166 ]%
14167 >>%
14168 }%
14169 \@pdfm@mark{obj @OBJZaDb%
14170 <<%
14171 /Type/Font%
14172 /Subtype/Type1%
14173 /Name/ZaDb%
14174 /BaseFont/ZapfDingbats%
14175 >>%
14176 }%
14177 \@pdfm@mark{obj @OBJHelv%
14178 <<%

```

```

14179 /Type/Font%
14180 /Subtype/Type1%
14181 /Name/Helv%
14182 /BaseFont/Helvetica%
14183 /Encoding @OBJpdfdocencoding%
14184 >>%
14185 }%
14186 \global\let\Hy@FormObjects\relax
14187 }
14188 </dvipdfm | xetex>

```

48.6 Common forms part

```

14189 <*pdfform>

\Fld@pageobjref

14190 \providecommand*\Fld@pageobjref{}{}

\Hy@escapestring

14191 \begingroup\expandafter\expandafter\expandafter\endgroup
14192 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14193 \let\Hy@escapestring\@firstofone
14194 \def\Hy@escapeform#1{%
14195 \ifHy@pdfescapeform
14196 \def\Hy@escapestring##1{%
14197 \noexpand\Hy@escapestring{\noexpand##1}%
14198 }%
14199 \edef\Hy@temp{##1}%
14200 \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14201 \def\Hy@escapestring##1{%
14202 \@ifundefined{Hy@esc@\string##1}{%
14203 ##1%
14204 \ThisShouldNotHappen
14205 }{%
14206 \csname Hy@esc@\string##1\endcsname
14207 }%
14208 }%
14209 \else
14210 \let\Hy@escapestring\@firstofone
14211 \fi
14212 }%
14213 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14214 \ifx\#3\%
14215 \else
14216 \expandafter
14217 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14218 \ltx@ReturnAfterFi{%
14219 \Hy@@escapeform#3\@nil
14220 }%
14221 \fi
14222 }%
14223 \else
14224 \def\Hy@escapeform#1{%
14225 \ifHy@pdfescapeform
14226 \let\Hy@escapestring\pdfescapestring
14227 \else
14228 \let\Hy@escapestring\@firstofone

```

```

14229 \fi
14230 }%
14231 \Hy@escapeform{}%
14232 \fi

```

\PDFForm@Name

```

14233 \def\PDFForm@Name{%
14234 \PDFForm@@Name\Fld@name
14235 \ifx\Fld@altname\relax
14236 \else
14237 \PDFForm@@Name\Fld@altname
14238 \fi
14239 \ifx\Fld@mappingname\relax
14240 \else
14241 \PDFForm@@Name\Fld@mappingname
14242 \fi
14243 }

```

\PDFForm@@Name

```

14244 \def\PDFForm@@Name#1{%
14245 \begingroup
14246 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14247 \ifHy@unicode
14248 \Hy@unicodetrue
14249 \fi
14250 \fi
14251 \HyPsd@XeTeXBigCharstrue
14252 \pdfstringdef\Hy@gtemp#1%
14253 \endgroup
14254 \let#1\Hy@gtemp
14255 }

```

\Fld@additionalactions

```

14256 \def\Fld@@additionalactions{%
K input (keystroke) format
14257 \ifx\Fld@keystroke@code\@empty
14258 \else
14259 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14260 \fi
F display format
14261 \ifx\Fld@format@code\@empty
14262 \else
14263 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14264 \fi
V validation
14265 \ifx\Fld@validate@code\@empty
14266 \else
14267 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14268 \fi
C calculation
14269 \ifx\Fld@calculate@code\@empty
14270 \else
14271 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14272 \fi

```


Fo receiving the input focus

```
14273 \ifx\Fld@onfocus@code\@empty
14274 \else
14275 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14276 \fi
```

Bl loosing the input focus (blurred)

```
14277 \ifx\Fld@onblur@code\@empty
14278 \else
14279 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14280 \fi
```

D pressing the mouse button (down)

```
14281 \ifx\Fld@onmousedown@code\@empty
14282 \else
14283 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14284 \fi
```

U releasing the mouse button (up)

```
14285 \ifx\Fld@onmouseup@code\@empty
14286 \else
14287 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14288 \fi
```

E cursor enters the annotation's active area.

```
14289 \ifx\Fld@onenter@code\@empty
14290 \else
14291 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14292 \fi
```

X cursor exits the annotation's active area.

```
14293 \ifx\Fld@onexit@code\@empty
14294 \else
14295 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14296 \fi
14297 }
```

```
14298 \def\Fld@additionalactions{%
14299 \if-\Fld@@additionalactions-%
14300 \else
14301 \ifHy@pdfa
14302 \else
14303 /AA<<\Fld@@additionalactions>>%
14304 \fi
14305 \fi
14306 }
```

\Fld@annotnames

```
14307 \def\Fld@annotnames{%
14308 /T(\Fld@name)%
14309 \ifx\Fld@altname\relax
14310 \else
14311 /TU(\Fld@altname)%
14312 \fi
14313 \ifx\Fld@mappingname\relax
14314 \else
14315 /TM(\Fld@mappingname)%
14316 \fi
14317 }
```

\PDFForm@Check

```
14318 \def\PDFForm@Check{%
14319 /Subtype/Widget%
14320 \Fld@annotflags
14321 \Fld@pageobjref
14322 \Fld@annotnames
14323 /FT/Btn%
14324 \Fld@flags
14325 /Q \Fld@align
14326 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14327 /MK<<%
14328 \ifnum\Fld@rotation=\z@
14329 \else
14330 /R \Fld@rotation
14331 \fi
14332 \ifx\Fld@bordercolor\relax
14333 \else
14334 /BC[\Fld@bordercolor]%
14335 \fi
14336 \ifx\Fld@bcolor\relax
14337 \else
14338 /BG[\Fld@bcolor]%
14339 \fi
14340 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14341 >>%
14342 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14343 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14344 /H/P%
14345 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14346 \Fld@additionalactions
14347 }
```

\PDFForm@Push

```
14348 \ifHy@pdfa
14349 \else
14350 \def\PDFForm@Push{%
14351 /Subtype/Widget%
14352 \Fld@annotflags
14353 \Fld@pageobjref
14354 \Fld@annotnames
14355 /FT/Btn%
14356 \Fld@flags
14357 /H/P%
14358 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14359 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14360 \ifx\Fld@bordercolor\relax\else 1\fi
14361 \space
14362 \else
14363 /MK<<%
14364 \ifnum\Fld@rotation=\z@
14365 \else
14366 /R \Fld@rotation
14367 \fi
14368 \ifx\Fld@bordercolor\relax
14369 \else
14370 /BC[\Fld@bordercolor]%
14371 \fi
```

```

14372    >>%
14373    \fi
14374    /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14375    \Fld@additionalactions
14376    }%
14377    \fi

```

\PDFForm@List

```

14378 \def\PDFForm@List{%
14379 /Subtype/Widget%
14380 \Fld@annotflags
14381 \Fld@pageobjref
14382 \Fld@annotnames
14383 /FT/Ch%
14384 \Fld@flags
14385 /Q \Fld@align
14386 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14387 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14388     \ifx\Fld@bordercolor\relax\else 1\fi
14389     \ifx\Fld@bcolor\relax \else 1\fi
14390     \space
14391 \else
14392 /MK<<%
14393     \ifnum\Fld@rotation=\z@
14394     \else
14395     /R \Fld@rotation
14396     \fi
14397     \ifx\Fld@bordercolor\relax
14398     \else
14399     /BC[\Fld@bordercolor]%
14400     \fi
14401     \ifx\Fld@bcolor\relax
14402     \else
14403     /BG[\Fld@bcolor]%
14404     \fi
14405 >>%
14406 \fi
14407 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14408     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14409 \Fld@choices
14410 \Fld@additionalactions
14411 }

```

\PDFForm@Radio

```

14412 \def\PDFForm@Radio{%
14413 /Subtype/Widget%
14414 \Fld@annotflags
14415 \Fld@pageobjref
14416 \Fld@annotnames
14417 /FT/Btn%
14418 \Fld@flags
14419 /H/P%
14420 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14421 /MK<<%
14422     \ifnum\Fld@rotation=\z@
14423     \else
14424     /R \Fld@rotation

```

```

14425 \fi
14426 \ifx\Fld@bordercolor\relax
14427 \else
14428 /BC[\Fld@bordercolor]%
14429 \fi
14430 \ifx\Fld@bcolor\relax
14431 \else
14432 /BG[\Fld@bcolor]%
14433 \fi
14434 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14435 >>%
14436 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14437 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14438 \ifx\@currValue\Fld@default
14439 /V/\Fld@default
14440 /DV/\Fld@default
14441 \else
14442 /V/Off%
14443 /DV/Off%
14444 \fi
14445 \Fld@additionalactions
14446 }

```

\PDFForm@Text

```

14447 \def\PDFForm@Text{%
14448 /Subtype/Widget%
14449 \Fld@annotflags
14450 \Fld@pageobjref
14451 \Fld@annotnames
14452 /FT/Tx%
14453 \Fld@flags
14454 /Q \Fld@align
14455 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14456 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14457 \ifx\Fld@bordercolor\relax\else 1\fi
14458 \ifx\Fld@bcolor\relax \else 1\fi
14459 \space
14460 \else
14461 /MK<<%
14462 \ifnum\Fld@rotation=\z@
14463 \else
14464 /R \Fld@rotation
14465 \fi
14466 \ifx\Fld@bordercolor\relax
14467 \else
14468 /BC[\Fld@bordercolor]%
14469 \fi
14470 \ifx\Fld@bcolor\relax
14471 \else
14472 /BG[\Fld@bcolor]%
14473 \fi
14474 >>%
14475 \fi
14476 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14477 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14478 /DV(\Hy@escapestring{\Fld@default})%
14479 /V(\Hy@escapestring{\Fld@value})%
14480 \Fld@additionalactions

```

```

14481 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14482 }

```

\PDFForm@Submit

```

14483 \def\PDFForm@Submit{%
14484   /Subtype/Widget%
14485   \Fld@annotflags
14486   \Fld@pageobjref
14487   \Fld@annotnames
14488   /FT/Btn%
14489   \Fld@flags
14490   /H/P%
14491   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14492   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14493     \ifx\Fld@bordercolor\relax\else 1\fi
14494     \space
14495   \else
14496     /MK<<%
14497     \ifnum\Fld@rotation=\z@
14498     \else
14499       /R \Fld@rotation
14500     \fi
14501     \ifx\Fld@bordercolor\relax
14502     \else
14503       /BC[\Fld@bordercolor]%
14504     \fi
14505     >>%
14506   \fi
14507   /A<<%
14508   /S/SubmitForm%
14509   /F<<%
14510   /FS/URL%
14511   /F(\Hy@escapestring{\Form@action})%
14512   >>%
14513   \Fld@submitflags
14514   >>%
14515   \Fld@additionalactions
14516 }

```

\PDFForm@Reset

```

14517 \ifHy@pdfa
14518 \else
14519 \def\PDFForm@Reset{%
14520   /Subtype/Widget%
14521   \Fld@annotflags
14522   \Fld@pageobjref
14523   \Fld@annotnames
14524   /FT/Btn%
14525   \Fld@flags
14526   /H/P%
14527   /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14528   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14529     \ifx\Fld@bordercolor\relax\else 1\fi
14530     \space
14531   \else
14532     /MK<<%
14533     \ifnum\Fld@rotation=\z@

```

```

14534     \else
14535     /R \Fld@rotation
14536     \fi
14537     \ifx\Fld@bordercolor\relax
14538     \else
14539     /BC[\Fld@bordercolor]%
14540     \fi
14541 %     /CA (Clear)
14542 %     /AC (Done)
14543     >>%
14544     \fi
14545     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14546     /A<</S/ResetForm>>%
14547     \Fld@additionalactions
14548 }%
14549 \fi

14550 </pdfform>
14551 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in L^AT_EX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

14552 \def\phantomsection{%
14553   \Hy@MakeCurrentHrefAuto{section*}%
14554   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14555 }
14556 </package>

```

49.1 Bookmarks

```
14557 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -T_EX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -T_EX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`,

which could be used to post-process it to achieve the proper ordering of \BOOKMARK commands in that file.

```

14558 \def\Hy@writebookmark#1#2#3#4#5{%
14559   % section number, text, label, level, file
14560   \ifx\WriteBookmarks\relax%
14561   \else
14562     \ifnum#4>\Hy@bookmarksdepth\relax
14563     \else
14564       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14565     \fi
14566   \fi
14567 }
14568 \def\Hy@currentbookmarklevel{0}
14569 \def\Hy@numberline#1{#1 }
14570 \def\@@writetorep#1#2#3#4#5{%
14571   \begingroup
14572     \edef\Hy@tempa{#5}%
14573     \ifx\Hy@tempa\Hy@bookmarkstype
14574       \edef\Hy@level{#4}%
14575       \ifx\Hy@levelcheck Y%
14576         \@tempcnta\Hy@level\relax
14577         \advance\@tempcnta by -1 %
14578         \ifnum\Hy@currentbookmarklevel<\@tempcnta
14579           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14580           \advance\@tempcnta by 1 %
14581           \Hy@Warning{%
14582             Difference (\the\@tempcnta) between bookmark levels is %
14583             greater \MessageBreak than one, level fixed%
14584           }%
14585           \@tempcnta\Hy@currentbookmarklevel
14586           \advance\@tempcnta by 1 %
14587           \edef\Hy@level{\the\@tempcnta}%
14588         \fi
14589       \else
14590         \global\let\Hy@levelcheck Y%
14591       \fi
14592       \global\let\Hy@currentbookmarklevel\Hy@level
14593       \@tempcnta\Hy@level\relax
14594       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14595       \advance\@tempcnta by -1 %
14596       \edef\Hy@tempa{#3}%
14597       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14598       \ifx\Hy@tempa\Hy@tempb
14599         \Hy@Warning{%
14600           The anchor of a bookmark and its parent's must not%
14601           \MessageBreak be the same. Added a new anchor%
14602         }%
14603       \phantomsection
14604     \fi
14605     \ifHy@bookmarksnumbered
14606       \let\numberline\Hy@numberline
14607       \let\booknumberline\Hy@numberline
14608       \let\partnumberline\Hy@numberline
14609       \let\chapternumberline\Hy@numberline
14610     \else
14611       \let\numberline\@gobble
14612       \let\booknumberline\@gobble

```

```

14613 \let\partnumberline\@gobble
14614 \let\chapternumberline\@gobble
14615 \fi
14616 \HyPsd@XeTeXBigCharstrue
14617 \pdfstringdef\Hy@tempa{#2}%
14618 \HyPsd@SanitizeForOutFile\Hy@tempa
14619 \if@filesw
14620 \stepcounter{bookmark@seq@number}%
14621 \@ifundefined{Outlinefile}{%
14622 }{%
14623 \protected@write\Outlinefile{%
14624 \protect\BOOKMARK
14625 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14626 {\Hy@tempa}{\Hy@tempb}%
14627 \@percentchar\space\thebookmark@seq@number
14628 }%
14629 }%
14630 \fi
14631 \fi
14632 \endgroup
14633 }
14634 \newcounter{bookmark@seq@number}
14635 \begingroup
14636 \lccode'={\%
14637 \lccode'}=\}%
14638 \lccode'1=\z@
14639 \lccode'2=\z@
14640 \lccode'3=\z@
14641 \lccode'5=\z@
14642 \lccode'7=\z@
14643 \lccode'\#=\z@
14644 \lccode'\'=\z@
14645 \lccode'\{=\z@
14646 \lccode'\}=\z@
14647 \lowercase{%
14648 \endgroup
14649 \def\HyPsd@SanitizeForOutFile#1{%
14650 \@onelevel@sanitize\Hy@tempa
14651 \escapechar'\%
14652 \edef\Hy@tempa{%
14653 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
14654 }%
14655 \edef\Hy@tempa{%
14656 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
14657 }%
14658 }%
14659 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14660 #1%
14661 \ifx\#2\%
14662 \expandafter\ltx@gobble
14663 \else
14664 \expandafter\ltx@firstofone
14665 \fi
14666 {%
14667 \string\173%
14668 \HyPsd@SanitizeOut@BraceLeft#2\@nil
14669 }%

```



```

14670 }%
14671 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14672   #1%
14673   \ifx\#2\%
14674     \expandafter\ltx@gobble
14675   \else
14676     \expandafter\ltx@firstofone
14677   \fi
14678   {%
14679     \string\175%
14680     \HyPsd@SanitizeOut@BraceRight#2\@nil
14681   }%
14682 }%
14683 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14684 \newcommand{\currentpdfbookmark}{%
14685   \pdfbookmark[\Hy@currentbookmarklevel]%
14686 }
14687 \newcommand{\subpdfbookmark}{%
14688   \@tempcnta\Hy@currentbookmarklevel
14689   \Hy@StepCount\@tempcnta
14690   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14691 }
14692 \newcommand{\belowpdfbookmark}[2]{%
14693   \@tempcnta\Hy@currentbookmarklevel
14694   \Hy@StepCount\@tempcnta
14695   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14696   \advance\@tempcnta by -1 %
14697   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14698 }

```

Tobias Oetiker rightly points out that we need a way to force a bookmark entry. So we introduce `\pdfbookmark`, with two parameters, the title, and a symbolic name. By default this is at level 1, but we can reset that with the optional first argument.

```

14699 \renewcommand\pdfbookmark[3][0]{%
14700   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
14701   \hyper@anchorstart{#3.#1}\hyper@anchorend
14702 }
14703 \def\BOOKMARK{%
14704   \ifnextchar{\@BOOKMARK}{\@BOOKMARK[1][-]}%
14705 }
14706 \def\@BOOKMARK[#1]{%
14707   \ifnextchar{\@BOOKMARK[{#1}]}{\@BOOKMARK[{#1}][-]}%
14708 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14709 \RequirePackage{rerunfilecheck}[2009/12/10]
14710 \def\Hy@OutlineRerunCheck{%
14711   \RerunFileCheck{\jobname.out}{%
14712     \immediate\closeout\@outlinefile
14713   }{%
14714     Rerun to get outlines right\MessageBreak

```

```

14715   or use package 'bookmark'%
14716 }%
14717 }

```

49.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping \ and the like.

```

14718 (*vtex)
14719 \newcount\@serial@counter\@serial@counter=1\relax

```

\hv@pdf@char Plain octal codes doesn't work with versions below 6.50. So for early versions hex numbers have to be used. It would be possible to program this instead of the large \ifcase, but I'm too lazy to sort that out now.

```

14720 \begingroup
14721 \catcode'\=12 %
14722 \ifnum\Hy@VTeXversion<650 %
14723 \catcode'\=12 %
14724 \gdef\hv@pdf@char#1#2#3{%
14725 \char
14726 \ifcase'#1#2#3 %
14727 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14728 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14729 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14730 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14731 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14732 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14733 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14734 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14735 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14736 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14737 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14738 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14739 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14740 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14741 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14742 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14743 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14744 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14745 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14746 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14747 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14748 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14749 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14750 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14751 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14752 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14753 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14754 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14755 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14756 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14757 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14758 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14759 \fi

```

```

14760 }%
14761 \else
14762 \gdef\hv@pdf@char{\char'}%
14763 \fi
14764 \endgroup

```

\@@BOOKMARK

```

14765 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14766 \expandafter\edef\csname @count@#3\endcsname{%
14767 \the\@serial@counter
14768 }%
14769 \edef\@mycount{\the\@serial@counter}%
14770 \Hy@StepCount\@serial@counter
14771 \edef\@parcount{%
14772 \expandafter\ifx\csname @count@#5\endcsname\relax
14773 0%
14774 \else
14775 \csname @count@#5\endcsname
14776 \fi
14777 }%
14778 \immediate\special{%
14779 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14780 s=\ifx#2-c\else o\fi,t=#4%
14781 }%
14782 }%

```

\ReadBookmarks

```

14783 \def\ReadBookmarks{%
14784 \begingroup
14785 \def\0{\hv@pdf@char 0}%
14786 \def\1{\hv@pdf@char 1}%
14787 \def\2{\hv@pdf@char 2}%
14788 \def\3{\hv@pdf@char 3}%
14789 \def\({}%
14790 \def\)}%
14791 \def\do##1{%
14792 \ifnum\catcode'##1=\active
14793 \@makeother##1%
14794 \else
14795 \ifnum\catcode'##1=6 %
14796 \@makeother##1%
14797 \fi
14798 \fi
14799 }%
14800 \dospecials
14801 \Hy@safe@activestru
14802 \InputIfFileExists{\jobname.out}{-}{-}%
14803 \endgroup
14804 \ifx\WriteBookmarks\relax
14805 \else
14806 \if@files
14807 \newwrite\@outlinefile
14808 \Hy@OutlineRerunCheck
14809 \immediate\openout\@outlinefile=\jobname.out\relax
14810 \ifHy@typexml
14811 \immediate\write\@outlinefile{<relaxxml>\relax}%
14812 \fi

```

```

14813 \fi
14814 \fi
14815 }

14816 </vtex>
14817 <*\vtex>
14818 \def\ReadBookmarks{%
14819 \pdf@ifdraftmode{}{%
14820 \begingroup
14821 \def\do###1{%
14822 \ifnum\catcode'###1=\active
14823 \@makeoother###1%
14824 \else
14825 \ifnum\catcode'###1=6 %
14826 \@makeoother###1%
14827 \fi
14828 \fi
14829 }%
14830 \dospecials
14831 \Hy@safe@activetrue
14832 \escapechar='\%
14833 \def\@@BOOKMARK[##1][##2]###3###4###5{%
14834 \calc@bm@number{##5}%
14835 }%
14836 \InputIfFileExists{\jobname.out}{-}{-}%
14837 \ifx\WriteBookmarks\relax
14838 \global\let\WriteBookmarks\relax
14839 \fi
14840 \def\@@BOOKMARK[##1][##2]###3###4###5{%
14841 \def\Hy@temp{##4}%
14842 (*pdfTeX)
14843 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14844 \Hy@OutlineName{}\Hy@pstringName{%
14845 ##2\check@bm@number{##3}%
14846 }{%
14847 \expandafter\strip@prefix\meaning\Hy@temp
14848 }%
14849 </pdfTeX>
14850 (*pdfmark)
14851 \pdfmark{%
14852 pdfmark=/OUT,%
14853 Count={##2\check@bm@number{##3}},%
14854 Dest={##3},%
14855 Title=\expandafter\strip@prefix\meaning\Hy@temp
14856 }%
14857 </pdfmark>
14858 <*\dvipdfm|xetex>
14859 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14860 \@pdfm@mark{%
14861 outline \ifHy@DvipdfmxOutlineOpen
14862 [%
14863 \ifnum##21>\z@
14864 \else
14865 -%
14866 \fi
14867 ] %
14868 \fi
14869 ##1<<%

```

```

14870      /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14871      /A<<%
14872      /S/GoTo%
14873      /D(\Hy@pstringName)%
14874      >>%
14875      >>%
14876      }%
14877 </dvipdfm | xetex>
14878      }%
14879      \begingroup
14880      \def\WriteBookmarks{0}%
14881      \InputIfFileExists{jobname.out}{\relax}%
14882      \endgroup
14883      %{\escapechar\m@ne\InputIfFileExists{jobname.out}{\relax}}%
14884      \endgroup
14885      }%
14886      \ifx\WriteBookmarks\relax
14887      \else
14888      \if@files
14889      \newwrite\@outlinefile
14890      \Hy@OutlineRerunCheck
14891      \immediate\openout\@outlinefile=jobname.out\relax
14892      \ifHy@typexml
14893      \immediate\write\@outlinefile{<relaxxml>\relax}%
14894      \fi
14895      \fi
14896      \fi
14897      }
14898 <*pdfTeX>
14899 \def\Hy@OutlineName#1#2#3#4{%
14900 \pdfoutline goto name{#2}count#3{#4}%
14901 }
14902 </pdfTeX>
14903 \def\check@bm@number#1{%
14904 \expandafter\ifx\csname B_#1\endcsname\relax
14905 0%
14906 \else
14907 \csname B_#1\endcsname
14908 \fi
14909 }
14910 \def\calc@bm@number#1{%
14911 \@tempcnta=\check@bm@number{#1}\relax
14912 \advance\@tempcnta by 1 %
14913 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14914 }
14915 </!vTeX>

14916 \ifHy@implicit
14917 \else
14918 \expandafter\endinput
14919 \fi

14920 </outlines>
14921 <*outlines | hypertex>

14922 \newlength\Hy@SectionHShift
14923 \def\Hy@SectionAnchorHRef#1{%
14924 \ifx\protect\@typeset@protect
14925 \Hy@@@SectionAnchor{#1}%

```

```

14926 \fi
14927 }
14928 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
14929 \leavevmode
14930 \hbox to 0pt{%
14931 \kern-\Hy@SectionHShift
14932 \Hy@raisedlink{%
14933 \hyper@anchorstart{#1}\hyper@anchorend
14934 }%
14935 \hss
14936 }%
14937 }
14938 \let\H@old@ssect\@ssect
14939 \def\@ssect#1#2#3#4#5{%
14940 \Hy@MakeCurrentHrefAuto{section*}%
14941 \setlength{\Hy@SectionHShift}{#1}%
14942 \begingroup
14943 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14944 \toks\tw@\expandafter{%
14945 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14946 #5%
14947 }%
14948 \edef\x{\endgroup
14949 \the\toks@\the\toks\tw@}%
14950 }\x
14951 }
14952 \let\H@old@schapter\@schapter
14953 \def\@schapter#1{%
14954 \begingroup
14955 \let\@mkboth\@gobbletwo
14956 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14957 \Hy@raisedlink{%
14958 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14959 }%
14960 \endgroup
14961 \H@old@schapter{#1}%
14962 }

```

If there is no chapter number (`\frontmatter` or `\backmatter`) then the counting by `\refstepcounter{chapter}` is not executed, so there will be no destination for `\ddcontentsline`. So `\@chapter` is overloaded to avoid this:

```

14963 \ltx@ifundefined{@chapter}{}{%
14964 \let\Hy@org@chapter\@chapter
14965 \def\@chapter{%
14966 \def\Hy@next{%
14967 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14968 \Hy@raisedlink{%
14969 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14970 }%
14971 }%
14972 \ifnum\c@secnumdepth>\m@ne
14973 \ltx@ifundefined{if@mainmatter}%
14974 \iftrue{\csname if@mainmatter\endcsname}%
14975 \let\Hy@next\relax
14976 \fi
14977 \fi
14978 \Hy@next
14979 \Hy@org@chapter

```

```

14980 }%
14981 }

14982 \let\H@old@part\@part
14983 \begingroup\expandafter\expandafter\expandafter\endgroup
14984 \expandafter\ifx\csname chapter\endcsname\relax
14985 \let\Hy@secnum@part\z@
14986 \else
14987 \let\Hy@secnum@part\m@ne
14988 \fi
14989 \def\@part{%
14990 \ifnum\Hy@secnum@part>\c@secnumdepth
14991 \phantomsection
14992 \fi
14993 \H@old@part
14994 }

14995 \let\H@old@spart\@spart
14996 \def\@spart#1{%
14997 \Hy@MakeCurrentHrefAuto{part*}%
14998 \Hy@raisedlink{%
14999 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15000 }%
15001 \H@old@spart{#1}%
15002 }

15003 \let\H@old@sect\@sect
15004 \def\@sect#1#2#3#4#5#6[#7]#8{%
15005 \ifnum #2>\c@secnumdepth
15006 \expandafter\@firstoftwo
15007 \else
15008 \expandafter\@secondoftwo
15009 \fi
15010 {%
15011 \Hy@MakeCurrentHrefAuto{section*}%
15012 \setlength{\Hy@SectionHShift}{#3}%
15013 \begingroup
15014 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15015 \toks\tw@\expandafter{%
15016 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15017 #8%
15018 }%
15019 \edef\x{\endgroup
15020 \the\toks@\the\toks\tw@}%
15021 }\x
15022 }{%
15023 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15024 }%
15025 }

15026 </outlines | hypertex>
15027 <*outlines>

15028 \expandafter\def\csname Parent-4\endcsname{}
15029 \expandafter\def\csname Parent-3\endcsname{}
15030 \expandafter\def\csname Parent-2\endcsname{}
15031 \expandafter\def\csname Parent-1\endcsname{}
15032 \expandafter\def\csname Parent0\endcsname{}
15033 \expandafter\def\csname Parent1\endcsname{}
15034 \expandafter\def\csname Parent2\endcsname{}
15035 \expandafter\def\csname Parent3\endcsname{}

```

```

15036 \expandafter\def\csname Parent4\endcsname{}
15037 </outlines>

```

50 Compatibility with koma-script classes

```

15038 <*outlines | hypertex>

```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

15039 \def\Hy@tempa{%
15040   \def\@addchap{##1}##2{%
15041     \typeout{##2}%
15042     \if@twoside
15043       \@mkboth{##1}{}%
15044     \else
15045       \@mkboth{}{##1}%
15046     \fi
15047     \addtocontents{lof}{\protect\addvspace{10\p@}}%
15048     \addtocontents{lot}{\protect\addvspace{10\p@}}%
15049     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15050     \Hy@raisedlink{%
15051       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15052     }%
15053     \if@twocolumn
15054       \@topnewpage[\@makeschapterhead{##2}]%
15055     \else
15056       \@makeschapterhead{##2}%
15057       \@afterheading
15058     \fi
15059     \addcontentsline{toc}{chapter}{##1}%
15060   }%
15061 }
15062 \@ifclassloaded{scrbook}{%
15063   \@ifclasslater{scrbook}{2001/01/01}{%
15064     \let\Hy@tempa\@empty
15065   }{}%
15066 }{%
15067   \@ifclassloaded{scrreprt}{%
15068     \@ifclasslater{scrreprt}{2001/01/01}{%
15069       \let\Hy@tempa\@empty
15070     }{}%
15071   }{}%
15072   \let\Hy@tempa\@empty
15073 }%
15074 }%
15075 \Hy@tempa
15076 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```
15077 \*pd1enc)
15078 \DeclareFontEncoding{PD1}{-}{-}

Accents
15079 \DeclareTextAccent{'}{PD1}{\textasciigrave}
15080 \DeclareTextAccent{'}{PD1}{\textacute}
15081 \DeclareTextAccent{^}{PD1}{\textasciicircum}
15082 \DeclareTextAccent{~}{PD1}{\texttilde}
15083 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
15084 \DeclareTextAccent{r}{PD1}{\textstring}
15085 \DeclareTextAccent{v}{PD1}{\textasciicaron}
15086 \DeclareTextAccent{.}{PD1}{\textdotaccent}
15087 \DeclareTextAccent{c}{PD1}{\textcedilla}
15088 \DeclareTextAccent{=}{PD1}{\textasciimacron}
15089 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
15090 \DeclareTextAccent{d}{PD1}{\textdotbelow}
15091 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
15092 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
15093 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
15094 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
15095 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
15096 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textstring}
15097 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
15098 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
15099 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
15100 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
15101 \DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}
15102 \DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}
15103 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}
15104 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}
15105 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}
15106 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
15107 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
15108 \DeclareTextCompositeCommand{r}{PD1}{\ }{\textstring}
15109 \DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}
15110 \DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}
15111 \DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}
15112 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
15113 \DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}
15114 \DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}
15115 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15116 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15117 \DeclareTextCommand{\newtie}{PD1}[1]{%
15118 \TextSymbolUnavailable{\newtie{#1}}#1%
15119 }
```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```
15120 % U+0009 (CHARACTER TABULATION)
15121 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15122 % U+000A (LINE FEED)
15123 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15124 % U+000D (CARRIAGE RETURN)
15125 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
```

Accent glyph names

```
15126 % U+02D8 BREVE; breve
15127 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
```

15128 % U+02C7 CARON; caron
 15129 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 15130 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 15131 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
 15132 % U+02D9 DOT ABOVE; dotaccent
 15133 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 15134 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 15135 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 15136 % U+02DB OGONEK; ogonek
 15137 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 15138 % U+02DA RING ABOVE; ring
 15139 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 15140 % U+02DC SMALL TILDE; ilde, *tilde
 15141 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 15142 % U+0022 QUOTATION MARK; quotedbl
 15143 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 15144 % U+0023 NUMBER SIGN; numbersign
 15145 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15146 % U+0024 DOLLAR SIGN; dollar
 15147 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15148 % U+0025 PERCENT SIGN; percent
 15149 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15150 % U+0026 AMPERSAND; ampersand
 15151 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15152 % U+0028 LEFT PARENTHESIS; parenleft
 15153 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 15154 % U+0029 RIGHT PARENTHESIS; parenright
 15155 \DeclareTextCommand{\textparenright}{PD1}{\string\}}% \051 U+0029
 \052: U+002A ASTERISK; asterisk
 \053: U+002B PLUS SIGN; plus
 \054: U+002C COMMA; comma
 \055: U+002D HYPHEN-MINUS; hyphen
 \056: U+002E FULL STOP; period
 15156 % U+002E FULL STOP; period
 15157 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E
 \057: U+002F SOLIDUS; slash
 \060: U+0030 DIGIT ZERO; zero
 ...
 \071: U+0039 DIGIT NINE; nine
 \072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 15158 % U+003C LESS-THAN SIGN; less
 15159 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15160 % U+003E GREATER-THAN SIGN; greater
 15161 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...

\132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 15162 % U+005C REVERSE SOLIDUS; backslash
 15163 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15164 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15165 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15166 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15167 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15168 % U+005F LOW LINE; underscore
 15169 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15170 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15171 % U+0060 GRAVE ACCENT; grave
 15172 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15173 % U+0069 LATIN SMALL LETTER I; i
 15174 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15175 % U+007B LEFT CURLY BRACKET; braceleft
 15176 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15177 % U+007C VERTICAL LINE; *bar, verticalbar
 15178 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15179 % U+007D RIGHT CURLY BRACKET; braceright
 15180 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15181 % U+007E TILDE; asciitilde
 15182 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15183 % U+2022 BULLET; bullet
 15184 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15185 % U+2020 DAGGER; dagger
 15186 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15187 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 15188 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15189 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15190 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15191 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15192 % U+2014 EM DASH; emdash
 15193 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15194 % U+2013 EN DASH; endash
 15195 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15196 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15197 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15198 % U+2044 FRACTION SLASH; fraction
 15199 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15200 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 15201 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 15202 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 15203 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15204 % U+2212 MINUS SIGN; minus
 15205 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212

15206 % U+2030 PER MILLE SIGN; perthousand
15207 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
15208 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15209 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
15210 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
15211 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
15212 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15213 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
15214 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15215 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
15216 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
15217 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
15218 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
15219 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
15220 % U+2122 TRADE MARK SIGN; trademark
15221 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
15222 % U+FB01 LATIN SMALL LIGATURE FI; fi
15223 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
15224 % U+FB02 LATIN SMALL LIGATURE FL; fl
15225 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
15226 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15227 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
15228 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15229 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
15230 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15231 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
15232 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15233 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
15234 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
15235 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15236 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
15237 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15238 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
15239 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15240 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
15241 % U+0153 LATIN SMALL LIGATURE OE; oe
15242 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
15243 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15244 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
15245 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15246 \DeclareTextCompositeCommand{\v}{PD1}{z}{\236}% U+017E
Slot \237 (0x9F) is not defined in PDFDocEncoding.
The euro \240 is inserted in version 1.3 of the pdf specification.
15247 % U+20AC EURO SIGN; *Euro, euro
15248 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
15249 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15250 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
15251 % U+00A2 CENT SIGN; cent
15252 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
15253 % U+00A3 POUND SIGN; sterling
15254 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
15255 % U+00A4 CURRENCY SIGN; currency
15256 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
15257 % U+00A5 YEN SIGN; yen
15258 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
15259 % U+00A6 BROKEN BAR; brokenbar
15260 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6

15261 % U+00A7 SECTION SIGN; section
 15262 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15263 % U+00A8 DIAERESIS; dieresis
 15264 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15265 % U+00A9 COPYRIGHT SIGN; copyright
 15266 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15267 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15268 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15269 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15270 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15271 % U+00AC NOT SIGN; logicalnot
 15272 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15273 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15274 % U+00AE REGISTERED SIGN; registered
 15275 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15276 % U+00AF MACRON; *macron, overscore
 15277 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15278 % U+00B0 DEGREE SIGN; degree
 15279 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 15280 % U+00B1 PLUS-MINUS SIGN; plusminus
 15281 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 15282 % U+00B2 SUPERSCRIPT TWO; twosuperior
 15283 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
 15284 % U+00B3 SUPERSCRIPT THREE; threesuperior
 15285 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
 15286 % U+00B4 ACUTE ACCENT; acute
 15287 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 15288 % U+00B5 MICRO SIGN; mu, mul
 15289 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 15290 % U+00B6 PILCROW SIGN; paragraph
 15291 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 15292 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15293 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 15294 % U+00B8 CEDILLA; cedilla
 15295 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 15296 % U+00B9 SUPERSCRIPT ONE; onesuperior
 15297 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
 15298 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 15299 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 15300 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 15301 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 15302 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 15303 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 15304 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 15305 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 15306 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 15307 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 15308 % U+00BF INVERTED QUESTION MARK; questiondown
 15309 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 15310 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 15311 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 15312 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 15313 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 15314 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex

15315 \DeclareTextCompositeCommand{\~}{PD1}{A}{\302}% U+00C2
15316 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15317 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15318 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15319 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15320 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15321 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15322 % U+00C6 LATIN CAPITAL LETTER AE; AE
15323 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15324 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15325 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15326 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15327 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15328 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15329 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15330 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15331 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15332 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15333 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15334 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15335 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15336 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15337 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15338 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15339 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15340 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15341 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15342 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15343 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15344 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15345 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15346 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15347 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15348 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15349 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15350 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15351 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15352 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15353 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15354 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15355 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15356 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15357 % U+00D7 MULTIPLICATION SIGN; multiply
15358 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15359 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15360 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15361 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15362 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15363 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15364 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15365 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15366 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15367 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15368 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15369 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15370 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15371 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)

15372 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15373 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15374 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15375 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15376 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15377 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15378 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15379 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15380 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15381 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15382 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15383 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15384 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15385 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15386 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15387 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15388 % U+00E6 LATIN SMALL LETTER AE; ae
15389 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15390 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15391 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15392 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15393 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15394 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15395 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15396 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15397 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15398 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15399 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15400 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15401 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15402 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
15403 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15404 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15405 \DeclareTextCompositeCommand{\^}{PD1}{i}{\355}% U+00ED
15406 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15407 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15408 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15409 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15410 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15411 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15412 % U+00F0 LATIN SMALL LETTER ETH; eth
15413 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15414 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15415 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15416 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15417 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15418 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15419 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15420 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15421 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15422 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15423 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15424 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15425 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15426 % U+00F7 DIVISION SIGN; divide
15427 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15428 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash

```

15429 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15430 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15431 \DeclareTextCompositeCommand{\'}{PD1}{u}{\371}% U+00F9
15432 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15433 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15434 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15435 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15436 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15437 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15438 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15439 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15440 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15441 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15442 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15443 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15444 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15445 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15446 \DeclareTextCommand{\SS}{PD1}{SS}%
15447 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15448 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15449 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15450 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15451 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15452 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15453 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15454 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15455 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15456 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15457 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15458 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15459 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15460 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15461 \DeclareTextCommand{\textbeta}{PD1}{\ss}%

```

Polish aliases. PDF encoding does not have the characters, but it is useful to Poles to have the plain letters regardless. Requested by Wojciech Myszka (W.Myszka@immt.pwr.wroc.pl).

```

15462 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15463 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15464 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15465 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15466 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15467 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15468 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15469 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15470 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15471 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15472 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15473 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15474 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15475 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15476 \pdlenc)

```


51.2 PU encoding

```
15477 ⟨*puenc⟩
15478 \DeclareFontEncoding{PU}{-}{-}
```

51.2.1 NFSS2 accents

```
15479 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15480 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
15481 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15482 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15483 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15484 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15485 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
15486 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15487 % U+0304 COMBINING MACRON; macroncmb
15488 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15489 % U+0306 COMBINING BREVE; brevecmb
15490 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15491 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15492 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15493 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15494 % U+0308 COMBINING DIAERESIS; dieresiscmb
15495 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15496 % U+030A COMBINING RING ABOVE; ringcmb
15497 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15498 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15499 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15500 % U+030C COMBINING CARON; caroncmb
15501 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15502 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15503 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15504 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15505 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15506 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15507 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
15508 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15509 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15510 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15511 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15512 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15513 % U+0327 COMBINING CEDILLA; cedillacmb
15514 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15515 % U+0328 COMBINING OGONEK; ogonekcmb
15516 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15517 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15518 % \textsubcircum (tipa)
15519 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15520 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15521 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15522 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15523 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15524 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15525 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15526 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
15527 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15528 % U+20DD COMBINING ENCLOSING CIRCLE
```

15529 \DeclareTextCommand{\textcircled}{PU}[1]{\#1\9040\335}% U+20DD

Double accents.

15530 \DeclareTextCommand{\textacutemacron}{PU}[1]{\#1\83\001\83\004}% U+0301 U+0304

15531 \DeclareTextCommand{\textgravemacron}{PU}[1]{\#1\83\000\83\004}% U+0300 U+0304

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

15532 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%

15533 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%

15534 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%

15535 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%

15536 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%

15537 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textstring}%

15538 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%

15539 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%

15540 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%

15541 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%

15542 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%

15543 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%

15544 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%

15545 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%

15546 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\83\021\}}% U+0311

15547 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\83\044\}}% U+0324

15548 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%

15549 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircumlow}%

15550 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\83\056\}}% U+032E

15551 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%

15552 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%

15553 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%

15554 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%

15555 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%

15556 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%

15557 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\83\001\83\004\}}% U+0301 U

15558 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\83\000\83\004\}}% U+0300 U

15559 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%

15560 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%

15561 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%

15562 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%

15563 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%

15564 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textstring}%

15565 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%

15566 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%

15567 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%

15568 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%

15569 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%

15570 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%

15571 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%

15572 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%

15573 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\83\021\}}% U+0311

15574 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\83\044\}}% U+0324

15575 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%

15576 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%

15577 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\83\056\}}% U+032E

15578 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%

15579 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%

15580 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%

```

15581 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15582 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15583 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15584 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\ \83\001\83\004}% U+0301 U+0304
15585 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\ \83\000\83\004}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

15586 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15587 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15588 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15589 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15590 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15591 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15592 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
15593 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15594 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15595 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15596 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15597 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15598 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
15599 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15600 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

15601 % U+0009 (CHARACTER TABULATION)
15602 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15603 % U+000A (LINE FEED)
15604 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15605 % U+000D (CARRIAGE RETURN)
15606 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

15607 % U+0022 QUOTATION MARK; quotedbl
15608 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
15609 % U+0023 NUMBER SIGN; numbersign
15610 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
15611 % U+0024 DOLLAR SIGN; dollar
15612 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
15613 %* \textdollar -> \mathdollar
15614 %* \textdollar -> \EyesDollar (marvosym)
15615 % U+0025 PERCENT SIGN; percent
15616 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15617 % U+0026 AMPERSAND; ampersand
15618 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15619 %* \textampersand -> \binampersand (stmaryrd)
15620 %* \textampersand -> \with (cml)
15621 % U+0027 APOSTROPHE; quotesingle
15622 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15623 % U+0028 LEFT PARENTHESIS; parenleft
15624 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15625 % U+0029 RIGHT PARENTHESIS; parenright
15626 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15627 % U+002A ASTERISK; asterisk; (?)
15628 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15629 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15630 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B

```

15631 % U+002C COMMA; comma; \MVComma (marvosym)
 15632 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
 15633 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
 15634 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
 15635 % U+002E FULL STOP; period; \MVPeriod (marvosym)
 15636 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
 15637 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
 15638 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
 15639 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
 15640 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
 15641 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
 15642 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 15643 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 15644 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 15645 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 15646 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 15647 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 15648 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
 15649 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
 15650 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
 15651 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 15652 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 15653 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 15654 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 15655 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 15656 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 15657 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 15658 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 15659 % U+003C LESS-THAN SIGN; less
 15660 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 15661 % U+003E GREATER-THAN SIGN; greater
 15662 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 15663 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 15664 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
 \80\101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \80\132: U+005A LATIN CAPITAL LETTER Z; Z
 \80\133: U+005B LEFT SQUARE BRACKET; bracketleft
 15665 % U+005C REVERSE SOLIDUS; backslash
 15666 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 15667 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15668 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 15669 % U+005F LOW LINE; underscore
 15670 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 15671 %* \textunderscore -> \mathunderscore (LaTeX)
 15672 % U+0060 GRAVE ACCENT; grave
 15673 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060

$\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
 ...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
 15674 % U+0069 LATIN SMALL LETTER I; i
 15675 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 15676 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
 ...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
 15677 % U+007B LEFT CURLY BRACKET; braceleft
 15678 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173\}\%$ U+007B
 15679 % U+007C VERTICAL LINE; *bar, verticalbar
 15680 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\text{||}\}\%$ $\backslash 80\backslash 174$ U+007C
 15681 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvtrline}$ (tipa)
 15682 % U+007D RIGHT CURLY BRACKET; braceright
 15683 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175\}\%$ U+007D
 15684 % U+007E TILDE; asciitilde
 15685 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176\}\%$ U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 15686 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15687 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241\}\%$ U+00A1
 15688 % U+00A2 CENT SIGN; cent
 15689 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}\{\text{PU}\}\{\backslash 80\backslash 242\}\%$ U+00A2
 15690 % U+00A3 POUND SIGN; sterling
 15691 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}\{\text{PU}\}\{\backslash 80\backslash 243\}\%$ U+00A3
 15692 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)
 15693 %* $\backslash \text{textsterling} \rightarrow \backslash \text{pounds}$ (LaTeX)
 15694 % U+00A4 CURRENCY SIGN; currency
 15695 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcurrency}\}\{\text{PU}\}\{\backslash 80\backslash 244\}\%$ U+00A4
 15696 % U+00A5 YEN SIGN; yen
 15697 $\backslash \text{DeclareTextCommand}\{\backslash \text{textyen}\}\{\text{PU}\}\{\backslash 80\backslash 245\}\%$ U+00A5
 15698 % U+00A6 BROKEN BAR; brokenbar
 15699 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbrokenbar}\}\{\text{PU}\}\{\backslash 80\backslash 246\}\%$ U+00A6
 15700 %* $\backslash \text{textbrokenbar} \rightarrow \backslash \text{brokenvert}$ (wasysym)
 15701 % U+00A7 SECTION SIGN; section
 15702 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsection}\}\{\text{PU}\}\{\backslash 80\backslash 247\}\%$ U+00A7
 15703 %* $\backslash \text{textsection} \rightarrow \backslash \text{mathsection}$ (LaTeX)
 15704 %* $\backslash \text{textsection} \rightarrow \backslash \text{S}$ (LaTeX)
 15705 % U+00A8 DIAERESIS; dieresis
 15706 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciidieresis}\}\{\text{PU}\}\{\backslash 80\backslash 250\}\%$ U+00A8
 15707 % U+00A9 COPYRIGHT SIGN; copyright
 15708 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcopyright}\}\{\text{PU}\}\{\backslash 80\backslash 251\}\%$ * U+00A9
 15709 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15710 $\backslash \text{DeclareTextCommand}\{\backslash \text{textordfeminine}\}\{\text{PU}\}\{\backslash 80\backslash 252\}\%$ U+00AA
 15711 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 15712 $\backslash \text{DeclareTextCommand}\{\backslash \text{guillemotleft}\}\{\text{PU}\}\{\backslash 80\backslash 253\}\%$ U+00AB
 15713 % U+00AC NOT SIGN; logicalnot
 15714 $\backslash \text{DeclareTextCommand}\{\backslash \text{textlogicalnot}\}\{\text{PU}\}\{\backslash 80\backslash 254\}\%$ U+00AC
 15715 $\backslash \text{DeclareTextCommand}\{\backslash \text{textlnot}\}\{\text{PU}\}\{\backslash 80\backslash 254\}\%$ U+00AC
 $\backslash 80\backslash 255$: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 15716 % U+00AE REGISTERED SIGN; registered

15717 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15718 % U+00AF MACRON; *macron, overscore
15719 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15720 % U+00B0 DEGREE SIGN; degree
15721 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15722 % U+00B1 PLUS-MINUS SIGN; plusminus
15723 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15724 % U+00B2 SUPERSCRIPT TWO; twosuperior
15725 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15726 % U+00B3 SUPERSCRIPT THREE; threesuperior
15727 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15728 % U+00B4 ACUTE ACCENT; acute
15729 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15730 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15731 % U+00B5 MICRO SIGN; mu, mul
15732 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15733 % U+00B6 PILCROW SIGN; paragraph
15734 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15735 %* \textparagraph -> \mathparagraph (LaTeX)
15736 % U+00B7 MIDDLE DOT; middot, *periodcentered
15737 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15738 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15739 %* \textperiodcentered -> \Squaredot (marvosym)
15740 % U+00B8 CEDILLA; cedilla
15741 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15742 % U+00B9 SUPERSCRIPT ONE; onesuperior
15743 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15744 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15745 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15746 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15747 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15748 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15749 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15750 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15751 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15752 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15753 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15754 % U+00BF INVERTED QUESTION MARK; questiondown
15755 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15756 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15757 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15758 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15759 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15760 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15761 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15762 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15763 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15764 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15765 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
15766 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15767 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15768 % U+00C6 LATIN CAPITAL LETTER AE; AE
15769 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15770 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15771 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15772 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave

15773 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}% U+00C8
15774 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15775 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15776 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15777 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15778 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15779 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15780 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15781 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}% U+00CC
15782 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15783 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15784 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15785 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15786 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15787 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15788 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15789 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15790 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15791 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15792 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15793 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}% U+00D2
15794 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15795 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15796 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15797 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15798 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15799 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15800 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15801 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15802 % U+00D7 MULTIPLICATION SIGN; multiply
15803 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15804 %* \textmultiply -> \vartimes (stmaryrd)
15805 %* \textmultiply -> \MVMultiplication (marvosym)
15806 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15807 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15808 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15809 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
15810 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15811 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15812 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15813 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15814 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15815 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15816 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15817 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15818 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15819 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15820 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15821 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15822 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15823 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15824 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
15825 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15826 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15827 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15828 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15829 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde

15830 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15831 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15832 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15833 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15834 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15835 % U+00E6 LATIN SMALL LETTER AE; ae
15836 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15837 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15838 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15839 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15840 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15841 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15842 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15843 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15844 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15845 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15846 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15847 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15848 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15849 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
15850 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15851 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15852 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\355}% U+00ED
15853 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15854 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15855 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15856 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15857 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15858 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15859 % U+00F0 LATIN SMALL LETTER ETH; eth
15860 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15861 %* \dh -> \eth (wsuipa, phonetic)
15862 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15863 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
15864 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15865 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
15866 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15867 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
15868 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15869 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
15870 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15871 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
15872 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15873 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
15874 % U+00F7 DIVISION SIGN; divide
15875 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
15876 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15877 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15878 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15879 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
15880 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15881 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
15882 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15883 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
15884 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15885 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
15886 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute


```

15887 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
15888 % U+00FE LATIN SMALL LETTER THORN; thorn;
15889 % \th, \thorn (wasysym), \textthorn (tipa)
15890 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
15891 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
15892 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15893 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

```

51.2.4 Latin Extended-A: U+0080 to U+017F

```

15894 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
15895 \DeclareTextCompositeCommand{=} {PU}{A}{\81\000}% U+0100
15896 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
15897 \DeclareTextCompositeCommand{=} {PU}{a}{\81\001}% U+0101
15898 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
15899 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
15900 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
15901 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
15902 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
15903 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15904 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15905 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15906 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15907 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15908 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15909 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
15910 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15911 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15912 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15913 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15914 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
15915 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15916 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15917 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15918 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15919 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15920 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15921 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15922 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15923 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15924 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15925 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15926 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15927 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15928 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15929 % \textcrd (tipa)
15930 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15931 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15932 %* \textcrd -> \crossd (wsuipa)
15933 % An alternate glyph with the stroke through the bowl:
15934 %* \textcrd -> \textbard (tipa)
15935 %* \textcrd -> \bard (wsuipa)
15936 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15937 \DeclareTextCompositeCommand{=} {PU}{E}{\81\022}% U+0112
15938 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15939 \DeclareTextCompositeCommand{=} {PU}{e}{\81\023}% U+0113

```

15940 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15941 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15942 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15943 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15944 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15945 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15946 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15947 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15948 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15949 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15950 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15951 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15952 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15953 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15954 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15955 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15956 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15957 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15958 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15959 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15960 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15961 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15962 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15963 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15964 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
15965 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15966 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15967 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15968 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
15969 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15970 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15971 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15972 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15973 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15974 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15975 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15976 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15977 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15978 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
15979 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
15980 %* \texthbar -> \textcrh (tipa)
15981 %* \texthbar -> \crossh (wsuipa)
15982 %* \texthbar -> \planck (phonetic)
15983 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15984 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15985 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15986 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15987 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15988 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15989 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15990 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15991 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15992 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15993 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15994 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C

```

15995 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15996 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15997 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
15998 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; iogonek
15999 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16000 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16001 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16002 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16003 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16004 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16005 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16006 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16007 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16008 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16009 % U+0133 LATIN SMALL LIGATURE IJ; ij
16010 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16011 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16012 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16013 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16014 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16015 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
16016 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16017 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16018 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16019 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

```

16020 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16021 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16022 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16023 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16024 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16025 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16026 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16027 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16028 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16029 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16030 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16031 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16032 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16033 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

```

There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). Therefore the `\.` accent is reused instead of making a separate accent macro `\textmiddledot`.

```

16034 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
16035 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16036 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16037 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16038 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16039 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16040 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16041 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142

```

16042 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16043 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16044 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16045 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16046 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaacent
cent
16047 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16048 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16049 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16050 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16051 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16052 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16053 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
16054 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
trophe, quoterightn
16055 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
16056 % U+014A LATIN CAPITAL LETTER ENG; Eng
16057 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
16058 % U+014B LATIN SMALL LETTER ENG; eng
16059 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
16060 %* \ng -> \eng (wsuipa)
16061 %* \ng -> \engma (phonetic)
16062 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
16063 \DeclareTextCompositeCommand{=}{PU}{O}{\81\114}% U+014C
16064 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
16065 \DeclareTextCompositeCommand{=}{PU}{o}{\81\115}% U+014D
16066 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
16067 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
16068 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
16069 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
16070 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
cute, Ohungarumlaut
16071 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
16072 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
cute, ohungarumlaut
16073 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
16074 % U+0152 LATIN CAPITAL LIGATURE OE; OE
16075 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
16076 % U+0153 LATIN SMALL LIGATURE OE; oe
16077 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
16078 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
16079 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
16080 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
16081 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
16082 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
cent
16083 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
16084 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
16085 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
16086 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
16087 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
16088 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
16089 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
16090 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
16091 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
16092 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
16093 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B

16094 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
16095 \DeclareTextCompositeCommand{\~}{PU}{S}{\81\134}% U+015C
16096 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
16097 \DeclareTextCompositeCommand{\~}{PU}{s}{\81\135}% U+015D
16098 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
16099 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
16100 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
16101 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
16102 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
16103 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
16104 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
16105 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
16106 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
cent
16107 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16108 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16109 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16110 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16111 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16112 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16113 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16114 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16115 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16116 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16117 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16118 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16119 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16120 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16121 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16122 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16123 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16124 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16125 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16126 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16127 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16128 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16129 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16130 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16131 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16132 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16133 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16134 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
16135 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16136 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
16137 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16138 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16139 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16140 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16141 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16142 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16143 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16144 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16145 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16146 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16147 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176

16148 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16149 \DeclareTextCompositeCommand{\`}{PU}{y}{\81\167}% U+0177
 16150 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16151 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16152 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16153 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16154 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16155 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16156 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16157 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16158 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16159 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16160 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16161 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16162 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16163 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16164 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16165 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16166 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16167 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16168 %* \textcrb -> \crossb (wsuipa)
 16169 % An alternate glyph with the stroke through the bowl:
 16170 %* \textcrb -> \textbarb (tipa)
 16171 %* \textcrb -> \barb (wsuipa)
 16172 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-
 netic)
 16173 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
 16174 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16175 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16176 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
 netic)
 16177 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
 16178 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 16179 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
 16180 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 16181 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 16182 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 16183 %* \textflorin -> \Florin (marvosym)
 16184 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 16185 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 16186 %* \texthvlig -> \hv (wsuipa)
 16187 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
 netic)
 16188 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
 16189 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
 16190 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
 16191 %* \texthtk -> \hausak (phonetic)
 16192 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
 16193 % \textbarl (tipa), \barl (wsuipa)
 16194 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
 16195 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
 16196 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
 16197 % \textcrlambda (tipa)
 16198 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
 16199 %* \textcrlambda -> \crossnilambda (wsuipa)

16200 %* \textcrlambda -> \barlambda (phonetic)
 16201 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
 16202 %* \textcrlambda -> \lambdash (txfonts/pxfonts)
 16203 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;
 16204 % \textnrleg (tipx)
 16205 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
 16206 %* \textPUnrleg -> \textnrleg (tipx)
 16207 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
 16208 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
 16209 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
 16210 % \textlhookt (tipa)
 16211 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
 16212 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
 16213 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
 16214 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
 16215 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
 16216 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
 16217 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
 16218 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
 16219 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
 16220 % glottalinvertedstroke; \textcrinvglotstop (tipa)
 16221 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
 16222 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
 16223 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
 16224 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
 tal;
 16225 % \textpipe (tipa)
 16226 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
 16227 %* \textpipe -> \textpipevar (tipx)
 16228 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
 16229 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
 16230 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
 16231 %* \textdoublepipe -> \textdoublepipevar (tipx)
 16232 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
 BLE BAR;
 16233 % clickalveolar; \textdoublebarpipe (tipa)
 16234 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
 16235 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
 16236 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 16237 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 16238 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 16239 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 16240 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 16241 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 16242 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 16243 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16244 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16245 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 16246 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 16247 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 16248 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 16249 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 16250 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 16251 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 16252 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 16253 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)

16254 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16255 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16256 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16257 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16258 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16259 %* \textgslash -> \textcrg (tipa)
16260 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16261 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16262 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16263 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16264 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16265 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16266 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
16267 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16268 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16269 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16270 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16271 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16272 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16273 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16274 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16275 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16276 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16277 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16278 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16279 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16280 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
16281 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16282 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
16283 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16284 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16285 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16286 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16287 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16288 % *Oslashacute, Ostrokeacute
16289 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16290 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16291 % *oslashacute, ostrokeacute
16292 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16293 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16294 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16295 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16296 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16297 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16298 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16299 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16300 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16301 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
16302 edbreve
16302 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16303 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
16304 breve
16304 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16305 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16306 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16307 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16308 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209

16309 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16310 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; iinverted-
breve
16311 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16312 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16313 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16314 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\i}{\82\013}% U+020B
16315 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16316 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16317 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16318 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16319 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16320 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16321 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinvert-
breve
16322 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16323 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16324 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16325 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16326 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16327 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16328 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16329 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16330 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16331 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16332 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16333 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinvert-
breve
16334 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
16335 % U+021E LATIN CAPITAL LETTER H WITH CARON
16336 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
16337 % U+021F LATIN SMALL LETTER H WITH CARON
16338 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
16339 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
16340 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
16341 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
16342 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
16343 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
16344 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
16345 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
16346 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
16347 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
16348 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
16349 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
16350 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
16351 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
16352 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
16353 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
16354 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
16355 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
16356 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
16357 % U+0233 LATIN SMALL LETTER Y WITH MACRON
16358 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
16359 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)

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16360 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
16361 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
16362 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
16363 % U+0237 LATIN SMALL LETTER DOTLESS J
16364 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
16365 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
16366 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
16367 %* \textPUdblig -> \textdblig (tipx)
16368 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
16369 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
16370 %* \textPUqplig -> \textqplig (tipx)
16371 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
16372 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
16373 %* \textslashc -> \textcentoldstyle (textcomp)
16374 % With bar instead of stroke:
16375 %* \textslashc -> \textbarc (tipa)

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51.2.6 IPA Extensions: U+0250 to U+02AF

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16376 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
16377 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
16378 %* \textturna -> \inva (wasysym)
16379 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
16380 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
16381 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
16382 %* \textscripta -> \vara (phonetic)
16383 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
16384 % \textturnscripta (tipa)
16385 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
16386 %* \textturnscripta -> \invscripta (wsuipa)
16387 %* \textturnscripta -> \rotvara (phonetic)
16388 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
16389 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
16390 %* \texthtb -> \hookb (wsuipa)
16391 %* \texthtb -> \hausab (phonetic)
16392 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16393 % \textopeno (tipa), \openo (wasysym)
16394 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16395 %* \textopeno -> \varopeno (phonetic)
16396 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16397 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16398 %* \textctc -> \curlyc (wsuipa)
16399 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16400 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16401 %* \textrtaild -> \taild (wsuipa)
16402 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16403 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16404 %* \texthtd -> \hookd (wsuipa)
16405 %* \texthtd -> \hausad (phonetic)
16406 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16407 % \textreve (tipa), \reve (wsuipa)
16408 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16409 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16410 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16411 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16412 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16413 % \textrhookschwa (tipa)
16414 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A

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16415 %* \textrhookswa -> \er (wsuipa)
16416 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
      SILON; eopen;
16417 % \niepsilon (wsuipa)
16418 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16419 %* \textniepsilon -> \epsi (phonetic)
16420 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16421 % \textrepsilon (tipa), \revepsilon (wsuipa)
16422 \DeclareTextCommand{\textrepsilon}{PU}{\82\134}%* U+025C
16423 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
      reversedhook;
16424 % \textrhookrepsilon (tipa)
16425 \DeclareTextCommand{\textrhookrepsilon}{PU}{\82\135}%* U+025D
16426 %* \textrhookrepsilon -> \hookrepsilon (wsuipa)
16427 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
      versedclosed;
16428 % \textcloseriepsilon (tipa)
16429 \DeclareTextCommand{\textcloseriepsilon}{PU}{\82\136}% U+025E
16430 %* \textcloseriepsilon -> \closedrepsilon (wsuipa)
16431 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
      lessstroke;
16432 % \textbardotlessj (tipa)
16433 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16434 %* \textbardotlessj -> \barj (phonetic)
16435 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16436 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16437 %* \texthtg -> \hookg (wsuipa)
16438 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16439 % \textscriptg (tipa), \scriptg (wsuipa)
16440 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16441 %* \textscriptg -> \varg (phonetic)
16442 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16443 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16444 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
16445 % \ipagamma (wsuipa), \vod (phonetic)
16446 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16447 %* \textipagamma -> \vod (pnonetic)
16448 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16449 % \babygamma (wsuipa)
16450 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16451 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16452 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16453 %* \textturnh -> \invh (wsuipa)
16454 %* \textturnh -> \udesc (phonetic)
16455 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16456 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16457 %* \texthth -> \hookh (wsuipa)
16458 %* \texthth -> \voicedh (phonetic)
16459 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
      ththeng (tipa)
16460 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16461 %* \texththeng -> \hookheng (wsuipa)
16462 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16463 % \textbari (tipa), \bari (wsuipa)
16464 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16465 %* \textbari -> \ibar (phonetic)
16466 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niota (wsuipa)

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16467 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16468 %* \textniiota -> \vari (phonetic)
16469 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16470 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16471 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; \lmiddletilde;
16472 % \textltilde (tipa)
16473 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16474 %* \textltilde -> \tildel (wsuipa)
16475 % U+026C LATIN SMALL LETTER L WITH BELT; \lbelt; \textbeltl (tipa)
16476 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16477 %* \textbeltl -> \latfrie (wsuipa)
16478 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16479 % \hookretroflex; \textrtaill (tipa)
16480 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16481 %* \textrtaill -> \taill (wsuipa)
16482 % U+026E LATIN SMALL LETTER LEZH; \lezh; \textlyoghlig (tipa)
16483 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16484 %* \textlyoghlig -> \lz (wsuipa)
16485 % U+026F LATIN SMALL LETTER TURNED M; \mturned; \textturnm (tipa)
16486 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16487 %* \textturnm -> \invm (wsuipa)
16488 %* \textturnm -> \rotm (phonetic)
16489 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; \mlongleg-
turned;
16490 % \textturnmrleg (tipa)
16491 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16492 %* \textturnmrleg -> \legm (wsuipa)
16493 % U+0271 LATIN SMALL LETTER M WITH HOOK; \mhook; \textltailm (tipa)
16494 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16495 %* \textltailm -> \labdentalnas (wsuipa)
16496 %* \textltailm -> \emgma (phonetic)
16497 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; \nhookleft; \textl-
tailn (tipa)
16498 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16499 %* \textltailn -> \nj (wsuipa)
16500 %* \textltailn -> \nya (phonetic)
16501 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16502 % \nhookretroflex; \textrtailn (tipa)
16503 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16504 %* \textrtailn -> \tailn (wsuipa)
16505 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16506 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16507 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16508 % LATIN CAPITAL LETTER BARRED O; \obarred;
16509 % \textbaro (tipa), \baro (wsuipa)
16510 % But \baro from stmaryrd is different!
16511 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16512 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16513 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16514 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; \omegalatincloded;
16515 % \textcloseomega (tipa)
16516 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16517 %* \textcloseomega -> \closedniomega (wsuipa)
16518 %* \textcloseomega -> \varomega (phonetic)
16519 % U+0278 LATIN SMALL LETTER PHI; \philatin; \niphy (wsuipa)
16520 \DeclareTextCommand{\textniphy}{PU}{\82\170}%* U+0278
16521 % U+0279 LATIN SMALL LETTER TURNED R; \rturned; \textturnr (tipa)

16522 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16523 %* \textturnr -> \invr (wsuipa)
16524 %* \textturnr -> \rotr (phonetic)
16525 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16526 % rlonglegturned; \textturnlonglegr (tipa)
16527 \DeclareTextCommand{\textturnlonglegr}{PU}{\82\172}% U+027A
16528 %* \textturnlonglegr -> \invlegr (wsuipa)
16529 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhoorturned;
16530 % \textturnrrtail (tipa)
16531 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16532 %* \textturnrrtail -> \tailinvr (wsuipa)
16533 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlonglegr (tipa)
16534 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
16535 %* \textlonglegr -> \legr (wsuipa)
16536 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoort; \textrtailr (tipa)
16537 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16538 %* \textrtailr -> \tailr (wsuipa)
16539 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16540 % \textfishhookr (tipa)
16541 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16542 %* \textfishhookr -> \flapr (wsuipa)
16543 %* \textfishhookr -> \flap (phonetic)
16544 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16545 % \textlhtlongi (tipa)
16546 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16547 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16548 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16549 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16550 % \textinvscr (tipa), \invscr (wsuipa)
16551 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16552 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16553 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16554 %* \textrtails -> \tails (wsuipa)
16555 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16556 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16557 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16558 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16559 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16560 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
16561 % \textvibyi (tipa)
16562 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16563 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16564 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16565 %* \textctesh -> \curlyesh (wsuipa)
16566 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16567 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16568 %* \textturnt -> \clickt (wsuipa)
16569 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
16570 % \textrtailt (tipa)
16571 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
16572 %* \textrtailt -> \tailt (wsuipa)
16573 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16574 % \textbaru (tipa), \baru (wsuipa)

16575 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16576 %* \textbaru -> \ubar (phonetic)
16577 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16578 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16579 %* \textniupsilon -> \rotOmega (phonetic)
16580 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
16581 % \vhook; \textscriptv (tipa), \scriptv (wsuipa)
16582 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16583 % U+028C LATIN SMALL LETTER TURNED V; \vturned; \textturnv (tipa)
16584 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16585 %* \textturnv -> \invv (wsuipa)
16586 %* \textturnv -> \pwedge (phonetic)
16587 % U+028D LATIN SMALL LETTER TURNED W; \wturned; \textturnw (tipa)
16588 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16589 %* \textturnw -> \invw (wsuipa)
16590 %* \textturnw -> \rotw (phonetic)
16591 % U+028E LATIN SMALL LETTER TURNED Y; \yturned; \textturny (tipa)
16592 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16593 %* \textturny -> \invy (wsuipa)
16594 %* \textturny -> \roty (phonetic)
16595 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16596 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16597 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; \zretroflex-hook;
16598 % \textrtailz (tipa)
16599 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
16600 %* \textrtailz -> \tailz (wsuipa)
16601 % U+0291 LATIN SMALL LETTER Z WITH CURL; \zcurl; \textctz (tipa)
16602 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16603 %* \textctz -> \curlyz (wsuipa)
16604 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; \ezh;
16605 % \textyogh (tipa), \yogh (wsuipa)
16606 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16607 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16608 % \ezhcurl; \textctyogh (tipa)
16609 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16610 %* \textctyogh -> \curlyyogh (wsuipa)
16611 % U+0294 LATIN LETTER GLOTTAL STOP; \glottalstop;
16612 % \textglotstop (tipa), \glotstop (wsuipa)
16613 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16614 %* \textglotstop -> \ejective (wsuipa)
16615 %* \textglotstop -> \glottal (phonetic)
16616 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16617 % LATIN LETTER REVERSED GLOTTAL STOP; \glottalstopreversed;
16618 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16619 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16620 %* \textrevglotstop -> \reveject (wsuipa)
16621 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; \glottalstopinverted;
16622 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16623 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16624 % U+0297 LATIN LETTER STRETCHED C; \cstretched; \textstretchc (tipa)
16625 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16626 %* \textstretchc -> \clickc (wsuipa)
16627 %* \textstretchc -> \textstretchcvar (tipx)
16628 % U+0298 LATIN LETTER BILABIAL CLICK; \bilabialclick;

16629 % \textbullseye (tipa)
16630 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16631 %* \textbullseye -> \clickb (wsuipa)
16632 %* \textbullseye -> \textObullseye (tipx)
16633 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16634 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16635 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16636 % \textcloseepsilon (tipa)
16637 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16638 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16639 % \texthtscg (tipa)
16640 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16641 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16642 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16643 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
tail; \textcdj (tipa)
16644 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16645 %* \textctj -> \textctjvar (tipx)
16646 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16647 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16648 %* \textturnk -> \textturnsck (tipx)
16649 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16650 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16651 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16652 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16653 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
16654 % \textbarglotstop (tipa)
16655 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
16656 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
16657 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
16658 % \textbarrevglotstop (tipa)
16659 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
16660 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
16661 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
16662 %* \textdzlig -> \dz (wsuipa)
16663 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
16664 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
16665 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
16666 % \textdctzlig (tipa)
16667 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
16668 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
16669 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
16670 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
16671 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
16672 %* \texttshlig -> \tesh (wsuipa)
16673 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
16674 % \texttctclig (tipa)
16675 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
16676 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
16677 % \textlhtlongy (tipa)
16678 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
16679 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
16680 % \textvibyy (tipa)
16681 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

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16682 % U+02BD MODIFIER LETTER REVERSED COMMA;
16683 % commareversedmod, afii64937; \textrevapostrophe (tipa)
16684 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
16685 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
16686 % \textrai seglotstop (tipa)
16687 \DeclareTextCommand{\textrai seglotstop}{PU}{\82\300}% U+02C0
16688 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
16689 % \textlptr (tipa)
16690 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
16691 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
16692 % \textrptr (tipa)
16693 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
16694 % U+02C7 CARON; caron
16695 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
16696 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
16697 % \textprimstress (tipa)
16698 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
16699 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
16700 % \textsecstress (tipa)
16701 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
16702 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
16703 % \textlengthmark (tipa)
16704 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
16705 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
    larhalfmod;
16706 % \texthalflength (tipa)
16707 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
16708 % U+02D8 BREVE; breve
16709 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
16710 % U+02D9 DOT ABOVE; dotaccent
16711 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
16712 % U+02DA RING ABOVE; ring
16713 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
16714 % U+02DB OGONEK; ogonek
16715 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
16716 % U+02DC SMALL TILDE; ilde, *tilde
16717 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
16718 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
16719 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
16720 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
16721 % U+02F3 MODIFIER LETTER LOW RING
16722 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
16723 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16724 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
16725 % U+02F7 MODIFIER LETTER LOW TILDE
16726 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16727 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
16728 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
16729 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16730 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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51.2.8 Combining Diacritical Marks: U+0300 to U+036F

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16731 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16732 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
16733 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16734 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311

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16735 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 16736 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 16737 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16738 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 16739 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 16740 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

16741 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 16742 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 16743 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 16744 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 16745 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 16746 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 16747 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 16748 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 16749 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 16750 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 16751 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 16752 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 16753 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 16754 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 16755 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
 16756 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 16757 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 16758 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 16759 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 16760 % iotadieresis
 16761 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 16762 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 16763 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 16764 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 16765 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 16766 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
 16767 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
 16768 % U+0394 GREEK CAPITAL LETTER DELTA; Delta; \Delta (LaTeX)
 16769 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
 16770 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 16771 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 16772 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 16773 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 16774 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 16775 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 16776 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
 16777 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
 16778 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 16779 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 16780 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 16781 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 16782 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
 16783 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
 16784 % U+039C GREEK CAPITAL LETTER MU; Mu
 16785 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 16786 % U+039D GREEK CAPITAL LETTER NU; Nu

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16787 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
16788 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
16789 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
16790 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
16791 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16792 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16793 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16794 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16795 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16796 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16797 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
16798 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16799 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16800 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16801 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16802 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16803 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16804 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16805 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16806 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16807 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16808 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16809 % \Omega (LaTeX)
16810 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16811 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16812 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16813 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16814 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
    silondieresis
16815 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16816 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphatonos
16817 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
16818 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon-tonos
16819 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
16820 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
16821 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
16822 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
16823 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
16824 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16825 % AND TONOS; upsilondieresis
16826 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
16827 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16828 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
16829 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
16830 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
16831 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
16832 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
16833 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
16834 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
16835 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
16836 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
16837 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
16838 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
16839 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
16840 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
16841 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
16842 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8

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16843 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
16844 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
16845 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
16846 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
16847 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
16848 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
16849 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
16850 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
16851 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
16852 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
16853 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
16854 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
16855 % U+03BF GREEK SMALL LETTER OMICRON; omicron
16856 \DeclareTextCommand{\textomicron}{PU}{\83\277}%* U+03BF
16857 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
16858 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
16859 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
16860 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
16861 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
16862 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
16863 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
16864 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
16865 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
16866 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
16867 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
16868 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
16869 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
16870 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
16871 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
16872 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
16873 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
16874 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
16875 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
16876 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
16877 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
16878 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
16879 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
      silondieresis
16880 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
16881 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
16882 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
16883 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
16884 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
16885 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
16886 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
16887 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
16888 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
16889 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
16890 % U+03DB GREEK SMALL LETTER STIGMA
16891 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
16892 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
16893 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
16894 % U+03DD GREEK SMALL LETTER DIGAMMA
16895 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
16896 %* \textdigammagreek -> \digamma (AmS)
16897 % U+03DE GREEK LETTER KOPPA; Koppagreek
16898 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE

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16899 % U+03DF GREEK SMALL LETTER KOPPA
16900 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
16901 % U+03E0 GREEK LETTER SAMPI; Sampigreek
16902 \DeclareTextCommand{\textsampigreek}{PU}{\83\340}% U+03E0
16903 % U+03E1 GREEK SMALL LETTER SAMPI
16904 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
16905 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
16906 % \backepsilon (AmS)
16907 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

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51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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16908 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16909 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
16910 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
16911 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16912 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
16913 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
16914 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16915 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
16916 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
16917 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
16918 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16919 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
16920 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16921 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16922 % Icyrillic, *afii10055
16923 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16924 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
16925 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16926 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
16927 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
16928 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16929 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
16930 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
16931 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
16932 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
16933 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
16934 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
16935 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
16936 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
16937 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
16938 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
16939 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
16940 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
16941 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
16942 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
16943 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
16944 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
16945 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
16946 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
16947 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
16948 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
16949 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
16950 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
16951 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413

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16952 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
 16953 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
 16954 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
 16955 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
 16956 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
 16957 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
 16958 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
 16959 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
 16960 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
 16961 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
 16962 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
 16963 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
 16964 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
 16965 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
 16966 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
 16967 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
 16968 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
 16969 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
 16970 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
 16971 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
 16972 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
 16973 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
 16974 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
 16975 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
 16976 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
 16977 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
 16978 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
 16979 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
 16980 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
 16981 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
 16982 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
 16983 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
 16984 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
 16985 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
 16986 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
 16987 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
 16988 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
 16989 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
 16990 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
 16991 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
 16992 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
 16993 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
 16994 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
 16995 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
 16996 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
 16997 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
 16998 % Hardsigncyrillic, *afii10044
 16999 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
 17000 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
 17001 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
 17002 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
 17003 % Softsigncyrillic, *afii10046
 17004 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
 17005 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
 17006 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
 17007 % U+042E CYRILLIC CAPITAL LETTER YU; IUCyrillic, *afii10048
 17008 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E

17009 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17010 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17011 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17012 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17013 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17014 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17015 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17016 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17017 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17018 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17019 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17020 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17021 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17022 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17023 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17024 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
17025 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17026 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17027 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17028 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17029 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17030 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17031 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17032 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17033 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17034 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17035 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
17036 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17037 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17038 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17039 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17040 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17041 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17042 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17043 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17044 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17045 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17046 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17047 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
17048 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17049 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
17050 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17051 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
17052 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17053 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
17054 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17055 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
17056 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17057 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
17058 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17059 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
17060 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17061 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
17062 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17063 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17064 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic

17065 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
17066 %* \cyrhrdsn -> \hardsign (tipa)
17067 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17068 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
17069 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17070 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
17071 %* \cyrstsn -> \softsign (tipa)
17072 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17073 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
17074 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17075 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
17076 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17077 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
17078 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17079 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
17080 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17081 \DeclareTextCommand{\cyrIo}{PU}{\84\121}% U+0451
17082 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17083 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17084 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17085 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17086 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17087 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17088 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17089 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17090 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17091 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17092 % *afii10103, icyrillic
17093 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17094 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17095 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17096 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17097 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17098 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17099 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17100 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
17101 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17102 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17103 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17104 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17105 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17106 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17107 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17108 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
17109 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17110 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17111 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17112 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17113 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17114 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17115 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17116 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17117 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17118 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17119 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17120 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17121 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463

17122 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 17123 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 17124 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 17125 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 17126 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
 17127 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 17128 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
 17129 \DeclareTextCommand{\cyrljus}{PU}{\84\147}% U+0467
 17130 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 17131 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 17132 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleioti-
 fiedcyrillic
 17133 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 17134 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 17135 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 17136 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 17137 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 17138 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 17139 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 17140 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 17141 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17142 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17143 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17144 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17145 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17146 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17147 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17148 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17149 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17150 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17151 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17152 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17153 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17154 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17155 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17156 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17157 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17158 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17159 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17160 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17161 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17162 % GRAVE ACCENT; izhitsadblgravecyrillic
 17163 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17164 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17165 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17166 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17167 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17168 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 17169 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17170 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17171 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17172 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
 locyrillic

17173 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17174 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-cyrillic
 17175 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17176 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17177 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17178 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17179 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17180 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17181 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17182 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17183 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17184 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17185 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17186 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17187 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17188 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17189 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17190 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17191 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17192 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17193 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17194 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17195 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17196 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17197 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17198 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 17199 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17200 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 17201 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17202 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 17203 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17204 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17205 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17206 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17207 % Ghemiddlehookcyrillic
 17208 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17209 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17210 % ghemiddlehookcyrillic
 17211 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17212 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17213 % Zhedescendercyrillic
 17214 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496

17215 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17216 % zhedescendercyrillic
 17217 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17218 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 17219 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17220 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17221 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 17222 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17223 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17224 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 17225 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17226 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 17227 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17228 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17229 % Kavertikalstrokecyrillic
 17230 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17231 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17232 % kavertikalstrokecyrillic
 17233 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17234 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17235 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17236 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17237 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 17238 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17239 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17240 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17241 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 17242 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 17243 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17244 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 17245 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17246 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17247 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17248 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17249 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17250 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 17251 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 17252 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 17253 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 17254 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 17255 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 17256 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 17257 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 17258 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 17259 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 17260 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

17261 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-cyrillic
 17262 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 17263 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 17264 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 17265 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 17266 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 17267 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
 17268 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 17269 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 17270 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 17271 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 17272 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 17273 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 17274 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
 17275 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 17276 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
 17277 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 17278 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 17279 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17280 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17281 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17282 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17283 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 17284 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17285 % Chedescendercyrillic
 17286 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 17287 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
 17288 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 17289 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 17290 % Cheverticalstrokecyrillic
 17291 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 17292 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 17293 % cheverticalstrokecyrillic
 17294 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 17295 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 17296 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 17297 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 17298 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 17299 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
 17300 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 17301 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 17302 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 17303 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 17304 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 17305 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE

17306 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 17307 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 17308 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 17309 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 17310 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 17311 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 17312 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 17313 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 17314 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 17315 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17316 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17317 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17318 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17319 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17320 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17321 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17322 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 17323 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17324 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17325 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17326 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17327 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17328 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17329 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17330 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17331 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17332 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17333 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17334 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17335 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17336 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17337 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17338 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17339 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrl-
 lic
 17340 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
 17341 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17342 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
 17343 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17344 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17345 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17346 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17347 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 17348 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17349 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 17350 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17351 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17352 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17353 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afi10846, schwacyrillic
 17354 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17355 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17356 % Schwadiesiscyrillic
 17357 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA

17358 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
17359 % schwadieresiscyrillic
17360 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
17361 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
17362 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
17363 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
17364 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
17365 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
17366 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
17367 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
17368 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
17369 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
17370 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
17371 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
17372 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
17373 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
17374 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
17375 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
17376 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
17377 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17378 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
17379 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17380 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
17381 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17382 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
17383 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
17384 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
17385 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17386 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17387 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17388 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17389 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17390 % Obarreddieresiscyrillic
17391 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
17392 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17393 % obarreddieresiscyrillic
17394 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
17395 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17396 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
17397 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17398 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
17399 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17400 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
17401 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17402 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
17403 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17404 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
17405 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17406 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1

17407 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 17408 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 17409 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 17410 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 17411 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 17412 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4
 17413 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 iscyrillic
 17414 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5
 17415 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 17416 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 17417 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 17418 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 17419 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 17420 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
 17421 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 17422 \DeclareTextCompositeCommand{\"}{PU}{\cyrery}{\84\371}% U+04F9
 \84\372: U+04FA CYRILLIC CAPITAL LETTER GHE WITH STROKE AND
 HOOK
 \84\373: U+04FB CYRILLIC SMALL LETTER GHE WITH STROKE AND
 HOOK
 17423 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 17424 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 17425 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 17426 \DeclareTextCommand{\cyrhhk}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

17427 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
 17428 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
 17429 % U+05D0 HEBREW LETTER ALEF
 17430 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
 17431 % U+05D1 HEBREW LETTER BET
 17432 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
 17433 % U+05D2 HEBREW LETTER GIMEL
 17434 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
 17435 % U+05D3 HEBREW LETTER DALET
 17436 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
 17437 % U+05D4 HEBREW LETTER HE
 17438 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
 17439 % U+05D5 HEBREW LETTER VAV
 17440 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
 17441 % U+05D6 HEBREW LETTER ZAYIN
 17442 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
 17443 % U+05D7 HEBREW LETTER HET
 17444 \DeclareTextCommand{\hebheth}{PU}{\85\327}% U+05D7
 17445 % U+05D8 HEBREW LETTER TET
 17446 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8

17447 % U+05D9 HEBREW LETTER YOD
 17448 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
 17449 % U+05DA HEBREW LETTER FINAL KAF
 17450 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
 17451 % U+05DB HEBREW LETTER KAF
 17452 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
 17453 % U+05DC HEBREW LETTER LAMED
 17454 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17455 % U+05DD HEBREW LETTER FINAL MEM
 17456 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17457 % U+05DE HEBREW LETTER MEM
 17458 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17459 % U+05DF HEBREW LETTER FINAL NUN
 17460 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17461 % U+05E0 HEBREW LETTER NUN
 17462 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17463 % U+05E1 HEBREW LETTER SAMEKH
 17464 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17465 % U+05E2 HEBREW LETTER AYIN
 17466 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17467 % U+05E3 HEBREW LETTER FINAL PE
 17468 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17469 % U+05E4 HEBREW LETTER PE
 17470 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17471 % U+05E5 HEBREW LETTER FINAL TSADI
 17472 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17473 % U+05E6 HEBREW LETTER TSADI
 17474 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17475 % U+05E7 HEBREW LETTER QOF
 17476 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17477 % U+05E8 HEBREW LETTER RESH
 17478 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17479 % U+05E9 HEBREW LETTER SHIN
 17480 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17481 %* \hebshin -> \hebsin (he8)
 17482 % U+05EA HEBREW LETTER TAV
 17483 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17484 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17485 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17486 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17487 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17488 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17489 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17490 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17491 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17492 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 17493 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 17494 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17495 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17496 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17497 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17498 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)

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17499 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
17500 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textsk (tipx)
17501 \DeclareTextCommand{\textPUsck}{PU}{\9035\013}% U+1D0B
17502 %* \textPUsck -> \textsk (tipx)
17503 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
17504 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
17505 %* \textPUscm -> \textscm (tipx)
17506 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
17507 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
17508 %* \textPUscp -> \textscp (tipx)
17509 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
17510 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
17511 %* \textPUrevscr -> \textrevscr (tipx)
17512 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
17513 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
17514 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
17515 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
17516 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
17517 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
17518 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
17519 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
17520 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
17521 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
17522 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
17523 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
17524 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
17525 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
17526 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
17527 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
17528 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
17529 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
17530 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
17531 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
17532 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
17533 % \barsci (wsuipa)
17534 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
17535 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
17536 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
17537 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
17538 % \barscu (wsuipa)
17539 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

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51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

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17540 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
      trhooka (tipx)
17541 \DeclareTextCommand{\textPUrhooka}{PU}{\9035\217}% U+1D8F
17542 %* \textPUrhooka -> \textrhooka (tipx)
17543 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
      taild (tipa)
17544 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
17545 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
      trhooke (tipx)
17546 \DeclareTextCommand{\textPUrhooke}{PU}{\9035\222}% U+1D92
17547 %* \textPUrhooke -> \textrhooke (tipx)
17548 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
17549 % \textrhookepsilon (tipx)
17550 \DeclareTextCommand{\textPUrhookepsilon}{PU}{\9035\223}% U+1D93

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17551 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
17552 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
17553 % \textrhookopeno (tipx)
17554 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
17555 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17556 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
17557 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
17558 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
17559 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
17560 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
17561 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
17562 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
17563 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
17564 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
17565 \DeclareTextCompositeCommand{d}{PU}{B}{\9036\004}% U+1E04
17566 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
17567 \DeclareTextCompositeCommand{d}{PU}{b}{\9036\005}% U+1E05
17568 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
17569 \DeclareTextCompositeCommand{b}{PU}{B}{\9036\006}% U+1E06
17570 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
17571 \DeclareTextCompositeCommand{b}{PU}{b}{\9036\007}% U+1E07
17572 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
17573 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
17574 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
17575 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
17576 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
17577 \DeclareTextCompositeCommand{d}{PU}{D}{\9036\014}% U+1E0C
17578 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
17579 \DeclareTextCompositeCommand{d}{PU}{d}{\9036\015}% U+1E0D
17580 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17581 \DeclareTextCompositeCommand{b}{PU}{D}{\9036\016}% U+1E0E
17582 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17583 \DeclareTextCompositeCommand{b}{PU}{d}{\9036\017}% U+1E0F
17584 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17585 \DeclareTextCompositeCommand{c}{PU}{D}{\9036\020}% U+1E10
17586 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17587 \DeclareTextCompositeCommand{c}{PU}{d}{\9036\021}% U+1E11
17588 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
17589 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17590 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
17591 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17592 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17593 % Emacrongrave
17594 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17595 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17596 % emacrongrave
17597 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17598 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17599 % Emacronacute
17600 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17601 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17602 % emacronacute
17603 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17

17604 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17605 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17606 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17607 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17608 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17609 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17610 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17611 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17612 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17613 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17614 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17615 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17616 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17617 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
17618 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17619 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
17620 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17621 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17622 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17623 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17624 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17625 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17626 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17627 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17628 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17629 \DeclareTextCompositeCommand{¨}{PU}{H}{\9036\046}% U+1E26
17630 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17631 \DeclareTextCompositeCommand{¨}{PU}{h}{\9036\047}% U+1E27
17632 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17633 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17634 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17635 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17636 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17637 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17638 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17639 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17640 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17641 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17642 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17643 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17644 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17645 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17646 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17647 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17648 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17649 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17650 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17651 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17652 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17653 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17654 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17655 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17656 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17657 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17658 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow

17659 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17660 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17661 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17662 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17663 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17664 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17665 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17666 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17667 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17668 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17669 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17670 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17671 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17672 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17673 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17674 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17675 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17676 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17677 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17678 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17679 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17680 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17681 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17682 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17683 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17684 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17685 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17686 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17687 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17688 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17689 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17690 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17691 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17692 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17693 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17694 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17695 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17696 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17697 % Omacrongrave
17698 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17699 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17700 % omacrongrave
17701 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17702 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17703 % Omacronacute
17704 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17705 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17706 % omacronacute
17707 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17708 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17709 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17710 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17711 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55

17712 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17713 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17714 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17715 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17716 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17717 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17718 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17719 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17720 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17721 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17722 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17723 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17724 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17725 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17726 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17727 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17728 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17729 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17730 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17731 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17732 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17733 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17734 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17735 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17736 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17737 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17738 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17739 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17740 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17741 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
17742 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17743 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17744 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17745 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17746 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17747 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17748 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
17749 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17750 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
cumflexbelow
17751 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17752 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17753 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17754 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
17755 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17756 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17757 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17758 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17759 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17760 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
17761 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17762 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow

17763 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17764 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17765 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17766 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17767 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17768 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17769 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17770 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17771 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17772 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17773 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17774 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17775 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17776 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17777 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17778 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17779 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17780 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17781 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17782 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17783 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17784 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17785 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17786 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17787 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17788 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17789 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17790 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17791 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17792 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17793 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17794 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17795 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17796 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17797 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17798 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17799 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
17800 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17801 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17802 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17803 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17804 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17805 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17806 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17807 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17808 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17809 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17810 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17811 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17812 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17813 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17814 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17815 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17816 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17817 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17818 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17819 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97

17820 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 17821 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 17822 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 17823 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 17824 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
 taccent
 17825 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 17826 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
 17827 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 17828 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
 17829 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 17830 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 17831 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 17832 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 17833 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 17834 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 17835 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 17836 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 17837 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 17838 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 17839 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 17840 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 17841 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 17842 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 17843 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 17844 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 17845 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 17846 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 17847 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 17848 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 17849 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 17850 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 17851 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 17852 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 17853 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 17854 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 17855 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 17856 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 17857 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 17858 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 17859 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 17860 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 17861 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

17862 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 17863 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 17864 % U+2013 EN DASH; endash
 17865 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 17866 % U+2014 EM DASH; emdash
 17867 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 17868 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 17869 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 17870 %* \textbardbl -> \textdoublevertline (tipa)
 17871 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 17872 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 17873 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright

17874 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
17875 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
17876 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
17877 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
17878 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
17879 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
17880 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
17881 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
17882 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
17883 % U+2020 DAGGER; dagger
17884 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
17885 %* \textdagger -> \dag (LaTeX)
17886 % U+2021 DOUBLE DAGGER; daggerdbl; ddagger (LaTeX)
17887 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
17888 %* \textdaggerdbl -> \ddagger (LaTeX)
17889 %* \textdaggerdbl -> \ddag (LaTeX)
17890 % U+2022 BULLET; bullet
17891 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
17892 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
17893 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
17894 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
17895 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
17896 %* \textellipsis -> \mathellipsis
17897 % U+2030 PER MILLE SIGN; perthousand
17898 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
17899 % U+2031 PER TEN THOUSAND SIGN
17900 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
17901 % U+2032 PRIME; minute; \prime (MnSymbol)
17902 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
17903 % U+2033 DOUBLE PRIME; \second (mathabx)
17904 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
17905 % U+2034 TRIPLE PRIME; \third (mathabx)
17906 \DeclareTextCommand{\texttthird}{PU}{\9040\064}%* U+2034
17907 % U+2035 REVERSED PRIME; \backprime (AmsS)
17908 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
17909 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
17910 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
17911 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
inglright
17912 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
17913 % U+203B REFERENCE MARK; referencemark
17914 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
17915 % U+203D INTERROBANG
17916 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
17917 % U+2044 FRACTION SLASH; fraction
17918 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
17919 % U+2045 LEFT SQUARE BRACKET WITH QUILL
17920 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
17921 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
17922 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
17923 % U+2052 COMMERCIAL MINUS SIGN
17924 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
17925 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
17926 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
17927 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
17928 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057

17929 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 17930 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

17931 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 17932 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 17933 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 17934 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 17935 % U+2074 SUPERSCRIPT FOUR; foursuperior
 17936 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 17937 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 17938 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 17939 % U+2076 SUPERSCRIPT SIX; sixsuperior
 17940 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 17941 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 17942 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 17943 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 17944 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 17945 % U+2079 SUPERSCRIPT NINE; ninesuperior
 17946 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 17947 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 17948 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 17949 % U+207B SUPERSCRIPT MINUS
 17950 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 17951 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 17952 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 17953 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 17954 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 17955 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 17956 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 17957 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 17958 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 17959 % U+2080 SUBSCRIPT ZERO; zeroinferior
 17960 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 17961 % U+2081 SUBSCRIPT ONE; oneinferior
 17962 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 17963 % U+2082 SUBSCRIPT TWO; twoinferior
 17964 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 17965 % U+2083 SUBSCRIPT THREE; threeinferior
 17966 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 17967 % U+2084 SUBSCRIPT FOUR; fourinferior
 17968 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 17969 % U+2085 SUBSCRIPT FIVE; fiveinferior
 17970 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 17971 % U+2086 SUBSCRIPT SIX; sixinferior
 17972 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 17973 % U+2087 SUBSCRIPT SEVEN; seveninferior
 17974 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 17975 % U+2088 SUBSCRIPT EIGHT; eightinferior
 17976 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 17977 % U+2089 SUBSCRIPT NINE; nineinferior
 17978 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 17979 % U+208A SUBSCRIPT PLUS SIGN
 17980 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 17981 % U+208B SUBSCRIPT MINUS
 17982 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 17983 % U+208C SUBSCRIPT EQUALS SIGN

17984 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 17985 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 17986 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 17987 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 17988 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 17989 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 17990 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 17991 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 17992 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 17993 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 17994 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 17995 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 17996 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 17997 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 17998 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 17999 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18000 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18001 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18002 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18003 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18004 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18005 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18006 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18007 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18008 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18009 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18010 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18011 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18012 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18013 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18014 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18015 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18016 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18017 % U+20A4 LIRA SIGN; afii08941, *lira
 18018 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18019 % U+20A6 NAIRA SIGN
 18020 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18021 % U+20A7 PESETA SIGN; peseta
 18022 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18023 % U+20A9 WON SIGN; won
 18024 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18025 % U+20AB DONG SIGN; dong
 18026 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18027 % U+20AC EURO SIGN; *Euro, euro
 18028 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18029 %* \texteuro -> \EurDig (marvosym)
 18030 %* \texteuro -> \EURdig (marvosym)
 18031 %* \texteuro -> \EurHv (marvosym)
 18032 %* \texteuro -> \EURhv (marvosym)
 18033 %* \texteuro -> \EurCr (marvosym)
 18034 %* \texteuro -> \EURcr (marvosym)
 18035 %* \texteuro -> \EurTm (marvosym)
 18036 %* \texteuro -> \EURtm (marvosym)
 18037 %* \texteuro -> \Eur (marvosym)
 18038 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)

18039 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18040 %* \textDeleatur -> \Denarius (marvosym)
 18041 % U+20B1 PESO SIGN
 18042 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18043 % U+20B2 GUARANI SIGN
 18044 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18045 % U+2103 DEGREE CELSIUS; centigrade
 18046 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18047 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18048 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18049 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18050 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18051 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18052 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18053 % U+2116 NUMERO SIGN; *afii61352, numero
 18054 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18055 % U+2117 SOUND RECORDING COPYRIGHT
 18056 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18057 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18058 % weierstrass; \wp (LaTeX)
 18059 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18060 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18061 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18062 % U+211E PRESCRIPTION TAKE; prescription
 18063 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18064 % U+2120 SERVICE MARK
 18065 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18066 % U+2122 TRADE MARK SIGN; trademark
 18067 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18068 % U+2126 OHM SIGN; Ohm, Omega
 18069 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18070 % U+2127 INVERTED OHM SIGN
 18071 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18072 %* \textmho -> \agemO (wasysym)
 18073 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18074 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18075 % U+212B ANGSTROM SIGN; angstrom
 18076 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18077 % U+212E ESTIMATED SYMBOL; estimated
 18078 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18079 %* \textestimated -> \EstimatedSign (marvosym)
 18080 %* \textestimated -> \Ecommerce (marvosym)
 18081 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18082 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18083 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18084 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18085 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18086 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18087 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18088 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18089 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18090 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18091 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18092 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B

18093 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18094 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18095 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18096 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18097 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18098 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18099 % U+2150 VULGAR FRACTION ONE SEVENTH
 18100 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18101 % U+2151 VULGAR FRACTION ONE NINTH
 18102 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18103 % U+2152 VULGAR FRACTION ONE TENTH
 18104 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18105 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18106 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18107 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18108 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18109 % U+2155 VULGAR FRACTION ONE FIFTH
 18110 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18111 % U+2156 VULGAR FRACTION TWO FIFTHS
 18112 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18113 % U+2157 VULGAR FRACTION THREE FIFTHS
 18114 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18115 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18116 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18117 % U+2159 VULGAR FRACTION ONE SIXTH
 18118 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18119 % U+215A VULGAR FRACTION FIVE SIXTHS
 18120 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18121 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18122 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18123 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18124 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18125 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18126 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18127 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18128 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18129 % U+2184 LATIN SMALL LETTER REVERSED C
 18130 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18131 % U+2189 VULGAR FRACTION ZERO THIRDS
 18132 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18133 % U+2190 LEFTWARDS ARROW; arrowleft
 18134 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18135 % U+2191 UPWARDS ARROW; arrowup
 18136 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18137 % U+2192 RIGHTWARDS ARROW; arrowright
 18138 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18139 %* \textrightarrow -> \MVRightArrow (marvosym)
 18140 %* \textrightarrow -> \MVRightarrow (marvosym)
 18141 % U+2193 DOWNWARDS ARROW; arrowdown
 18142 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18143 %* \textdownarrow -> \MVAArrowDown (marvosym)
 18144 %* \textdownarrow -> \Force (marvosym)
 18145 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)

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18146 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
18147 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
18148 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
18149 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
18150 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
18151 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
18152 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
18153 %* \textnearrow -> \textglobrise (tipa)
18154 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
18155 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
18156 %* \textsearrow -> \textglobfall (tipa)
18157 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18158 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18159 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
18160 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18161 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
18162 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18163 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18164 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18165 % \twoheadleftarrow (txfonts/pxfonts)
18166 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18167 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18168 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18169 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18170 % \twoheadrightarrow (AmS)
18171 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18172 % \twoheadrightarrow (txfonts/pxfonts)
18173 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18174 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18175 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18176 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18177 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18178 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18179 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18180 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18181 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18182 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18183 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18184 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18185 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18186 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18187 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18188 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18189 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18190 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18191 \DeclareTextCommand{\textnleftrightarrow}{PU}{\9041\256}%* U+21AE
18192 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18193 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18194 %* \textlightning -> \Lightning (marvosym)
18195 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18196 % \dls (mathabx)
18197 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18198 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18199 % \curvearrowleft (AmS)
18200 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18201 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)

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18202 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18203 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18204 % \leftharpoonup (LaTeX)
18205 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18206 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18207 % \leftharpoondown (LaTeX)
18208 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18209 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18210 % \upharpoonright (AmS)
18211 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18212 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18213 % \upharpoonleft (AmS)
18214 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18215 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18216 % \rightharpoonup (LaTeX)
18217 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18218 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18219 % \rightharpoondown (LaTeX)
18220 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18221 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18222 % \downharpoonright (AmS)
18223 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18224 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18225 % \downharpoonleft (AmS)
18226 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18227 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18228 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18229 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18230 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
      rowupleftofdown;
18231 % \updownarrows (MnSymbol)
18232 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18233 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
18234 % \leftrightharpoons (AmS)
18235 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\306}%* U+21C6
18236 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18237 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18238 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18239 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18240 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18241 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18242 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18243 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18244 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18245 % \leftrightharpoons (AmS);
18246 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18247 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18248 % \rightleftharpoons (LaTeX, AmS)
18249 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18250 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
18251 % \nLeftarrow (AmS)
18252 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD

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18253 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow (AmS)
18254 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18255 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightdblstroke;
18256 % \nRrightarrow (AmS)
18257 \DeclareTextCommand{\textnRrightarrow}{PU}{\9041\317}%* U+21CF
18258 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18259 % \Leftarrow (LaTeX)
18260 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18261 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18262 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18263 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18264 % \Rrightarrow (LaTeX)
18265 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
18266 %* \textRrightarrow -> \Conclusion (marvosym)
18267 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18268 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18269 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18270 % \Leftrightarrow (LaTeX)
18271 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18272 %* \textLeftrightarrow -> \Equivalence (marvosym)
18273 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18274 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18275 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18276 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18277 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18278 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18279 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18280 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18281 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18282 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18283 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18284 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18285 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18286 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18287 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18288 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18289 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18290 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18291 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18292 % \dashleftarrow (AmS)
18293 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18294 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18295 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
18296 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18297 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)
18298 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18299 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18300 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)
18301 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18302 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18303 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8

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18304 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18305 % \downuparrows (MnSymbol)
18306 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18307 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18308 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18309 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18310 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18311 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
      gle (stmaryrd)
18312 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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51.2.22 Mathematical Operators: U+2200 to U+22FF

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18313 % U+2200 FOR ALL; forall; \forall (LaTeX)
18314 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18315 % U+2201 COMPLEMENT; \complement (AmS)
18316 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18317 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18318 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18319 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18320 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18321 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18322 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18323 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18324 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18325 %* \textemptyset -> \varnothing (AmS)
18326 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18327 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18328 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18329 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18330 % U+2208 ELEMENT OF; element; \in (LaTeX)
18331 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18332 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18333 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18334 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18335 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18336 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18337 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18338 %* \textni -> \owns (mathabx)
18339 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18340 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18341 %* \textnotowner -> \notni (txfonts/pxfonts)
18342 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18343 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18344 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18345 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18346 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18347 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18348 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18349 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18350 % U+2212 MINUS SIGN; minus
18351 \DeclareTextCommand{\textminus}{PU}{\9042\022}%* U+2212
18352 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18353 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18354 % U+2214 DOT PLUS; \dotplus (AmS)
18355 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18356 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18357 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215

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18358 % \DividesNot (marvosym)
18359 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18360 % U+2216 SET MINUS; \setminus (LaTeX)
18361 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18362 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18363 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18364 % U+2218 RING OPERATOR; \circ (LaTeX)
18365 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18366 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18367 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18368 % U+221A SQUARE ROOT; radical
18369 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18370 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18371 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18372 %* \textpropto -> \varprop (wasysym)
18373 % U+221E INFINITY; infinity; \infty (LaTeX)
18374 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18375 % U+2220 ANGLE; angle; \angle (LaTeX)
18376 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18377 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18378 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18379 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18380 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18381 %* \textsphericalangle -> \varangle (wasysym)
18382 %* \textsphericalangle -> \Anglesign (marvosym)
18383 %* \textsphericalangle -> \AngleSign (marvosym)
18384 % U+2223 DIVIDES; divides; \mid (LaTeX)
18385 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18386 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18387 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18388 %* \textnmid -> \notdivides (mathabx)
18389 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18390 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18391 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18392 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18393 %* \textnparallel -> nUpdownline (MnSymbol)
18394 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18395 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18396 % \owedge (stmaryrd)
18397 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18398 %* \textowedge -> \varowedge (stmaryrd)
18399 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18400 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18401 % \ovee (stmaryrd)
18402 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18403 %* \textovee -> \varovee (stmaryrd)
18404 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18405 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18406 % U+222A UNION; union; \cup (LaTeX)
18407 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18408 % U+222B INTEGRAL; integral; \int (LaTeX)
18409 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18410 %* \textint -> \varint (wasysym)
18411 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18412 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18413 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18414 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D

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18415 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18416 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18417 %* \textoint -> \varoint (wasysym)
18418 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18419 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18420 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18421 % \ointclockwise (txfonts/pxfonts)
18422 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18423 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
    fonts/pxfonts)
18424 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18425 % U+2234 THEREFORE; therefore; \therefore (AmS)
18426 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18427 %* \texttherefore -> uptherefore (MnSymbol)
18428 % U+2235 BECAUSE; because; \because (AmS)
18429 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18430 %* \textbecause -> \downtherefore (MnSymbol)
18431 % U+2236 RATIO; \vdotdot (MnSymbol)
18432 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18433 % U+2237 PROPORTION; \squaredots (MnSymbol)
18434 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18435 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18436 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18437 %* \textdotminus -> \textdotdiv (mathabx)
18438 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18439 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18440 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18441 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18442 %* \textsim -> \AC (wasysym)
18443 % U+223D REVERSED TILDE; reverseditilde; \backsim (AmS)
18444 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18445 % \nbacksim (txfonts/pxfonts)
18446 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18447 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18448 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18449 %* \textwr -> \wreath (MnSymbol)
18450 % U+2241 NOT TILDE; \nsim (AmS)
18451 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18452 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18453 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18454 % \neqsim (MnSymbol)
18455 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18456 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
    TeX)
18457 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18458 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18459 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18460 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18461 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18462 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18463 % \ncong (AmS)
18464 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18465 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18466 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18467 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18468 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18469 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)

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18470 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18471 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18472 % \napproxeq (txfonts/pxfonts)
18473 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18474 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18475 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18476 %* \texttriplesim -> \VHF (wasysym)
18477 % \ntriplesim (MnSymbol)
18478 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18479 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18480 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18481 % \nbackcong (MnSymbol)
18482 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18483 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18484 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18485 % \nasymp (txfonts/pxfonts)
18486 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18487 %* \textnasymp -> \notasym (mathabx)
18488 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18489 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18490 % \nBumpeq (txfonts/pxfonts)
18491 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18492 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18493 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18494 % \nbumpeq (txfonts/pxfonts)
18495 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18496 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18497 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18498 % \ndoteq (MnSymbol)
18499 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18500 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18501 % \doteqdot (AmS)
18502 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18503 %* \textdoteqdot -> \Doteq (MnSymbol)
18504 % \nDoteq (MnSymbol)
18505 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18506 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18507 % \fallingdotseq (AmS)
18508 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
18509 % \nfallingdotseq (MnSymbol)
18510 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18511 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
18512 % \risingdotseq (AmS)
18513 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
18514 % \nrisingdoteq (MnSymbol)
18515 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18516 % U+2254 COLON EQUALS; \colonequals (colonequals)
18517 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18518 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18519 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18520 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18521 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18522 % \neqcirc (MnSymbol)
18523 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18524 % U+2257 RING EQUAL TO; \circeq (AmS)

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18525 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18526 % \ncirceq (MnSymbol)
18527 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18528 % U+2259 ESTIMATES; \hateq (MnSymbol)
18529 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18530 %* \texthateq -> \corresponds (mathabx)
18531 %* \texthateq -> \Corresponds (marvosym)
18532 % \nhateq (MnSymbol)
18533 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18534 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18535 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18536 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18537 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18538 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18539 %* \textneq -> \nequal (MnSymbol)
18540 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18541 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18542 %* \textequiv -> \Congruent (marvosym)
18543 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18544 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18545 %* \textnequiv -> \NotCongruent (marvosym)
18546 %* \textnequiv -> \notequiv (mathabx)
18547 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18548 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18549 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
18550 %* \textleq -> \LessOrEqual (marvosym)
18551 % U+2265 GREATER-THAN OR EQUAL TO; greaterqual;
18552 % \ge (LaTeX), \geq (LaTeX)
18553 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18554 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18555 %* \textgeq -> \LargerOrEqual (marvosym)
18556 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
18557 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18558 % \nleqq (txfonts/pxfonts)
18559 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18560 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
18561 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18562 % \ngeqq (txfonts/pxfonts)
18563 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18564 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18565 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18566 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18567 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18568 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18569 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18570 % \nll (txfonts/pxfonts)
18571 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18572 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18573 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18574 % \ngg (txfonts/pxfonts)
18575 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18576 % U+226C BETWEEN; \between (AmS)
18577 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18578 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18579 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18580 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18581 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F

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18582 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18583 % \nleq (AmS)
18584 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18585 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18586 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18587 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18588 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18589 %* \textlessim -> \apprle (wasysym)
18590 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18591 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18592 %* \textgtrsim -> \apprge (wasysym)
18593 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-fonts/pxfonts)
18594 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18595 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-fonts/pxfonts)
18596 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18597 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18598 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18599 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18600 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18601 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-fonts/pxfonts)
18602 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18603 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-fonts/pxfonts)
18604 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18605 % U+227A PRECEDES; precedes; \prec (LaTeX)
18606 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18607 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18608 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18609 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18610 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18611 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18612 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18613 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18614 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18615 % \nprecsim (txfonts/pxfonts)
18616 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18617 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18618 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18619 % \nsuccsim (txfonts/pxfonts)
18620 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18621 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18622 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18623 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
18624 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18625 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18626 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18627 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18628 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18629 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18630 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18631 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18632 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285

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18633 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18634 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18635 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18636 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18637 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18638 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18639 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18640 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18641 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
18642 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18643 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
18644 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18645 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18646 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18647 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18648 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18649 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18650 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18651 % \nsqsubset (txfonts/pxfonts)
18652 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18653 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18654 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18655 % \nsqsupset (txfonts/pxfonts)
18656 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18657 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18658 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18659 % \nsqsubseteq (txfonts/pxfonts)
18660 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18661 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18662 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18663 % \nsqsupseteq (txfonts/pxfonts)
18664 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18665 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18666 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18667 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18668 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18669 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18670 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18671 %* \textoplus -> \varoplus (stmaryrd)
18672 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18673 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18674 %* \textominus -> \varominus (stmaryrd)
18675 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18676 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18677 %* \textotimes -> \varotimes (stmaryrd)
18678 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18679 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18680 %* \textoslash -> \varoslash (stmaryrd)
18681 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18682 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18683 %* \textodot -> \varodot (stmaryrd)
18684 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18685 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18686 %* \textcircledcirc -> \ocirc (mathabx)
18687 %* \textcircledcirc -> \varocircle (stmaryrd)

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18688 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18689 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18690 %* \textcircledast -> \varoast (stmaryrd)
18691 %* \textcircledast -> \oasterisk (mathabx)
18692 % U+229D CIRCLED DASH; \circleddash (AmS)
18693 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18694 % U+229E SQUARED PLUS; \boxplus (AmS)
18695 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18696 % U+229F SQUARED MINUS; \boxminus (AmS)
18697 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18698 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18699 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18700 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18701 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18702 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18703 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18704 %* \textvdash -> \rightvdash (MnSymbol)
18705 % U+22A3 LEFT TACK; \dashv (LaTeX)
18706 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18707 %* \textdashv -> \leftvdash (MnSymbol)
18708 % \ndashv (mathabx)
18709 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18710 %* \textndashv -> \leftvdash (MnSymbol)
18711 % U+22A4 DOWN TACK (=top); \tackdown; \top (LaTeX)
18712 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18713 %* \texttop -> \downvdash (MnSymbol)
18714 % \ndownvdash (MnSymbol)
18715 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18716 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18717 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18718 %* \textbot -> \upvdash (MnSymbol)
18719 % \nupvdash (MnSymbol)
18720 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18721 %* \textnupvdash -> \nperp (MnSymbol)
18722 % U+22A8 TRUE; \vDash (AmS)
18723 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18724 %* \textvDash -> \models (LaTeX)
18725 %* \textvDash -> \rightmodels (MnSymbol)
18726 % U+22A9 FORCES; \Vdash (AmS)
18727 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18728 %* \textVdash -> \rightVdash (MnSymbol)
18729 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18730 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18731 % \nVdash (mathabx)
18732 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18733 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18734 % \VDash (mathabx)
18735 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18736 %* \textVDash -> \rightModels (MnSymbol)
18737 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18738 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18739 %* \textnvdash -> \rightvdash (MnSymbol)
18740 % U+22AD NOT TRUE; \nvDash (AmS)
18741 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18742 %* \textnvDash -> \rightmodels (MnSymbol)
18743 %* \textnvDash -> \nmodels (MnSymbol)
18744 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)

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18745 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18746 %* \textnVdash -> \nrightVdash (MnSymbol)
18747 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18748 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18749 %* \textnVDash -> \nrightModels (MnSymbol)
18750 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18751 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18752 %* \textlhd -> \lessclosed (MnSymbol)
18753 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18754 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18755 %* \textrhd -> \gtrclosed (MnSymbol)
18756 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18757 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18758 %* \textunlhd -> \leqclosed (MnSymbol)
18759 %* \textunlhd -> \trianglelefteq (MnSymbol)
18760 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18761 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18762 %* \textunrhd -> \geqclosed (MnSymbol)
18763 %* \textunrhd -> \trianglerighteq (MnSymbol)
18764 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18765 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18766 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18767 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18768 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18769 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18770 % U+22BB XOR; \veebar (AmS)
18771 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18772 % U+22BC NAND; \barwedge (mathabx)
18773 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18774 % U+22C6 STAR OPERATOR; \star (LaTeX)
18775 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18776 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18777 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18778 % U+22C8 BOWTIE; \bowtie (LaTeX)
18779 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18780 %* \textbowtie -> \Bowtie (wasysym)
18781 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18782 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18783 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18784 % \rtimes (AmS)
18785 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18786 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18787 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18788 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18789 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18790 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18791 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18792 % \nbacksimeq (txfonts/pxfonts)
18793 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18794 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18795 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18796 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18797 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18798 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18799 %* \textcurlywedge -> \varcurlywedge (stmaryrd)

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18800 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18801 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18802 % \nSubset (txfonts/pxfonts)
18803 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18804 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18805 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18806 % \nSupset (txfonts/pxfonts)
18807 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18808 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18809 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18810 %* \textCap -> \doublecap (mathabx)
18811 % U+22D3 DOUBLE UNION; \Cup (AmS)
18812 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18813 %* \textCup -> \doublecup (mathabx)
18814 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18815 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18816 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18817 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18818 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18819 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18820 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18821 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18822 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18823 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18824 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18825 % \lesseqgtr (AmS)
18826 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18827 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18828 % \gtreqless (AmS)
18829 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18830 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18831 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18832 % \ncurlyeqprec (mathabx)
18833 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18834 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18835 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18836 % \ncurlyeqsucc (mathabx)
18837 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18838 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18839 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18840 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18841 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18842 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseq (tx-
fontsf/pxfonts)
18843 \DeclareTextCommand{\textnqsubseq}{PU}{\9042\342}%* U+22E2
18844 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseq (tx-
fontsf/pxfonts)
18845 \DeclareTextCommand{\textnqsupseq}{PU}{\9042\343}%* U+22E3
18846 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
18847 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
18848 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
18849 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
abx)
18850 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
18851 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
18852 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18853 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6

18854 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
 18855 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
 18856 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
 18857 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
 18858 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
 18859 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
 18860 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
 18861 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
 18862 %* \textntriangleleft -> \nlessclosed (MnSymbol)
 18863 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright (AmS)
 18864 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
 18865 %* \textntriangleright -> \ngtrclosed (MnSymbol)
 18866 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
 18867 % \ntrianglelefteq (AmS)
 18868 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
 18869 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
 18870 % \ntrianglerighteq (AmS)
 18871 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
 18872 %* \textntrianglerighteq -> \textngeqclosed
 18873 % U+22EE VERTICAL ELLIPSIS; \vdots (LaTeX)
 18874 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
 18875 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
 18876 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
 18877 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 18878 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 18879 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 18880 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 18881 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 18882 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

18883 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 18884 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 18885 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 18886 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 18887 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 18888 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 18889 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 18890 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 18891 % U+231A WATCH; \clock (wasysym)
 18892 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 18893 %* \textclock -> \Clocklogo (marvosym)
 18894 %* \textclock -> \ClockLogo (marvosym)
 18895 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 18896 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 18897 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 18898 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 18899 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 18900 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 18901 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 18902 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 18903 % U+2322 FROWN; \frown (LaTeX)
 18904 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 18905 % U+2323 SMILE; \smile (LaTeX)
 18906 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 18907 % U+2328 KEYBOARD; \Keyboard (marvosym)

18908 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 18909 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft; \langle (LaTeX)
 18910 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 18911 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright; \rangle (LaTeX)
 18912 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
 18913 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
 18914 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
 18915 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 18916 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 18917 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 18918 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
 18919 %* \textstmaryrdbaro -> \baro (stmaryrd)
 18920 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 18921 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 18922 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 18923 % \notbackslash (wasysym)
 18924 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 18925 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
 18926 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 18927 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 18928 % \APLleftarrowbox (wasysym)
 18929 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 18930 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 18931 % \APLrightarrowbox (wasysym)
 18932 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 18933 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
 18934 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 18935 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 18936 % \APLdownarrowbox (wasysym)
 18937 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 18938 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 18939 % \APLinput (wasysym)
 18940 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 18941 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 18942 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 18943 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 18944 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 18945 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 18946 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 18947 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 18948 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 18949 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 18950 % \ForwardToIndex (marvosym)
 18951 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 18952 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 18953 % \RewindToIndex (marvosym)
 18954 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

18955 % U+2422 BLANK SYMBOL
 18956 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 18957 % U+2423 OPEN BOX; blank

18958 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

18959 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)

18960 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A

18961 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18962 % U+2460 CIRCLED DIGIT ONE; onecircle

18963 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460

18964 % U+2461 CIRCLED DIGIT TWO; twocircle

18965 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461

18966 % U+2462 CIRCLED DIGIT THREE; threecircle

18967 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462

18968 % U+2463 CIRCLED DIGIT FOUR; fourcircle

18969 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463

18970 % U+2464 CIRCLED DIGIT FIVE; fivecircle

18971 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464

18972 % U+2465 CIRCLED DIGIT SIX; sixcircle

18973 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465

18974 % U+2466 CIRCLED DIGIT SEVEN; sevendigit

18975 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466

18976 % U+2467 CIRCLED DIGIT EIGHT; eightcircle

18977 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467

18978 % U+2468 CIRCLED DIGIT NINE; ninecircle

18979 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468

18980 % U+2469 CIRCLED NUMBER TEN; tencircle

18981 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469

18982 % U+246A CIRCLED NUMBER ELEVEN; elevencircle

18983 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A

18984 % U+246B CIRCLED NUMBER TWELVE; twelvecircle

18985 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B

18986 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle

18987 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C

18988 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle

18989 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D

18990 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle

18991 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E

18992 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle

18993 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F

18994 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle

18995 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470

18996 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle

18997 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471

18998 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle

18999 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472

19000 % U+2473 CIRCLED NUMBER TWENTY; twentycircle

19001 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473

19002 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle

19003 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6

19004 % \CircledA (marvosym)

19005 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6

19006 %* \textCircledA -> \CleaningA

19007 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle

19008 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7

19009 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle

19010 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8

19011 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19012 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19013 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19014 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19015 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19016 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19017 % \CleaningF (marvosym)
 19018 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19019 % \CleaningFF (marvosym)
 19020 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19021 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19022 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19023 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19024 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19025 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19026 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19027 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19028 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19029 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19030 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19031 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19032 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19033 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19034 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19035 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19036 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19037 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19038 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19039 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19040 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19041 % \CleaningP (marvosym)
 19042 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19043 % \CleaningPP (marvosym)
 19044 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19045 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19046 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19047 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19048 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19049 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19050 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19051 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19052 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19053 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19054 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19055 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19056 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19057 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19058 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19059 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19060 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19061 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19062 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19063 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19064 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19065 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19066 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19067 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle

19068 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19069 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19070 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19071 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19072 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19073 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19074 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19075 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19076 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19077 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19078 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19079 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19080 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19081 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19082 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19083 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19084 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19085 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19086 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19087 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19088 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19089 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19090 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19091 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19092 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19093 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19094 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19095 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19096 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19097 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19098 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19099 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19100 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19101 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19102 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19103 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19104 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19105 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19106 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19107 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19108 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19109 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19110 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19111 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19112 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19113 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19114 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19115 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19116 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19117 % U+24EA CIRCLED DIGIT ZERO
 19118 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19119 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19120 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19121 %* \textCuttingLine -> \Kutline (marvosym)

19122 %* \textCuttingLine -> \CutLine (marvosym)
 19123 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19124 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19125 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19126 %* \textUParrow -> \MoveUp (marvosym)
 19127 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19128 % \bigtriangleup (LaTeX)
 19129 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19130 %* \textbigtriangleup -> \APLup (wasysym)
 19131 %* \textbigtriangleup -> \Bleech (marvosym)
 19132 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19133 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19134 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restriction);
 19135 % whiterightpointingtriangle; \triangleright (LaTeX)
 19136 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19137 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19138 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19139 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19140 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19141 %* \textDOWNarrow -> \MoveDown (marvosym)
 19142 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtriangle;
 19143 % \bigtriangledown (LaTeX)
 19144 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
 19145 %* \textbigtriangledown -> \APLdown (wasysym)
 19146 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
 19147 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
 19148 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain restriction);
 19149 % whiteleftpointingtriangle; \triangleleft (LaTeX)
 19150 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
 19151 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
 19152 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
 19153 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
 19154 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
 19155 %* \textdiamond -> \Diamond (wasysym)
 19156 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
 19157 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
 19158 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
 19159 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
 19160 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
 19161 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
 19162 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 19163 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
 19164 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
 19165 % \boxbar (stmaryrd)
 19166 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
 19167 % U+25EF LARGE CIRCLE; largecircle
 19168 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
 19169 %* \textbigcircle -> \varbigcirc (stmaryrd)
 19170 %

51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

19171 % U+2601 CLOUD; \Cloud (ifsym)

19172 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19173 % U+2605 BLACK STAR; \FiveStar (bding)
19174 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19175 % U+2606 WHITE STAR; \FiveStarOpen (bding)
19176 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19177 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
19178 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19179 %* \textPhone -> \Telefon (marvosym)
19180 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19181 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19182 %* \textboxempty -> \Box (wasysym)
19183 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19184 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19185 %* \textCheckedbox -> \CheckedBox (marvosym)
19186 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19187 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19188 %* \textCrossedbox -> \XBox (wasysym)
19189 %* \textCrossedbox -> \CrossedBox (marvosym)
19190 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19191 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19192 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
19193 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19194 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
19195 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19196 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
19197 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19198 %* \textHandLeft -> \rightpointleft (fourier)
19199 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
19200 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19201 %* \textHandRight -> \leftpointright (fourier)
19202 %* \textHandRight -> \PointingHand (marvosym)
19203 %* \textHandRight -> \Pointinghand (marvosym)
19204 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19205 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19206 %* \textRadioactivity -> \Radiation (ifsym)
19207 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19208 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19209 % U+2625 ANKH; \Ankh (marvosym)
19210 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19211 % U+262F YIN YANG; \YinYang (marvosym)
19212 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19213 %* \textYinYang -> \Yinyang (marvosym)
19214 %* \textYinYang -> \YingYang (marvosym)
19215 %* \textYinYang -> \Yingyang (marvosym)
19216 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19217 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19218 %* \textfrownie -> \Frowny (marvosym)
19219 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19220 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19221 %* \textsmiley -> \Smiley (marvosym)
19222 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19223 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19224 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19225 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19226 %* \textsun -> \Sun (marvosym)
19227 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19228 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D

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19229 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19230 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19231 % U+263F MERCURY; \mercury (wasysym)
19232 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19233 %* \textmercury -> \Mercury (marvosym)
19234 % U+2640 FEMALE SIGN; female; \female (wasysym)
19235 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19236 %* \textPUfemale -> \textfemale (tipx)
19237 %* \textPUfemale -> \female (wasysym)
19238 %* \textPUfemale -> \venus (wasysym)
19239 %* \textPUfemale -> \Venus (marvosym)
19240 %* \textPUfemale -> \Female (marvosym)
19241 % U+2641 EARTH; \earth (wasysym)
19242 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19243 %* \textearth -> \Earth (marvosym)
19244 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19245 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19246 %* \textmale -> \mars (wasysym)
19247 %* \textmale -> \Mars (marvosym)
19248 %* \textmale -> \Male (marvosym)
19249 % U+2643 JUPITER; \jupiter (wasysym)
19250 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19251 %* \textjupiter -> \Jupiter (marvosym)
19252 % U+2644 SATURN; \saturn (wasysym)
19253 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19254 %* \textsaturn -> \Saturn (marvosym)
19255 % U+2645 URANUS; \uranus (wasysym)
19256 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19257 %* \texturanus -> \Uranus (marvosym)
19258 % U+2646 NEPTUNE; \neptune (wasysym)
19259 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19260 %* \textneptune -> \Neptune (marvosym)
19261 % U+2647 PLUTO; \pluto (wasysym)
19262 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19263 %* \textpluto -> \Pluto (marvosym)
19264 % U+2648 ARIES; \aries (wasysym)
19265 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19266 %* \textaries -> \Aries (marvosym)
19267 % U+2649 TAURUS; \taurus (wasysym)
19268 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19269 %* \texttaurus -> \Taurus (marvosym)
19270 % U+264A GEMINI; \gemini (wasysym)
19271 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19272 %* \textgemini -> \Gemini (marvosym)
19273 % U+264B CANCER; \cancer (wasysym)
19274 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19275 %* \textcancer -> \Cancer (marvosym)
19276 % U+264C LEO; \leo (wasysym)
19277 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19278 %* \textleo -> \Leo (marvosym)
19279 % U+264D VIRGO; \virgo (wasysym)
19280 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19281 %* \textvirgo -> \Virgo (marvosym)
19282 % U+264E LIBRA; \libra (wasysym)
19283 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19284 %* \textlibra -> \Libra (marvosym)
19285 % U+264F SCORPIO; \scorpio (wasysym)

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19286 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19287 %* \textscorpio -> \Scorpio (marvosym)
19288 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19289 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19290 %* \textsagittarius -> \Sagittarius (marvosym)
19291 % U+2651 CAPRICORN; \capricornus (wasysym)
19292 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19293 %* \textcapricornus -> \Capricorn (marvosym)
19294 % U+2652 AQUARIUS; \aquarius (wasysym)
19295 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19296 %* \textaquarius -> \Aquarius (marvosym)
19297 % U+2653 PISCES; \pisces (wasysym)
19298 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19299 %* \textpisces -> \Pisces (marvosym)
19300 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19301 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19302 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19303 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19304 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19305 %* \textheartsuitwhite -> \Heart (marvosym)
19306 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19307 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19308 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19309 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19310 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19311 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19312 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19313 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19314 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19315 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19316 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19317 % U+2666 BLACK DIAMOND SUIT; diamond
19318 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19319 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19320 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19321 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19322 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19323 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19324 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19325 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19326 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19327 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19328 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19329 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19330 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19331 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19332 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19333 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19334 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19335 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19336 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19337 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19338 %* \textrecycle -> \Recycling (marvosym)
19339 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19340 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19341 % U+2691 BLACK FLAG; \Flag (ifsym)

19342 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
 19343 %* \textFlag -> \VarFlag (ifsym)
 19344 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
 19345 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
 19346 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
 19347 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
 19348 %* \textdsmilitary -> \textxswup (fourier)
 19349 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 19350 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 19351 % U+2696 SCALES; \dsjuridical (dictsym)
 19352 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 19353 % U+2697 ALEMBIC; \dschemical (dictsym)
 19354 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19355 % U+2698 FLOWER; \dsbiological (dictsym)
 19356 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19357 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19358 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19359 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19360 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19361 % U+26A0 WARNING SIGN; \danger (fourier)
 19362 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19363 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19364 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19365 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19366 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19367 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19368 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19369 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19370 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19371 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19372 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19373 % U+26AD MARRIAGE SYMBOL
 19374 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19375 % U+26AE DIVORCE SYMBOL
 19376 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19377 % U+26B2 NEUTER; \textunconfemale (tipx)
 19378 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
 19379 %* \textPUunconfemale -> \textunconfemale (tipx)
 19380 % U+26B9 SEXTILE; \hexstar (wasysym)
 19381 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19382 % U+26BD SOCCER BALL; \Football (marvosym)
 19383 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19384 %* \textSoccerBall -> \Football (marvosym)
 19385 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19386 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19387 % U+26C6 RAIN; \Rain (ifsym)
 19388 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19389 % U+26D4 NO ENTRY; \noway (fourier)
 19390 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19391 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19392 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19393 % U+26FA TENT; \Tent (ifsym)
 19394 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19395 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)

19396 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19397 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19398 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19399 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
 19400 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19401 %* \textScissorRight -> \RightScissors (marvosym)
 19402 %* \textScissorRight -> \Leftscissors (marvosym)
 19403 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19404 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19405 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19406 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19407 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19408 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19409 % U+2707 TAPE DRIVE; \Tape (bding)
 19410 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19411 % U+2708 AIRPLANE; \Plane (bding)
 19412 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19413 % U+2709 ENVELOPE; \Envelope (bding),
 19414 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19415 %* \textEnvelope -> \Letter (marvosym)
 19416 % U+270C VICTORY HAND; \Peace (bding)
 19417 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19418 % U+270D WRITING HAND; \WritingHand (marvosym)
 19419 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19420 %* \textWritingHand -> \Writinghand (marvosym)
 19421 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19422 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19423 % U+270F PENCIL; \PencilRight (bding)
 19424 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19425 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19426 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19427 % U+2711 WHITE NIB; \NibRight (bding)
 19428 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19429 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19430 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19431 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19432 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19433 %* \textCheckmark -> \checkmark (MnSymbol)
 19434 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19435 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19436 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19437 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19438 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19439 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19440 % U+2717 BALLOT X; \XSolidBrush (bding)
 19441 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19442 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19443 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19444 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19445 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19446 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19447 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19448 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19449 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19450 % U+271D LATIN CROSS; \Cross (bding)
 19451 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19452 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)

19453 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
19454 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
19455 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
19456 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
19457 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
19458 % U+2721 STAR OF DAVID; \DavidStar (bding)
19459 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
19460 %* \textDavidStar -> \davidstar (wasysym)
19461 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
19462 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
19463 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
19464 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
19465 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
19466 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
19467 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
19468 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
19469 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
19470 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
19471 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
19472 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
19473 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
19474 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
19475 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
19476 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
19477 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
19478 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
19479 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
19480 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
19481 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
19482 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
19483 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
19484 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
19485 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
19486 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
19487 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
19488 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
19489 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
19490 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
19491 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
19492 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
19493 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
19494 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
19495 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
19496 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
19497 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
19498 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
19499 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
19500 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
19501 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
19502 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
19503 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
19504 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
19505 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)

19506 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19507 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19508 % \SixFlowerOpenCenter (bding)
 19509 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19510 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19511 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19512 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl-
 ternate (bding)
 19513 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19514 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19515 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19516 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19517 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19518 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
 erPetal (bding)
 19519 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19520 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
 neOpenCircled (bding)
 19521 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19522 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
 erAltPetal (bding)
 19523 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19524 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19525 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19526 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19527 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19528 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19529 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19530 % U+2747 SPARKLE; \Sparkle (bding)
 19531 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19532 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19533 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19534 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19535 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19536 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19537 % \EightFlowerPetalRemoved (bding)
 19538 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19539 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19540 % \EightAsterisk (bding)
 19541 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19542 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19543 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19544 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19545 % \SquareShadowBottomRight (bding)
 19546 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19547 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19548 % \SquareShadowTopRight (bding)
 19549 \DeclareTextCommand{\textSquareShadowTopRight}{PU}{\9047\120}%* U+2750
 19550 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19551 % \SquareCastShadowBottomRight (bding)
 19552 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19553 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19554 % \SquareCastShadowTopRight (bding)
 19555 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19556 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-
 ding)
 19557 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756

19558 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bbding)
 19559 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19560 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bbding)
 19561 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19562 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
 19563 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19564 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19565 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19566 % \notperp (mathabx)
 19567 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19568 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19569 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19570 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19571 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19572 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19573 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19574 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19575 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19576 %* \textlbrackdbl -> \llbracket (stmaryrd)
 19577 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19578 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19579 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19580 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19581 % \circlearrowleft (AmS)
 19582 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19583 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 19584 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 19585 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 19586 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19587 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19588 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19589 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
 19590 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
 19591 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19592 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19593 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 19594 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19595 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)
 19596 \DeclareTextCommand{\textLonglefttrightarrow}{PU}{\9047\372}%* U+27FA
 19597 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19598 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 19599 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 19600 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19601 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 19602 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

19603 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 19604 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921

19605 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSymbol)
 19606 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19607 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 19608 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 19609 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 19610 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19611 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 19612 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 19613 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 19614 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19615 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19616 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19617 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19618 % \rcurvearrowne (MnSymbol)
 19619 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19620 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 19621 % \lcurvearrowse (MnSymbol)
 19622 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19623 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 19624 % \lcurvearrowsw (MnSymbol)
 19625 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19626 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 19627 % \rcurvearrowse (MnSymbol)
 19628 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 19629 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 19630 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 19631 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 19632 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 19633 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 19634 % \rcurvearrowdown (MnSymbol)
 19635 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
 19636 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
 19637 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
 19638 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)
 19639 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
 19640 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 19641 % \rcurvearrowright (MnSymbol)
 19642 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
 19643 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \lefttrighthar-
 poon (mathabx)
 19644 \DeclareTextCommand{\textlefttrightharpoon}{PU}{\9051\112}%* U+294A
 19645 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 poon (mathabx)
 19646 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 19647 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 19648 % \updownharpoonrightleft (MnSymbol)
 19649 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 19650 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 19651 % \updownharpoonleftright (MnSymbol)
 19652 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 19653 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS

19654 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 19655 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 19656 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 19657 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 19658 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 19659 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 19660 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 19661 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 19662 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19663 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 19664 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 19665 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 19666 % \leftbarharpoon (mathabx)
 19667 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 19668 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 19669 % LONG DASH; \barleftharpoon (mathabx)
 19670 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19671 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19672 % LONG DASH; \rightbarharpoon (mathabx)
 19673 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19674 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19675 % LONG DASH; \barrightharpoon (mathabx)
 19676 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19677 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19678 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19679 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19680 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19681 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19682 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19683 % U+297F DOWN FISH TAIL
 19684 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19685 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19686 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 19687 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19688 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19689 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19690 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19691 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19692 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19693 %* \textobar -> \textvarobar (stmaryrd)
 19694 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19695 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19696 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19697 %* \textobslash -> \obackslash (mathabx)
 19698 %* \textobslash -> \varobslash (stmaryrd)
 19699 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19700 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19701 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19702 %* \textobot -> \odplus (ulsy)
 19703 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)

19704 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19705 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19706 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19707 %* \textolessthan -> \varolessthan (stmaryrd)
 19708 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19709 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19710 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19711 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19712 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19713 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19714 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 19715 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19716 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19717 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19718 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19719 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19720 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19721 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19722 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19723 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19724 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19725 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19726 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19727 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19728 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19729 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19730 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19731 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19732 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19733 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 19734 % pxfonts, wasysym)
 19735 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 19736 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 19737 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 19738 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 19739 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 19740 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 19741 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 19742 %* \textminusdot -> \divdot (mathabx)
 19743 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dotimes (math-
 19744 % abx)
 19744 \DeclareTextCommand{\textdotimes}{PU}{\9052\060}%* U+2A30
 19745 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 19746 % \dtimes (mathdesign)
 19747 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 19748 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 19749 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 19750 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 19751 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 19752 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 19753 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 19754 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 19755 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 19756 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 19757 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)

19758 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19759 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19760 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19761 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19762 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19763 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19764 %* \textdoublevee -> \merge (stmaryrd)
19765 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19766 % \doublebarwedge (AmS)
19767 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19768 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19769 % \veedoublebar (mahtabx)
19770 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19771 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19772 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19773 % \neqdot (MnSymbol)
19774 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19775 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19776 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19777 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19778 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19779 % \nleqslant (txfonts/pxfonts)
19780 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19781 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19782 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19783 % \ngeqslant (txfonts/pxfonts)
19784 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19785 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19786 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19787 % \nlessapprox (txfonts/pxfonts)
19788 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19789 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19790 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19791 % \ngtrapprox (txfonts/pxfonts)
19792 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19793 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19794 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19795 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19796 % \gneq (AmS)
19797 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19798 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
19799 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
19800 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
19801 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
19802 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN;
19803 % \lesseqgtr (AmS)
19804 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
19805 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN;
19806 % \gtreqless (AmS)
19807 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
19808 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
19809 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
19810 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
19811 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
19812 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
19813 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
19814 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)

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19815 \DeclareTextCommand{\textrightsslice}{PU}{\9052\247}%* U+2AA7
19816 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
      Symbol)
19817 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
19818 % \npreceq (txfonts/pxfonts)
19819 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
19820 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
      Symbol)
19821 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
19822 % \nsucceq (txfonts/pxfonts)
19823 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
19824 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
      neq (mathabx)
19825 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
19826 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
      neq (mathabx)
19827 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
19828 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
19829 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
19830 % \npreceqq (txfonts/pxfonts)
19831 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
19832 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
19833 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
19834 % \nsucceqq (txfonts/pxfonts)
19835 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
19836 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
19837 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
19838 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
19839 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
19840 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
19841 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
19842 % \nprecapprox (txfonts/pxfonts)
19843 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
19844 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
19845 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
19846 % \nsuccapprox (txfonts/pxfonts)
19847 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19848 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
      prox (AmS)
19849 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19850 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
      prox (AmS)
19851 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
19852 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19853 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19854 % \nsubseteqq (txfonts/pxfonts, mathabx)
19855 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19856 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19857 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19858 % \nsupseteqq (mathabx)
19859 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19860 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19861 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19862 %* \textdashV -> \leftVdash (MnSymbol)
19863 % \ndashV (mathabx)
19864 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19865 %* \textndashV -> \nleftVdash (MnSymbol)

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19866 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 19867 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 19868 %* \textDashv -> \leftmodels (MnSymbol)
 19869 % \nDashv (mathabx)
 19870 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 19871 %* \textnDashv -> \nleftmodels (MnSymbol)
 19872 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 19873 % \DashV (mathabx)
 19874 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 19875 %* \textDashV -> \leftModels (MnSymbol)
 19876 % \nDashV (mathabx)
 19877 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 19878 %* \textnDashV -> \nleftModels (MnSymbol)
 19879 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 19880 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 19881 % \ndownmodels (MnSymbol)
 19882 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 19883 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 19884 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 19885 % \nupmodels (MnSymbol)
 19886 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 19887 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 19888 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 19889 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 19890 % \interleave (stmaryrd)
 19891 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 19892 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 19893 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 19894 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

19895 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19896 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19897 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19898 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

19899 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19900 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19901 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19902 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19903 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19904 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19905 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19906 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

19907 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19908 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19909 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19910 % \textdownstep (tipa)
 19911 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

19912 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)

19913 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 19914 %* \textPUheng -> \textheng (tipx)
 19915 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 19916 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 19917 %* \textPULhookfour -> \textlhookfour (tipx)
 19918 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 19919 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 19920 %* \textPUscf -> \textscf (tipx)
 19921 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 19922 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 19923 %* \textPUaolig -> \textao lig (tipx)
 19924 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 19925 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 19926 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 19927 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

19928 % U+FB01 LATIN SMALL LIGATURE FI; fi
 19929 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 19930 % U+FB02 LATIN SMALL LIGATURE FL; fl
 19931 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

19932 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 19933 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 19934 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 19935 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 19936 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 19937 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 19938 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 19939 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 19940 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 19941 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 19942 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 19943 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 19944 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 19945 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 19946 %* \textfullnote -> \Ganz (harmony)
 19947 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 19948 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 19949 %* \texthalfnote -> \Halb (harmony)
 19950 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 19951 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 19952 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 19953 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 19954 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 19955 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 19956 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 19957 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19958 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 19959 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 19960 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 19961 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 19962 % U+1F468 MAN; \ManFace (marvosym)
 19963 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468

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19964 % U+1F469 WOMAN; \WomanFace (marvosym)
19965 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
19966 %* \textWomanFace -> \Womanface (marvosym)
19967 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
19968 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
19969 %* \textFax -> \Faxmachine (marvosym)
19970 % U+1F525 FIRE; \Fire (ifsym)
19971 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

```

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

```

19972 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
19973 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
19974 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
19975 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
19976 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
19977 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

```

51.2.45 Miscellaneous

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19978 \DeclareTextCommand{\SS}{PU}{SS}%
19979 % \textcopyleft (textcomp)
19980 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
19981 % \ccnc (ccllicenses)
19982 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
19983 % \ccnd (ccllicenses)
19984 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
19985 % \ccsa (ccllicenses)
19986 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
19987 % \Info (marvosym, china2e)
19988 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
19989 % \CESign (marvosym)
19990 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
19991 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

19992 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19993 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19994 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19995 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19996 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
19997 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
19998 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19999 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20000 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20001 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20002 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20003 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20004 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20005 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
20006 <*puvnenc>
```

20007 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
 20008 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
 20009 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
 20010 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
 20011 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
 20012 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
 20013 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
 20014 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
 20015 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
 20016 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
 20017 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
 20018 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

 20019 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 20020 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 20021 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
 20022 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 20023 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 20024 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20025 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20026 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}% U+1EB1
 20027 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20028 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20029 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20030 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20031 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20032 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20033 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20034 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20035 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20036 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
 20037 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20038 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20039 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20040 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20041 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20042 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20043 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20044 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20045 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20046 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
 20047 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20048 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20049 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20050 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20051 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
 20052 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20053 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20054 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20055 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20056 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20057 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20058 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20059 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20060 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20061 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}% U+1EDD
 20062 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20063 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1

20064 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
 20065 \DeclareTextCompositeCommand{d}{PU}{u}{\9036\345}% U+1EE5
 20066 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
 20067 \DeclareTextCompositeCommand{h}{PU}{u}{\9036\347}% U+1EE7
 20068 \DeclareTextCompositeCommand{~}{PU}{u}{\81\151}% U+0169
 20069 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20070 \DeclareTextCompositeCommand{d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20071 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\353}% U+1EEB
 20072 \DeclareTextCompositeCommand{h}{PU}{\uhorn}{\9036\355}% U+1EED
 20073 \DeclareTextCompositeCommand{~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20074 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
 20075 \DeclareTextCompositeCommand{d}{PU}{y}{\9036\365}% U+1EF5
 20076 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}% U+1EF3
 20077 \DeclareTextCompositeCommand{h}{PU}{y}{\9036\367}% U+1EF7
 20078 \DeclareTextCompositeCommand{~}{PU}{y}{\9036\371}% U+1EF9
 20079 \DeclareTextCompositeCommand{'}{PU}{A}{\80\301}% U+00C1
 20080 \DeclareTextCompositeCommand{d}{PU}{A}{\9036\240}% U+1EA0
 20081 \DeclareTextCompositeCommand{'}{PU}{A}{\80\300}% U+00C0
 20082 \DeclareTextCompositeCommand{h}{PU}{A}{\9036\242}% U+1EA2
 20083 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}% U+00C3
 20084 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20085 \DeclareTextCompositeCommand{d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20086 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20087 \DeclareTextCompositeCommand{h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20088 \DeclareTextCompositeCommand{~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20089 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20090 \DeclareTextCompositeCommand{d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20091 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20092 \DeclareTextCompositeCommand{h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20093 \DeclareTextCompositeCommand{~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20094 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}% U+00C9
 20095 \DeclareTextCompositeCommand{d}{PU}{E}{\9036\270}% U+1EB8
 20096 \DeclareTextCompositeCommand{'}{PU}{E}{\80\310}% U+00C8
 20097 \DeclareTextCompositeCommand{h}{PU}{E}{\9036\272}% U+1EBA
 20098 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}% U+1EBC
 20099 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20100 \DeclareTextCompositeCommand{d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20101 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20102 \DeclareTextCompositeCommand{h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20103 \DeclareTextCompositeCommand{~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20104 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}% U+00CD
 20105 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}% U+1ECA
 20106 \DeclareTextCompositeCommand{'}{PU}{I}{\80\314}% U+00CC
 20107 \DeclareTextCompositeCommand{h}{PU}{I}{\9036\310}% U+1EC8
 20108 \DeclareTextCompositeCommand{~}{PU}{I}{\81\050}% U+0128
 20109 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
 20110 \DeclareTextCompositeCommand{d}{PU}{O}{\9036\314}% U+1ECC
 20111 \DeclareTextCompositeCommand{'}{PU}{O}{\80\322}% U+00D2
 20112 \DeclareTextCompositeCommand{h}{PU}{O}{\9036\316}% U+1ECE
 20113 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}% U+00D5
 20114 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20115 \DeclareTextCompositeCommand{d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20116 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20117 \DeclareTextCompositeCommand{h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20118 \DeclareTextCompositeCommand{~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20119 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20120 \DeclareTextCompositeCommand{d}{PU}{\OHORN}{\9036\342}% U+1EE2


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20121 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}% U+1EDC
20122 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
20123 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
20124 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
20125 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20126 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
20127 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20128 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20129 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20130 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20131 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}% U+1EEA
20132 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20133 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20134 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20135 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20136 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
20137 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20138 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20139 </puvnenc>

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51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20140 <*puarenc>
20141 % U+0621;afii57409;ARABIC LETTER HAMZA
20142 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20143 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20144 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20145 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20146 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20147 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20148 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20149 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20150 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20151 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20152 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20153 % U+0627;afii57415;ARABIC LETTER ALEF
20154 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20155 % U+0628;afii57416;ARABIC LETTER BEH
20156 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20157 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20158 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20159 % U+062A;afii57418;ARABIC LETTER TEH
20160 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20161 % U+062B;afii57419;ARABIC LETTER THEH
20162 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20163 % U+062C;afii57420;ARABIC LETTER JEEM
20164 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20165 % U+062D;afii57421;ARABIC LETTER HAH
20166 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20167 % U+062E;afii57422;ARABIC LETTER KHAH
20168 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20169 % U+062F;afii57423;ARABIC LETTER DAL
20170 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20171 % U+0630;afii57424;ARABIC LETTER THAL
20172 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630

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20173 % U+0631;afii57425;ARABIC LETTER REH
 20174 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20175 % U+0632;afii57426;ARABIC LETTER ZAIN
 20176 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20177 % U+0633;afii57427;ARABIC LETTER SEEN
 20178 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20179 % U+0634;afii57428;ARABIC LETTER SHEEN
 20180 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20181 % U+0635;afii57429;ARABIC LETTER SAD
 20182 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20183 % U+0636;afii57430;ARABIC LETTER DAD
 20184 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20185 % U+0637;afii57431;ARABIC LETTER TAH
 20186 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20187 % U+0638;afii57432;ARABIC LETTER ZAH
 20188 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20189 % U+0639;afii57433;ARABIC LETTER AIN
 20190 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20191 % U+063A;afii57434;ARABIC LETTER GHAIN
 20192 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20193 % U+0640;afii57440;ARABIC TATWEEL
 20194 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20195 % U+0641;afii57441;ARABIC LETTER FEH
 20196 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20197 % U+0642;afii57442;ARABIC LETTER QAF
 20198 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20199 % U+0643;afii57443;ARABIC LETTER KAF
 20200 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20201 % U+0644;afii57444;ARABIC LETTER LAM
 20202 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20203 % U+0645;afii57445;ARABIC LETTER MEEM
 20204 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20205 % U+0646;afii57446;ARABIC LETTER NOON
 20206 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20207 % U+0647;afii57470;ARABIC LETTER HEH
 20208 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20209 % U+0648;afii57448;ARABIC LETTER WAW
 20210 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20211 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20212 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20213 % U+064A;afii57450;ARABIC LETTER YEH
 20214 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A
 20215 % U+064B;afii57451;ARABIC FATHATAN
 20216 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20217 % U+064C;afii57452;ARABIC DAMMATAN
 20218 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20219 % U+064D;afii57453;ARABIC KASRATAN
 20220 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20221 % U+064E;afii57454;ARABIC FATHA
 20222 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20223 % U+064F;afii57455;ARABIC DAMMA
 20224 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20225 % U+0650;afii57456;ARABIC KASRA
 20226 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20227 % U+0651;afii57457;ARABIC SHADDA
 20228 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20229 % U+0652;afii57458;ARABIC SUKUN

20230 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

Farsi

20231 % U+067E ARABIC LETTER PEH; afii57506

20232 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E

20233 % U+0686 ARABIC LETTER TCHEH; afii57507

20234 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686

20235 % U+0698 ARABIC LETTER JEH; afii57508

20236 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698

20237 % U+06A9 ARABIC LETTER KEHEH

20238 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9

20239 % U+06AF ARABIC LETTER GAF; afii57509

20240 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF

20241 % U+06CC ARABIC LETTER FARSI YEH

20242 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

20243 % U+200C ZERO WIDTH NON-JOINER; afii61664

20244 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C

20245 % U+200D ZERO WIDTH JOINER; afii301

20246 \DeclareTextCommand{\noboundary}{PU}{\9040\015}% U+200D

20247 \end{puarenc}

20248 \end{psdextra}

20249 \Hy@VersionCheck{psdextra.def}

20250 \newcommand*{\psdmapshortnames}{%

20251 \let\MVPlus\textMVPlus

20252 \let\MVComma\textMVComma

20253 \let\MVMinus\textMVMinus

20254 \let\MVPeriod\textMVPeriod

20255 \let\MVDivision\textMVDivision

20256 \let\MVZero\textMVZero

20257 \let\MVOne\textMVOne

20258 \let\MVTwo\textMVTwo

20259 \let\MVThree\textMVThree

20260 \let\MVFour\textMVFour

20261 \let\MVFive\textMVFive

20262 \let\MVSix\textMVSix

20263 \let\MVSeven\textMVSeven

20264 \let\MVEight\textMVEight

20265 \let\MVNine\textMVNine

20266 \let\MVAt\textMVAt

20267 \let\copyright\textcopyright

20268 \let\twosuperior\texttwosuperior

20269 \let\threesuperior\textthreesuperior

20270 \let\onesuperior\textonesuperior

20271 \let\Thorn\textThorn

20272 \let\thorn\textthorn

20273 \let\hbar\texthbar

20274 \let\hausaB\texthausaB

20275 \let\hausaD\texthausaD

20276 \let\hausaK\texthausaK

20277 \let\barl\textbarl

20278 \let\inve\textinve

20279 \let\slashc\textslashc

20280 \let\scripta\textscripta

20281 \let\openo\textopeno

20282 \let\rtaild\textrtaild

20283 \let\reve\textreve

20284 \let\schwa\textschwa

20285 \let\niepsilon\textniepsilon
 20286 \let\repsilon\textrepsilon
 20287 \let\rhookrepsilon\texthookrepsilon
 20288 \let\scriptg\textscriptg
 20289 \let\scg\textscg
 20290 \let\ipagamma\textipagamma
 20291 \let\babygamma\textbabygamma
 20292 \let\bari\textbari
 20293 \let\niiota\textniiota
 20294 \let\sci\textsci
 20295 \let\scn\textscn
 20296 \let\niphi\textniphi
 20297 \let\longleggr\textlongleggr
 20298 \let\scr\textscr
 20299 \let\invscr\textinvscr
 20300 \let\esh\textesh
 20301 \let\baru\textbaru
 20302 \let\niupsilon\textniupsilon
 20303 \let\scriptv\textscriptv
 20304 \let\turnv\textturnv
 20305 \let\turnw\textturnw
 20306 \let\turny\textturny
 20307 \let\scy\textscy
 20308 \let\yogh\textyogh
 20309 \let\glotstop\textglotstop
 20310 \let\revglotstop\textrevglotstop
 20311 \let\invglotstop\textinvglotstop
 20312 \let\Gamma\textGamma
 20313 \let\Delta\textDelta
 20314 \let\Theta\textTheta
 20315 \let\Lambda\textLambda
 20316 \let\Xi\textXi
 20317 \let\Pi\textPi
 20318 \let\Sigma\textSigma
 20319 \let\Upsilon\textUpsilon
 20320 \let\Phi\textPhi
 20321 \let\Psi\textPsi
 20322 \let\Omega\textOmega
 20323 \let\alpha\textalpha
 20324 \let\beta\textbeta
 20325 \let\gamma\textgamma
 20326 \let\delta\textdelta
 20327 \let\epsilon\textepsilon
 20328 \let\zeta\textzeta
 20329 \let\eta\texteta
 20330 \let\theta\texttheta
 20331 \let\iota\textiota
 20332 \let\kappa\textkappa
 20333 \let\lambda\textlambda
 20334 \let\mugreek\textmugreek
 20335 \let\nu\textnu
 20336 \let\xi\textxi
 20337 \let\pi\textpi
 20338 \let\rho\textrho
 20339 \let\varsigma\textvarsigma
 20340 \let\sigma\textsigma
 20341 \let\tau\texttau

20342 \let\upsilon\textupsilon
 20343 \let\phi\textphi
 20344 \let\chi\textchi
 20345 \let\psi\textpsi
 20346 \let\omega\textomega
 20347 \let\scd\textscd
 20348 \let\scu\textscu
 20349 \let\iinferior\textiinferior
 20350 \let\rinferior\extrinferior
 20351 \let\uinferior\textuinferior
 20352 \let\vinferior\textvinferior
 20353 \let\betainferior\textbetainferior
 20354 \let\gammainferior\textgammainferior
 20355 \let\rhoinferior\textrhoinferior
 20356 \let\phiinferior\textphiinferior
 20357 \let\chiinferior\textchiinferior
 20358 \let\barsci\textbarsci
 20359 \let\barp\textbarp
 20360 \let\barscu\textbarscu
 20361 \let\htrtaild\texthtrtaild
 20362 \let\dagger\textdagger
 20363 \let\bullet\textbullet
 20364 \let\hdotfor\texthdotfor
 20365 \let\prime\textprime
 20366 \let\second\textsecond
 20367 \let\third\textthird
 20368 \let\backprime\textbackprime
 20369 \let\lefttherefore\textlefttherefore
 20370 \let\fourth\textfourth
 20371 \let\diamonddots\textdiamonddots
 20372 \let\zerosuperior\textzerosuperior
 20373 \let\isuperior\textisuperior
 20374 \let\foursuperior\textfoursuperior
 20375 \let\fivesuperior\textfivesuperior
 20376 \let\sixsuperior\textsixsuperior
 20377 \let\sevensuperior\textsevensuperior
 20378 \let\eightsuperior\texteightsuperior
 20379 \let\ninesuperior\textninesuperior
 20380 \let\plussuperior\textplussuperior
 20381 \let\minussuperior\textminussuperior
 20382 \let>equalsuperior\textequalsuperior
 20383 \let\parenleftsuperior\textparenleftsuperior
 20384 \let\parenrightsuperior\textparenrightsuperior
 20385 \let\nsuperior\textnsuperior
 20386 \let\zeroinferior\textzeroinferior
 20387 \let\oneinferior\textoneinferior
 20388 \let\twoinferior\texttwoinferior
 20389 \let\threeinferior\textthreeinferior
 20390 \let\fourinferior\textfourinferior
 20391 \let\fiveinferior\textfiveinferior
 20392 \let\sixinferior\textsixinferior
 20393 \let\seveninferior\textseveninferior
 20394 \let\eightinferior\texteightinferior
 20395 \let\nineinferior\textnineinferior
 20396 \let\plusinferior\textplusinferior
 20397 \let\minusinferior\textminusinferior
 20398 \let>equalsinferior\textequalsinferior

20399 \let\parenleftinferior\textparenleftinferior
 20400 \let\parenrightinferior\textparenrightinferior
 20401 \let\ainferior\textainferior
 20402 \let\einferior\texteinferior
 20403 \let\oinferior\textoinferior
 20404 \let\xinferior\textxinferior
 20405 \let\schwainferior\textschwainferior
 20406 \let\hinferior\texthinferior
 20407 \let\kinferior\textkinferior
 20408 \let\linferior\textlinferior
 20409 \let\minferior\textminferior
 20410 \let\ninferior\textninferior
 20411 \let\pinferior\textpinferior
 20412 \let\sinferior\textsinferior
 20413 \let\tinferior\texttinferior
 20414 \let\Deleatur\textDeleatur
 20415 \let\hslash\texthslash
 20416 \let\Im\textIm
 20417 \let\ell\textell
 20418 \let\wp\textwp
 20419 \let\Re\textRe
 20420 \let\mho\textmho
 20421 \let\riota\textriota
 20422 \let\Finv\textFinv
 20423 \let\aleph\textaleph
 20424 \let\beth\textbeth
 20425 \let\gimel\textgimel
 20426 \let\daleth\textdaleth
 20427 \let\xfax\textfax
 20428 \let\Game\textGame
 20429 \let\leftarrow\textleftarrow
 20430 \let\uparrow\textuparrow
 20431 \let\rightarrow\textrightarrow
 20432 \let\downarrow\textdownarrow
 20433 \let\leftrightarrow\textleftrightarrow
 20434 \let\updownarrow\textupdownarrow
 20435 \let\nwarrow\textnwarrow
 20436 \let\nearrow\textnearrow
 20437 \let\searrow\textsearrow
 20438 \let\swarrow\textswarrow
 20439 \let\nleftarrow\textnleftarrow
 20440 \let\nrightarrow\textnrightarrow
 20441 \let\twoheadleftarrow\texttwoheadleftarrow
 20442 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20443 \let\twoheaduparrow\texttwoheaduparrow
 20444 \let\twoheadrightarrow\texttwoheadrightarrow
 20445 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20446 \let\twoheaddownarrow\texttwoheaddownarrow
 20447 \let\leftarrowtail\textleftarrowtail
 20448 \let\rightarrowtail\textrightarrowtail
 20449 \let\mapsto\textmapsto
 20450 \let\hookleftarrow\texthookleftarrow
 20451 \let\hookrightarrow\texthookrightarrow
 20452 \let\looparrowleft\textlooparrowleft
 20453 \let\looparrowright\textlooparrowright
 20454 \let\leftrightharrow\textleftrightharrow
 20455 \let\lightning\textlightning

20456 $\backslash\text{dlsh}\backslash\text{tex}\text{dlsh}$
 20457 $\backslash\text{let}\backslash\text{curvearrowleft}\backslash\text{tex}\text{curvearrowleft}$
 20458 $\backslash\text{let}\backslash\text{curvearrowright}\backslash\text{tex}\text{curvearrowright}$
 20459 $\backslash\text{let}\backslash\text{leftharpoonup}\backslash\text{tex}\text{leftharpoonup}$
 20460 $\backslash\text{let}\backslash\text{leftharpoondown}\backslash\text{tex}\text{leftharpoondown}$
 20461 $\backslash\text{let}\backslash\text{upharpoonright}\backslash\text{tex}\text{upharpoonright}$
 20462 $\backslash\text{let}\backslash\text{upharpoonleft}\backslash\text{tex}\text{upharpoonleft}$
 20463 $\backslash\text{let}\backslash\text{rightharpoonup}\backslash\text{tex}\text{rightharpoonup}$
 20464 $\backslash\text{let}\backslash\text{rightharpoondown}\backslash\text{tex}\text{rightharpoondown}$
 20465 $\backslash\text{let}\backslash\text{downharpoonright}\backslash\text{tex}\text{downharpoonright}$
 20466 $\backslash\text{let}\backslash\text{downharpoonleft}\backslash\text{tex}\text{downharpoonleft}$
 20467 $\backslash\text{let}\backslash\text{rightleftarrows}\backslash\text{tex}\text{rightleftarrows}$
 20468 $\backslash\text{let}\backslash\text{updownarrows}\backslash\text{tex}\text{updownarrows}$
 20469 $\backslash\text{let}\backslash\text{leftrightarrows}\backslash\text{tex}\text{leftrightarrows}$
 20470 $\backslash\text{let}\backslash\text{leftleftarrows}\backslash\text{tex}\text{leftleftarrows}$
 20471 $\backslash\text{let}\backslash\text{upuparrows}\backslash\text{tex}\text{upuparrows}$
 20472 $\backslash\text{let}\backslash\text{rightrightarrows}\backslash\text{tex}\text{rightrightarrows}$
 20473 $\backslash\text{let}\backslash\text{downdownarrows}\backslash\text{tex}\text{downdownarrows}$
 20474 $\backslash\text{let}\backslash\text{leftrightharpoons}\backslash\text{tex}\text{leftrightharpoons}$
 20475 $\backslash\text{let}\backslash\text{rightleftharpoons}\backslash\text{tex}\text{rightleftharpoons}$
 20476 $\backslash\text{let}\backslash\text{nLeftarrow}\backslash\text{tex}\text{nLeftarrow}$
 20477 $\backslash\text{let}\backslash\text{nLeftrightarrow}\backslash\text{tex}\text{nLeftrightarrow}$
 20478 $\backslash\text{let}\backslash\text{nRrightarrow}\backslash\text{tex}\text{nRrightarrow}$
 20479 $\backslash\text{let}\backslash\text{Leftarrow}\backslash\text{tex}\text{Leftarrow}$
 20480 $\backslash\text{let}\backslash\text{Uparrow}\backslash\text{tex}\text{Uparrow}$
 20481 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{tex}\text{Rrightarrow}$
 20482 $\backslash\text{let}\backslash\text{Downarrow}\backslash\text{tex}\text{Downarrow}$
 20483 $\backslash\text{let}\backslash\text{Leftrightarrow}\backslash\text{tex}\text{Leftrightarrow}$
 20484 $\backslash\text{let}\backslash\text{Updownarrow}\backslash\text{tex}\text{Updownarrow}$
 20485 $\backslash\text{let}\backslash\text{Nwarrow}\backslash\text{tex}\text{Nwarrow}$
 20486 $\backslash\text{let}\backslash\text{Nearrow}\backslash\text{tex}\text{Nearrow}$
 20487 $\backslash\text{let}\backslash\text{Searrow}\backslash\text{tex}\text{Searrow}$
 20488 $\backslash\text{let}\backslash\text{Swarrow}\backslash\text{tex}\text{Swarrow}$
 20489 $\backslash\text{let}\backslash\text{Lleftarrow}\backslash\text{tex}\text{Lleftarrow}$
 20490 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{tex}\text{Rrightarrow}$
 20491 $\backslash\text{let}\backslash\text{leftsquigarrow}\backslash\text{tex}\text{leftsquigarrow}$
 20492 $\backslash\text{let}\backslash\text{rightsquigarrow}\backslash\text{tex}\text{rightsquigarrow}$
 20493 $\backslash\text{let}\backslash\text{dashleftarrow}\backslash\text{tex}\text{dashleftarrow}$
 20494 $\backslash\text{let}\backslash\text{dasheduparrow}\backslash\text{tex}\text{dasheduparrow}$
 20495 $\backslash\text{let}\backslash\text{dashrightarrow}\backslash\text{tex}\text{dashrightarrow}$
 20496 $\backslash\text{let}\backslash\text{dasheddownarrow}\backslash\text{tex}\text{dasheddownarrow}$
 20497 $\backslash\text{let}\backslash\text{pointer}\backslash\text{tex}\text{pointer}$
 20498 $\backslash\text{let}\backslash\text{downuparrows}\backslash\text{tex}\text{downuparrows}$
 20499 $\backslash\text{let}\backslash\text{leftarrowtriangle}\backslash\text{tex}\text{leftarrowtriangle}$
 20500 $\backslash\text{let}\backslash\text{rightarrowtriangle}\backslash\text{tex}\text{rightarrowtriangle}$
 20501 $\backslash\text{let}\backslash\text{leftrightarrowtriangle}\backslash\text{tex}\text{leftrightarrowtriangle}$
 20502 $\backslash\text{let}\backslash\text{forall}\backslash\text{tex}\text{forall}$
 20503 $\backslash\text{let}\backslash\text{complement}\backslash\text{tex}\text{complement}$
 20504 $\backslash\text{let}\backslash\text{partial}\backslash\text{tex}\text{partial}$
 20505 $\backslash\text{let}\backslash\text{exists}\backslash\text{tex}\text{exists}$
 20506 $\backslash\text{let}\backslash\text{nexists}\backslash\text{tex}\text{nexists}$
 20507 $\backslash\text{let}\backslash\text{emptyset}\backslash\text{tex}\text{emptyset}$
 20508 $\backslash\text{let}\backslash\text{triangle}\backslash\text{tex}\text{triangle}$
 20509 $\backslash\text{let}\backslash\text{nabla}\backslash\text{tex}\text{nabla}$
 20510 $\backslash\text{let}\backslash\text{in}\backslash\text{tex}\text{in}$
 20511 $\backslash\text{let}\backslash\text{notin}\backslash\text{tex}\text{notin}$
 20512 $\backslash\text{let}\backslash\text{smallin}\backslash\text{tex}\text{smallin}$

20513 $\backslash\mathrm{ni}\backslash\mathrm{textni}$
 20514 $\backslash\mathrm{let}\backslash\mathrm{notowner}\backslash\mathrm{textnotowner}$
 20515 $\backslash\mathrm{let}\backslash\mathrm{smallowns}\backslash\mathrm{textsmallowns}$
 20516 $\backslash\mathrm{let}\backslash\mathrm{prod}\backslash\mathrm{textprod}$
 20517 $\backslash\mathrm{let}\backslash\mathrm{amalg}\backslash\mathrm{textamalg}$
 20518 $\backslash\mathrm{let}\backslash\mathrm{sum}\backslash\mathrm{textsum}$
 20519 $\backslash\mathrm{let}\backslash\mathrm{mp}\backslash\mathrm{textmp}$
 20520 $\backslash\mathrm{let}\backslash\mathrm{dotplus}\backslash\mathrm{textdotplus}$
 20521 $\backslash\mathrm{let}\backslash\mathrm{Divides}\backslash\mathrm{textDivides}$
 20522 $\backslash\mathrm{let}\backslash\mathrm{DividesNot}\backslash\mathrm{textDividesNot}$
 20523 $\backslash\mathrm{let}\backslash\mathrm{setminus}\backslash\mathrm{textsetminus}$
 20524 $\backslash\mathrm{let}\backslash\mathrm{ast}\backslash\mathrm{textast}$
 20525 $\backslash\mathrm{let}\backslash\mathrm{circ}\backslash\mathrm{textcirc}$
 20526 $\backslash\mathrm{let}\backslash\mathrm{surd}\backslash\mathrm{textsurd}$
 20527 $\backslash\mathrm{let}\backslash\mathrm{propto}\backslash\mathrm{textpropto}$
 20528 $\backslash\mathrm{let}\backslash\mathrm{infty}\backslash\mathrm{textinfty}$
 20529 $\backslash\mathrm{let}\backslash\mathrm{angle}\backslash\mathrm{textangle}$
 20530 $\backslash\mathrm{let}\backslash\mathrm{measuredangle}\backslash\mathrm{textmeasuredangle}$
 20531 $\backslash\mathrm{let}\backslash\mathrm{sphericalangle}\backslash\mathrm{textsphericalangle}$
 20532 $\backslash\mathrm{let}\backslash\mathrm{mid}\backslash\mathrm{textmid}$
 20533 $\backslash\mathrm{let}\backslash\mathrm{nmid}\backslash\mathrm{textnmid}$
 20534 $\backslash\mathrm{let}\backslash\mathrm{parallel}\backslash\mathrm{textparallel}$
 20535 $\backslash\mathrm{let}\backslash\mathrm{nparallel}\backslash\mathrm{textnparallel}$
 20536 $\backslash\mathrm{let}\backslash\mathrm{wedge}\backslash\mathrm{textwedge}$
 20537 $\backslash\mathrm{let}\backslash\mathrm{owedge}\backslash\mathrm{textowedge}$
 20538 $\backslash\mathrm{let}\backslash\mathrm{vee}\backslash\mathrm{textvee}$
 20539 $\backslash\mathrm{let}\backslash\mathrm{ovee}\backslash\mathrm{textovee}$
 20540 $\backslash\mathrm{let}\backslash\mathrm{cap}\backslash\mathrm{textcap}$
 20541 $\backslash\mathrm{let}\backslash\mathrm{cup}\backslash\mathrm{textcup}$
 20542 $\backslash\mathrm{let}\backslash\mathrm{int}\backslash\mathrm{textint}$
 20543 $\backslash\mathrm{let}\backslash\mathrm{iint}\backslash\mathrm{textiint}$
 20544 $\backslash\mathrm{let}\backslash\mathrm{iiint}\backslash\mathrm{textiiint}$
 20545 $\backslash\mathrm{let}\backslash\mathrm{ooint}\backslash\mathrm{textoint}$
 20546 $\backslash\mathrm{let}\backslash\mathrm{oiint}\backslash\mathrm{textoiint}$
 20547 $\backslash\mathrm{let}\backslash\mathrm{oointclockwise}\backslash\mathrm{textointclockwise}$
 20548 $\backslash\mathrm{let}\backslash\mathrm{oointctrlockwise}\backslash\mathrm{textointctrlockwise}$
 20549 $\backslash\mathrm{let}\backslash\mathrm{therefore}\backslash\mathrm{texttherefore}$
 20550 $\backslash\mathrm{let}\backslash\mathrm{because}\backslash\mathrm{textbecause}$
 20551 $\backslash\mathrm{let}\backslash\mathrm{vdotdot}\backslash\mathrm{textvdotdot}$
 20552 $\backslash\mathrm{let}\backslash\mathrm{sqaredots}\backslash\mathrm{textsquaredots}$
 20553 $\backslash\mathrm{let}\backslash\mathrm{dotminus}\backslash\mathrm{textdotminus}$
 20554 $\backslash\mathrm{let}\backslash\mathrm{eqcolon}\backslash\mathrm{texteqcolon}$
 20555 $\backslash\mathrm{let}\backslash\mathrm{sim}\backslash\mathrm{textsim}$
 20556 $\backslash\mathrm{let}\backslash\mathrm{backsim}\backslash\mathrm{textbacksim}$
 20557 $\backslash\mathrm{let}\backslash\mathrm{nbacksim}\backslash\mathrm{textnbacksim}$
 20558 $\backslash\mathrm{let}\backslash\mathrm{wr}\backslash\mathrm{textwr}$
 20559 $\backslash\mathrm{let}\backslash\mathrm{nsim}\backslash\mathrm{textnsim}$
 20560 $\backslash\mathrm{let}\backslash\mathrm{eqsim}\backslash\mathrm{texteqsim}$
 20561 $\backslash\mathrm{let}\backslash\mathrm{neqsim}\backslash\mathrm{textneqsim}$
 20562 $\backslash\mathrm{let}\backslash\mathrm{simeq}\backslash\mathrm{textsimeq}$
 20563 $\backslash\mathrm{let}\backslash\mathrm{nsimeq}\backslash\mathrm{textnsimeq}$
 20564 $\backslash\mathrm{let}\backslash\mathrm{cong}\backslash\mathrm{textcong}$
 20565 $\backslash\mathrm{let}\backslash\mathrm{ncong}\backslash\mathrm{textncong}$
 20566 $\backslash\mathrm{let}\backslash\mathrm{approx}\backslash\mathrm{textapprox}$
 20567 $\backslash\mathrm{let}\backslash\mathrm{napprox}\backslash\mathrm{textnapprox}$
 20568 $\backslash\mathrm{let}\backslash\mathrm{approxeq}\backslash\mathrm{textapproxeq}$
 20569 $\backslash\mathrm{let}\backslash\mathrm{napproxeq}\backslash\mathrm{textnapproxeq}$

20570 \let\triplesim\texttriplesim
 20571 \let\ntriplesim\textntriplesim
 20572 \let\backcong\textbackcong
 20573 \let\backcong\textnbackcong
 20574 \let\asymp\textasymp
 20575 \let\nasymp\textnasymp
 20576 \let\Bumpeq\textBumpeq
 20577 \let\NBumpeq\textNBumpeq
 20578 \let\bumpeq\textbumpeq
 20579 \let\Nbumpeq\textNbumpeq
 20580 \let\doteq\textdoteq
 20581 \let\ndoteq\textndoteq
 20582 \let\doteqdot\textdoteqdot
 20583 \let\NDoteq\textNDoteq
 20584 \let\fallingdoteq\textfallingdoteq
 20585 \let\Nfallingdoteq\textNfallingdoteq
 20586 \let\risingdoteq\textrisingdoteq
 20587 \let\Nrisingdoteq\textNrisingdoteq
 20588 \let\colonequals\textcolonequals
 20589 \let\equalscolon\textequalscolon
 20590 \let\eqcirc\texteqcirc
 20591 \let\neqcirc\textneqcirc
 20592 \let\circeq\textcirceq
 20593 \let\ncirceq\textncirceq
 20594 \let\hateq\texthateq
 20595 \let\Nhateq\textNhateq
 20596 \let\triangleeq\texttriangleeq
 20597 \let\neq\textneq
 20598 \let\ne\textne
 20599 \let\equiv\textequiv
 20600 \let\equiv\textequiv
 20601 \let\leq\textleq
 20602 \let\le\textle
 20603 \let\geq\textgeq
 20604 \let\ge\textge
 20605 \let\leqq\textleqq
 20606 \let\Nleqq\textNleqq
 20607 \let\geqq\textgeqq
 20608 \let\Ngeqq\textNgeqq
 20609 \let\lneqq\textlneqq
 20610 \let\gneqq\textgneqq
 20611 \let\ll\textll
 20612 \let\Nll\textNll
 20613 \let\gg\textgg
 20614 \let\ngg\textngg
 20615 \let\between\textbetween
 20616 \let\less\textless
 20617 \let\ngtr\textngtr
 20618 \let\leq\textleq
 20619 \let\geq\textgeq
 20620 \let\lesssim\textlessim
 20621 \let\gtrsim\textgtrsim
 20622 \let\lesssim\textlessim
 20623 \let\ngtrsim\textngtrsim
 20624 \let\lessgtr\textlessgtr
 20625 \let\gtrless\textgtrless
 20626 \let\ngtrless\textngtrless

20627 $\backslash\text{nlessgtr}$
 20628 $\backslash\text{prec}$
 20629 $\backslash\text{succ}$
 20630 $\backslash\text{preccurlyeq}$
 20631 $\backslash\text{succcurlyeq}$
 20632 $\backslash\text{precsim}$
 20633 $\backslash\text{nprecsim}$
 20634 $\backslash\text{succsim}$
 20635 $\backslash\text{nsuccsim}$
 20636 $\backslash\text{nprec}$
 20637 $\backslash\text{nsucc}$
 20638 $\backslash\text{subset}$
 20639 $\backslash\text{supset}$
 20640 $\backslash\text{nsubset}$
 20641 $\backslash\text{nsupset}$
 20642 $\backslash\text{subseteq}$
 20643 $\backslash\text{supseteq}$
 20644 $\backslash\text{nsubseteq}$
 20645 $\backslash\text{nsupseteq}$
 20646 $\backslash\text{subsetneq}$
 20647 $\backslash\text{supsetneq}$
 20648 $\backslash\text{cupdot}$
 20649 $\backslash\text{cupplus}$
 20650 $\backslash\text{sqsubset}$
 20651 $\backslash\text{nsqsubset}$
 20652 $\backslash\text{sqsupset}$
 20653 $\backslash\text{nsqsupset}$
 20654 $\backslash\text{sqsubseq}$
 20655 $\backslash\text{nsqsubseq}$
 20656 $\backslash\text{sqsupseq}$
 20657 $\backslash\text{nsqsupseq}$
 20658 $\backslash\text{sqcap}$
 20659 $\backslash\text{sqcup}$
 20660 $\backslash\text{oplus}$
 20661 $\backslash\text{ominus}$
 20662 $\backslash\text{otimes}$
 20663 $\backslash\text{oslash}$
 20664 $\backslash\text{odot}$
 20665 $\backslash\text{circledcirc}$
 20666 $\backslash\text{circledast}$
 20667 $\backslash\text{circleddash}$
 20668 $\backslash\text{boxplus}$
 20669 $\backslash\text{boxminus}$
 20670 $\backslash\text{boxtimes}$
 20671 $\backslash\text{boxdot}$
 20672 $\backslash\text{vdash}$
 20673 $\backslash\text{dashed}$
 20674 $\backslash\text{ndashed}$
 20675 $\backslash\text{top}$
 20676 $\backslash\text{ndown}$
 20677 $\backslash\text{bot}$
 20678 $\backslash\text{nup}$
 20679 $\backslash\text{vDash}$
 20680 $\backslash\text{VDash}$
 20681 $\backslash\text{Vdash}$
 20682 $\backslash\text{nVdash}$
 20683 $\backslash\text{VDash}$

20684 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20685 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20686 $\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 20687 $\backslash\mathrm{nVDash}\backslash\mathrm{textnVDash}$
 20688 $\backslash\mathrm{lhs}\backslash\mathrm{textrhs}$
 20689 $\backslash\mathrm{rhs}\backslash\mathrm{textrhs}$
 20690 $\backslash\mathrm{unlhs}\backslash\mathrm{textunlhs}$
 20691 $\backslash\mathrm{unrhs}\backslash\mathrm{textunrhs}$
 20692 $\backslash\mathrm{multimapdotbothA}\backslash\mathrm{textmultimapdotbothA}$
 20693 $\backslash\mathrm{multimapdotbothB}\backslash\mathrm{textmultimapdotbothB}$
 20694 $\backslash\mathrm{multimap}\backslash\mathrm{textmultimap}$
 20695 $\backslash\mathrm{veebar}\backslash\mathrm{textveebar}$
 20696 $\backslash\mathrm{barwedge}\backslash\mathrm{textbarwedge}$
 20697 $\backslash\mathrm{star}\backslash\mathrm{textstar}$
 20698 $\backslash\mathrm{divideontimes}\backslash\mathrm{textdivideontimes}$
 20699 $\backslash\mathrm{bowtie}\backslash\mathrm{textbowtie}$
 20700 $\backslash\mathrm{ltimes}\backslash\mathrm{texltimes}$
 20701 $\backslash\mathrm{rtimes}\backslash\mathrm{textrtimes}$
 20702 $\backslash\mathrm{leftthreetimes}\backslash\mathrm{textleftthreetimes}$
 20703 $\backslash\mathrm{rightthreetimes}\backslash\mathrm{textrightthreetimes}$
 20704 $\backslash\mathrm{backsimeq}\backslash\mathrm{textbacksimeq}$
 20705 $\backslash\mathrm{nbacksimeq}\backslash\mathrm{textnbacksimeq}$
 20706 $\backslash\mathrm{curlyvee}\backslash\mathrm{textcurlyvee}$
 20707 $\backslash\mathrm{curlywedge}\backslash\mathrm{textcurlywedge}$
 20708 $\backslash\mathrm{Subset}\backslash\mathrm{textSubset}$
 20709 $\backslash\mathrm{nSubset}\backslash\mathrm{textnSubset}$
 20710 $\backslash\mathrm{Supset}\backslash\mathrm{textSupset}$
 20711 $\backslash\mathrm{nSupset}\backslash\mathrm{textnSupset}$
 20712 $\backslash\mathrm{Cap}\backslash\mathrm{textCap}$
 20713 $\backslash\mathrm{Cup}\backslash\mathrm{textCup}$
 20714 $\backslash\mathrm{pitchfork}\backslash\mathrm{textpitchfork}$
 20715 $\backslash\mathrm{lessdot}\backslash\mathrm{textlessdot}$
 20716 $\backslash\mathrm{gtrdot}\backslash\mathrm{textgtrdot}$
 20717 $\backslash\mathrm{lll}\backslash\mathrm{texlll}$
 20718 $\backslash\mathrm{ggg}\backslash\mathrm{textggg}$
 20719 $\backslash\mathrm{lesseqgtr}\backslash\mathrm{textlesseqgtr}$
 20720 $\backslash\mathrm{gtreqless}\backslash\mathrm{textgtreqless}$
 20721 $\backslash\mathrm{curlyeqprec}\backslash\mathrm{textcurlyeqprec}$
 20722 $\backslash\mathrm{ncurlyeqprec}\backslash\mathrm{textncurlyeqprec}$
 20723 $\backslash\mathrm{curlyeqsucc}\backslash\mathrm{textcurlyeqsucc}$
 20724 $\backslash\mathrm{ncurlyeqsucc}\backslash\mathrm{textncurlyeqsucc}$
 20725 $\backslash\mathrm{npreccurlyeq}\backslash\mathrm{textnpreccurlyeq}$
 20726 $\backslash\mathrm{nsucccurlyeq}\backslash\mathrm{textnsucccurlyeq}$
 20727 $\backslash\mathrm{nqsubseteq}\backslash\mathrm{textnqsubseteq}$
 20728 $\backslash\mathrm{nqsupseteq}\backslash\mathrm{textnqsupseteq}$
 20729 $\backslash\mathrm{sqsubsetneq}\backslash\mathrm{textsqsubsetneq}$
 20730 $\backslash\mathrm{sqsupsetneq}\backslash\mathrm{textsqsupsetneq}$
 20731 $\backslash\mathrm{lnsim}\backslash\mathrm{textlnsim}$
 20732 $\backslash\mathrm{gnsim}\backslash\mathrm{textgnsim}$
 20733 $\backslash\mathrm{precnsim}\backslash\mathrm{textprecnsim}$
 20734 $\backslash\mathrm{succnsim}\backslash\mathrm{textsuccnsim}$
 20735 $\backslash\mathrm{ntriangleleft}\backslash\mathrm{textntriangleleft}$
 20736 $\backslash\mathrm{ntriangleright}\backslash\mathrm{textntriangleright}$
 20737 $\backslash\mathrm{ntrianglelefteq}\backslash\mathrm{textntrianglelefteq}$
 20738 $\backslash\mathrm{ntrianglerighteq}\backslash\mathrm{textntrianglerighteq}$
 20739 $\backslash\mathrm{vdots}\backslash\mathrm{textvdots}$
 20740 $\backslash\mathrm{cdots}\backslash\mathrm{textcdots}$

20741 \let\udots\textudots
 20742 \let\ddots\textddots
 20743 \let\barin\textbarin
 20744 \let\diameter\textdiameter
 20745 \let\backneg\textbackneg
 20746 \let\wasylozenge\textwasylozenge
 20747 \let\invbackneg\textinvbackneg
 20748 \let\clock\textclock
 20749 \let\ulcorner\textulcorner
 20750 \let\urcorner\texturcorner
 20751 \let\llcorner\textllcorner
 20752 \let\lrcorner\textlrcorner
 20753 \let\frown\textfrown
 20754 \let\smile\textsmile
 20755 \let\Keyboard\textKeyboard
 20756 \let\langle\textlangle
 20757 \let\rangle\textrangle
 20758 \let\APLinv\textAPLinv
 20759 \let\Tumbler\textTumbler
 20760 \let\notslash\textnotslash
 20761 \let\notbackslash\textnotbackslash
 20762 \let\boxbackslash\textboxbackslash
 20763 \let\APLleftarrowbox\textAPLleftarrowbox
 20764 \let\APLrightarrowbox\textAPLrightarrowbox
 20765 \let\APLuparrowbox\textAPLuparrowbox
 20766 \let\APLdownarrowbox\textAPLdownarrowbox
 20767 \let\APLinput\textAPLinput
 20768 \let\Request\textRequest
 20769 \let\Beam\textBeam
 20770 \let\hexagon\texthexagon
 20771 \let\APLbox\textAPLbox
 20772 \let\ForwardToIndex\textForwardToIndex
 20773 \let\RewindToIndex\textRewindToIndex
 20774 \let\bbslash\textbbslash
 20775 \let\CircledA\textCircledA
 20776 \let\CleaningF\textCleaningF
 20777 \let\CleaningFF\textCleaningFF
 20778 \let\CleaningP\textCleaningP
 20779 \let\CleaningPP\textCleaningPP
 20780 \let\CuttingLine\textCuttingLine
 20781 \let\UParrow\textUParrow
 20782 \let\bigtriangleup\textbigtriangleup
 20783 \let\Forward\textForward
 20784 \let\triangleright\texttriangleright
 20785 \let\RHD\textRHD
 20786 \let\DOWNarrow\textDOWNarrow
 20787 \let\bigtriangledown\textbigtriangledown
 20788 \let\Rewind\textRewind
 20789 \let\triangleleft\texttriangleleft
 20790 \let\LHD\textLHD
 20791 \let\diamond\textdiamond
 20792 \let\lozenge\textlozenge
 20793 \let\LEFTCIRCLE\textLEFTCIRCLE
 20794 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20795 \let\openbullet\textopenbullet
 20796 \let\boxbar\textboxbar
 20797 \let\bigcircle\textbigcircle

20798 \let\Cloud\textCloud
 20799 \let\FiveStar\textFiveStar
 20800 \let\FiveStarOpen\textFiveStarOpen
 20801 \let\Phone\textPhone
 20802 \let\boxempty\textboxempty
 20803 \let\Checkedbox\textCheckedbox
 20804 \let\Crossedbox\textCrossedbox
 20805 \let\Coffeecup\textCoffeecup
 20806 \let\HandCuffLeft\textHandCuffLeft
 20807 \let\HandCuffRight\textHandCuffRight
 20808 \let\HandLeft\textHandLeft
 20809 \let\HandRight\textHandRight
 20810 \let\Radioactivity\textRadioactivity
 20811 \let\Biohazard\textBiohazard
 20812 \let\Ankh\textAnkh
 20813 \let\YinYang\textYinYang
 20814 \let\frownie\textfrownie
 20815 \let\smiley\textsmiley
 20816 \let\blacksmiley\textblacksmiley
 20817 \let\sun\textsun
 20818 \let\leftmoon\textleftmoon
 20819 \let\rightmoon\textrightmoon
 20820 \let\mercury\textmercury
 20821 \let\earth\textearth
 20822 \let\male\textmale
 20823 \let\jupiter\textjupiter
 20824 \let\saturn\textsaturn
 20825 \let\uranus\texturanus
 20826 \let\neptune\textneptune
 20827 \let\pluto\textpluto
 20828 \let\aries\textaries
 20829 \let\taurus\texttaurus
 20830 \let\gemini\textgemini
 20831 \let\cancer\textcancer
 20832 \let\leo\textleo
 20833 \let\virgo\textvirgo
 20834 \let\libra\textlibra
 20835 \let\scorpio\textscorpio
 20836 \let\sagittarius\textsagittarius
 20837 \let\capricornus\textcapricornus
 20838 \let\aquarius\textaquarius
 20839 \let\pisces\textpisces
 20840 \let\quarternote\textquarternote
 20841 \let\twonotes\texttwonotes
 20842 \let\sixteenthnote\textsixteenthnote
 20843 \let\flat\textflat
 20844 \let\natural\textnatural
 20845 \let\sharp\textsharp
 20846 \let\recycle\textrecycle
 20847 \let\Wheelchair\textWheelchair
 20848 \let\Flag\textFlag
 20849 \let\MineSign\textMineSign
 20850 \let\ds\textds
 20851 \let\dsmedical\textdsmedical
 20852 \let\dsjuridical\textdsjuridical
 20853 \let\dschemical\textdschemical
 20854 \let\dsbiological\textdsbiological

20855 \let\dscommercial\textdscommercial
 20856 \let\manstar\textmanstar
 20857 \let\danger\textdanger
 20858 \let\FemaleFemale\textFemaleFemale
 20859 \let\MaleMale\textMaleMale
 20860 \let\FemaleMale\textFemaleMale
 20861 \let\Hermaphrodite\textHermaphrodite
 20862 \let\Neutral\textNeutral
 20863 \let\hexstar\texthexstar
 20864 \let\SunCload\textSunCload
 20865 \let\Rain\textRain
 20866 \let\noway\textnoway
 20867 \let\Mountain\textMountain
 20868 \let\Tent\textTent
 20869 \let\ScissorRight\textScissorRight
 20870 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 20871 \let\ScissorHollowRight\textScissorHollowRight
 20872 \let\PhoneHandset\textPhoneHandset
 20873 \let\Tape\textTape
 20874 \let\Plane\textPlane
 20875 \let\Envelope\textEnvelope
 20876 \let\Peace\textPeace
 20877 \let\WritingHand\textWritingHand
 20878 \let\PencilRightDown\textPencilRightDown
 20879 \let\PencilRight\textPencilRight
 20880 \let\PencilRightUp\textPencilRightUp
 20881 \let\NibRight\textNibRight
 20882 \let\NibSolidRight\textNibSolidRight
 20883 \let\Checkmark\textCheckmark
 20884 \let\CheckmarkBold\textCheckmarkBold
 20885 \let\XSolid\textXSolid
 20886 \let\XSolidBold\textXSolidBold
 20887 \let\XSolidBrush\textXSolidBrush
 20888 \let\PlusOutline\textPlusOutline
 20889 \let\Plus\textPlus
 20890 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 20891 \let\PlusCenterOpen\textPlusCenterOpen
 20892 \let\Cross\textCross
 20893 \let\CrossOpenShadow\textCrossOpenShadow
 20894 \let\CrossOutline\textCrossOutline
 20895 \let\CrossMaltese\textCrossMaltese
 20896 \let\DavidStar\textDavidStar
 20897 \let\FourAsterisk\textFourAsterisk
 20898 \let\JackStar\textJackStar
 20899 \let\JackStarBold\textJackStarBold
 20900 \let\ClowerTips\textClowerTips
 20901 \let\FourStar\textFourStar
 20902 \let\FourStarOpen\textFourStarOpen
 20903 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 20904 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 20905 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 20906 \let\FiveStarOutline\textFiveStarOutline
 20907 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 20908 \let\FiveStarConvex\textFiveStarConvex
 20909 \let\FiveStarShadow\textFiveStarShadow
 20910 \let\AsteriskBold\textAsteriskBold
 20911 \let\AsteriskCenterOpen\textAsteriskCenterOpen

20912 \let\EightStarTaper\textEightStarTaper
 20913 \let\EightStarConvex\textEightStarConvex
 20914 \let\SixStar\textSixStar
 20915 \let\EightStar\textEightStar
 20916 \let\EightStarBold\textEightStarBold
 20917 \let\TwelveStar\textTwelveStar
 20918 \let\SixteenStarLight\textSixteenStarLight
 20919 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 20920 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 20921 \let\Asterisk\textAsterisk
 20922 \let\SixFlowerAlternate\textSixFlowerAlternate
 20923 \let\FiveFlowerPetal\textFiveFlowerPetal
 20924 \let\FiveFlowerOpen\textFiveFlowerOpen
 20925 \let\EightFlowerPetal\textEightFlowerPetal
 20926 \let\SunshineOpenCircled\textSunshineOpenCircled
 20927 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 20928 \let\SnowflakeChevron\textSnowflakeChevron
 20929 \let\Snowflake\textSnowflake
 20930 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 20931 \let\Sparkle\textSparkle
 20932 \let\SparkleBold\textSparkleBold
 20933 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 20934 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 20935 \let\EightAsterisk\textEightAsterisk
 20936 \let\CircleShadow\textCircleShadow
 20937 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 20938 \let\SquareTopRight\textSquareTopRight
 20939 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 20940 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 20941 \let\DiamandSolid\textDiamandSolid
 20942 \let\RectangleThin\textRectangleThin
 20943 \let\Rectangle\textRectangle
 20944 \let\RectangleBold\textRectangleBold
 20945 \let\perp\textperp
 20946 \let\notperp\textnotperp
 20947 \let\veedot\textveedot
 20948 \let\wedgedot\textwedgedot
 20949 \let\leftspoon\textleftspoon
 20950 \let\lbrackdbl\textlbrackdbl
 20951 \let\rbrackdbl\textrbrackdbl
 20952 \let\circlearrowleft\textcirclearrowleft
 20953 \let\circlearrowright\textcirclearrowright
 20954 \let\longleftarrow\textlongleftarrow
 20955 \let\longrightarrow\textlongrightarrow
 20956 \let\longleftarrow\textlongleftarrow
 20957 \let\longrightarrow\textlongrightarrow
 20958 \let\Longleftarrow\textLongleftarrow
 20959 \let\Longrightarrow\textLongrightarrow
 20960 \let\longmapsto\textlongmapsto
 20961 \let\Longmapsfrom\textLongmapsfrom
 20962 \let\Longmapsto\textLongmapsto
 20963 \let\nwsearrow\textnwsearrow
 20964 \let\neswarrow\textneswarrow
 20965 \let\lhooknarrow\textlhooknarrow
 20966 \let\rhooknarrow\texthooknarrow
 20967 \let\lhooksearrow\textlhooksearrow
 20968 \let\rhooksearrow\texthooksearrow

20969 `\let\leadsto\textleadsto`
 20970 `\let\rcurvearrowne\textrcurvearrowne`
 20971 `\let\lcurvearrowse\textlcurvearrowse`
 20972 `\let\lcurvearrowsw\textlcurvearrowsw`
 20973 `\let\rcurvearrowse\textrcurvearrowse`
 20974 `\let\lcurvearrowdown\textlcurvearrowdown`
 20975 `\let\rcurvearrowdown\textrcurvearrowdown`
 20976 `\let\rcurvearrowleft\textrcurvearrowleft`
 20977 `\let\rcurvearrowright\textrcurvearrowright`
 20978 `\let\leftrightharpoon\textleftrightharpoon`
 20979 `\let\rightleftharpoon\textrightleftharpoon`
 20980 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
 20981 `\let\updownharpoonleftright\textupdownharpoonleftright`
 20982 `\let\leftleftharpoons\textleftleftharpoons`
 20983 `\let\upupharpoons\textupupharpoons`
 20984 `\let\righttrightharpoons\textrighttrightharpoons`
 20985 `\let\downdownharpoons\textdowndownharpoons`
 20986 `\let\leftbarharpoon\textleftbarharpoon`
 20987 `\let\barleftharpoon\textbarleftharpoon`
 20988 `\let\rightbarharpoon\textrightbarharpoon`
 20989 `\let\barrightharpoon\textbarrightharpoon`
 20990 `\let\updownharpoons\textupdownharpoons`
 20991 `\let\downupharpoons\textdownupharpoons`
 20992 `\let\moo\textmoo`
 20993 `\let\llparenthesis\textllparenthesis`
 20994 `\let\rrparenthesis\textrrparenthesis`
 20995 `\let\invdiameter\textinvdiameter`
 20996 `\let\obar\textobar`
 20997 `\let\obslash\textobslash`
 20998 `\let\obot\textobot`
 20999 `\let\NoChemicalCleaning\textNoChemicalCleaning`
 21000 `\let\olessthan\textolessthan`
 21001 `\let\ogreaterthan\textogreaterthan`
 21002 `\let\boxslash\textboxslash`
 21003 `\let\boxbslash\textboxbslash`
 21004 `\let\boxast\textboxast`
 21005 `\let\boxcircle\textboxcircle`
 21006 `\let\boxbox\textboxbox`
 21007 `\let\Valve\textValve`
 21008 `\let\multimapboth\textmultimapboth`
 21009 `\let\shuffle\textshuffle`
 21010 `\let\uplus\textuplus`
 21011 `\let\bigdoublewedge\textbigdoublewedge`
 21012 `\let\bigdoublevee\textbigdoublevee`
 21013 `\let\Join\textJoin`
 21014 `\let\fatsemi\textfatsemi`
 21015 `\let\circplus\textcircplus`
 21016 `\let\minusdot\textminusdot`
 21017 `\let\dottimes\textdottimes`
 21018 `\let\dtimes\textdtimes`
 21019 `\let\odiv\textodiv`
 21020 `\let\invneg\textinvneg`
 21021 `\let\squdoublecap\textsqudoublecap`
 21022 `\let\capdot\textcapdot`
 21023 `\let\squdoublecup\textsqudoublecup`
 21024 `\let\doublewedge\textdoublewedge`
 21025 `\let\doublevee\textdoublevee`

21026 \let\doublebarwedge\textdoublebarwedge
 21027 \let\veedoublebar\textveedoublebar
 21028 \let\eqdot\texteqdot
 21029 \let\neqdot\textneqdot
 21030 \let\coloncolonequals\textcoloncolonequals
 21031 \let\leqslant\textleqslant
 21032 \let\leqslant\textleqslant
 21033 \let\geqslant\textgeqslant
 21034 \let\ngeslant\textngeslant
 21035 \let\lessapprox\textlessapprox
 21036 \let\lessapprox\textlessapprox
 21037 \let\gtrapprox\textgtrapprox
 21038 \let\ngtrapprox\textngtrapprox
 21039 \let\lneq\textlneq
 21040 \let\gneq\textgneq
 21041 \let\lnapprox\textlnapprox
 21042 \let\gnapprox\textgnapprox
 21043 \let\lesseqqgtr\textlesseqqgtr
 21044 \let\gtreqless\textgtreqless
 21045 \let\eqslantless\texteqslantless
 21046 \let\eqslantgtr\texteqslantgtr
 21047 \let\leftslice\textleftslice
 21048 \let\rightslice\textrightslice
 21049 \let\preceq\textpreceq
 21050 \let\preceq\textpreceq
 21051 \let\succeq\textsucceq
 21052 \let\succeq\textsucceq
 21053 \let\precneq\textprecneq
 21054 \let\succneq\textsuccneq
 21055 \let\preceqq\textpreceqq
 21056 \let\preceqq\textpreceqq
 21057 \let\succeqq\textsucceqq
 21058 \let\succeqq\textsucceqq
 21059 \let\precneqq\textprecneqq
 21060 \let\succneqq\textsuccneqq
 21061 \let\precapprox\textprecapprox
 21062 \let\precapprox\textprecapprox
 21063 \let\succapprox\textsuccapprox
 21064 \let\succapprox\textsuccapprox
 21065 \let\precnapprox\textprecnapprox
 21066 \let\succnapprox\textsuccnapprox
 21067 \let\subteqq\textsubteqq
 21068 \let\subteqq\textsubteqq
 21069 \let\supseteqq\textsupseteqq
 21070 \let\supseteqq\textsupseteqq
 21071 \let\dashV\textdashV
 21072 \let\ndashV\textndashV
 21073 \let\Dashv\textDashv
 21074 \let\ndashv\textndashv
 21075 \let\DashV\textDashV
 21076 \let\ndashV\textndashV
 21077 \let\downmodels\textdownmodels
 21078 \let\ndownmodels\textndownmodels
 21079 \let\upmodels\textupmodels
 21080 \let\nupmodels\textnupmodels
 21081 \let\upspoon\textupspoon
 21082 \let\interleave\textinterleave

21083 \let\sslash\textsslash
 21084 \let\pentagon\textpentagon
 21085 \let\varhexagon\textvarhexagon
 21086 \let\jinferior\textjinferior
 21087 \let\slashdiv\textslashdiv
 21088 \let\fivedots\textfivedots
 21089 \let\oo\textoo
 21090 \let\GaPa\textGaPa
 21091 \let\HaPa\textHaPa
 21092 \let\ViPa\textViPa
 21093 \let\AcPa\textAcPa
 21094 \let\SePa\textSePa
 21095 \let\ZwPa\textZwPa
 21096 \let\fullnote\textfullnote
 21097 \let\halfnote\texthalfnote
 21098 \let\Vier\textVier
 21099 \let\Acht\textAcht
 21100 \let\Sech\textSech
 21101 \let\Zwdr\textZwdr
 21102 \let\Mundus\textMundus
 21103 \let\Moon\textMoon
 21104 \let\ManFace\textManFace
 21105 \let\WomanFace\textWomanFace
 21106 \let\Fax\textFax
 21107 \let\Fire\textFire
 21108 \let\Bicycle\textBicycle
 21109 \let\Gentsroom\textGentsroom
 21110 \let\Ladiesroom\textLadiesroom
 21111 \let\ccnc\textccnc
 21112 \let\ccsa\textccsa
 21113 \let\Info\textInfo
 21114 \let\CESign\textCESign
 21115 \let\neg\textneg
 21116 \let\times\texttimes
 21117 \let\div\textdiv
 21118 \let\pm\textpm
 21119 \let\cdot\textcdot
 21120 }% \psdmapshortnames
 21121 \newcommand*{\psdaliasnames}{%
 21122 \let\epsdice\HyPsd@DieFace
 21123 \let\fcdice\HyPsd@DieFace
 21124 \let\MoonPha\HyPsd@MoonPha
 21125 \let\mathdollar\textdollar
 21126 \let\EyesDollar\textdollar
 21127 \let\binampersand\textampersand
 21128 \let\with\textampersand
 21129 \let\mathunderscore\textunderscore
 21130 \let\textvertline\textbar
 21131 \let\mathsterling\textsterling
 21132 \let\pounds\textsterling
 21133 \let\brokenvert\textbrokenbar
 21134 \let\mathsection\textsection
 21135 \let\S\textsection
 21136 \let\mathparagraph\textparagraph
 21137 \let\MultiplicationDot\textperiodcentered
 21138 \let\Squaredot\textperiodcentered
 21139 \let\vartimes\textmultiply

21140 \let\MVMultiplication\textmultiply
 21141 \let\eth\dh
 21142 \let\crossd\textcrd
 21143 \let\textbard\textcrd
 21144 \let\bard\textcrd
 21145 \let\textcrh\texthbar
 21146 \let\crossh\texthbar
 21147 \let\planck\texthbar
 21148 \let\eng\ng
 21149 \let\engma\ng
 21150 \let\crossb\textcrb
 21151 \let\textbarb\textcrb
 21152 \let\barb\textcrb
 21153 \let\Florin\textflorin
 21154 \let\hv\texthvl
 21155 \let\hausak\texthtk
 21156 \let\crossnilambda\textcrlambda
 21157 \let\barlambda\textcrlambda
 21158 \let\lambdabar\textcrlambda
 21159 \let\lambdaslash\textcrlambda
 21160 \let\textnrleg\textPUnrleg
 21161 \let\textpipevar\textpipe
 21162 \let\textdoublepipevar\textdoublepipe
 21163 \let\textdoublebarpipevar\textdoublebarpipe
 21164 \let\textcrg\textgslash
 21165 \let\textdblig\textPUdblig
 21166 \let\textqplig\textPUqplig
 21167 \let\textcentoldstyle\textslashc
 21168 \let\textbarc\textslashc
 21169 \let\inva\textturna
 21170 \let\vara\textscripta
 21171 \let\invscripta\textturnscripta
 21172 \let\rotvara\textturnscripta
 21173 \let\hookb\texthtb
 21174 \let\hausab\texthtb
 21175 \let\varopeno\textopeno
 21176 \let\curlyc\textctc
 21177 \let\taild\textrtaild
 21178 \let\hookd\texthtd
 21179 \let\hausad\texthtd
 21180 \let\er\textrhohookswa
 21181 \let\epsi\textniepsilon
 21182 \let\hookrepsilon\textrhohookrepsilon
 21183 \let\closedrepsilon\textcloserepsilon
 21184 \let\barj\textbardotlessj
 21185 \let\hookg\texthtg
 21186 \let\varg\textscriptg
 21187 \let\vod\textipagamma
 21188 \let\invh\textturnh
 21189 \let\udesc\textturnh
 21190 \let\hookh\texthth
 21191 \let\voicedh\texthth
 21192 \let\hookheng\texththeng
 21193 \let\ibar\textbari
 21194 \let\vari\textniiota
 21195 \let\tildel\textltilde
 21196 \let\latfric\textbeltl

21197 \let\tail\textrtail
 21198 \let\lz\textlyoghlig
 21199 \let\inv\textturnm
 21200 \let\rotr\textturnm
 21201 \let\legm\textturnmrleg
 21202 \let\labdentainas\textltailm
 21203 \let\emgma\textltailm
 21204 \let\nj\textltailn
 21205 \let\enya\textltailn
 21206 \let\tailn\textrtailn
 21207 \let\closedniomega\textcloseomega
 21208 \let\varomega\textcloseomega
 21209 \let\invr\textturnr
 21210 \let\rotr\textturnr
 21211 \let\invlegr\textturnlonglegr
 21212 \let\tailinvr\textturnrrtail
 21213 \let\legr\textlonglegr
 21214 \let\tailr\textrtailr
 21215 \let\flapr\textfishhookr
 21216 \let\flap\textfishhookr
 21217 \let\tails\textrtails
 21218 \let\curlyesh\textctesh
 21219 \let\clickt\textturnt
 21220 \let\tailt\textrtailt
 21221 \let\ubar\textbaru
 21222 \let\rotOmega\textniupsilon
 21223 \let\invv\textturnv
 21224 \let\pwedge\textturnv
 21225 \let\invw\textturnw
 21226 \let\rotrw\textturnw
 21227 \let\invy\textturny
 21228 \let\roty\textturny
 21229 \let\tailz\textrtailz
 21230 \let\curlyz\textctz
 21231 \let\curlyyogh\textctyogh
 21232 \let\ejective\textglotstop
 21233 \let\glottal\textglotstop
 21234 \let\reveject\textrevglotstop
 21235 \let\clickc\textstretchc
 21236 \let\textstretchcvar\textstretchc
 21237 \let\clickb\textbullseye
 21238 \let\textObullseye\textbullseye
 21239 \let\textctjvar\textctj
 21240 \let\textturnsck\textturnk
 21241 \let\dz\textdzlig
 21242 \let\tesh\textteshlig
 21243 \let\digamma\textdigammagreek
 21244 \let\hardsign\cyrhrdsn
 21245 \let\softsign\cyrsoftsn
 21246 \let\hebsin\hebshin
 21247 \let\textsck\textPUsc
 21248 \let\textscm\textPUscm
 21249 \let\textscp\textPUscp
 21250 \let\textrevscr\textPUrevscr
 21251 \let\textrhooca\textPURhooka
 21252 \let\textrhooke\textPURhooka
 21253 \let\textrhookepsilon\textPURhookepsilon

21254 `\let\texthookopeno\textPurhookopeno`
 21255 `\let\textdoublevertline\textbardbl`
 21256 `\let\dag\textdagger`
 21257 `\let\ddagger\textdaggerdbl`
 21258 `\let\ddag\textdaggerdbl`
 21259 `\let\mathellipsis\textellipsis`
 21260 `\let\EurDig\texteuro`
 21261 `\let\EURdig\texteuro`
 21262 `\let\EurHv\texteuro`
 21263 `\let\EURhv\texteuro`
 21264 `\let\EurCr\texteuro`
 21265 `\let\EURcr\texteuro`
 21266 `\let\EurTm\texteuro`
 21267 `\let\EURtm\texteuro`
 21268 `\let\Eur\texteuro`
 21269 `\let\Denarius\textDeleatur`
 21270 `\let\agemO\textmho`
 21271 `\let\EstimatedSign\textestimated`
 21272 `\let\Ecommerce\textestimated`
 21273 `\let\bindnasrepma\textinvamp`
 21274 `\let\parr\textinvamp`
 21275 `\let\MVRightArrow\textrightarrow`
 21276 `\let\MVRightarrow\textrightarrow`
 21277 `\let\MVArrowDown\textdownarrow`
 21278 `\let\Force\textdownarrow`
 21279 `\let\textglobrise\textnearrow`
 21280 `\let\textglobfall\textsearrow`
 21281 `\let\Lightning\textlightning`
 21282 `\let\Conclusion\textRightarrow`
 21283 `\let\dashedleftarrow\textdashleftarrow`
 21284 `\let\dashedrightarrow\textdashrightarrow`
 21285 `\let\varnothing\textemptyset`
 21286 `\let\owns\textni`
 21287 `\let\notni\textnotowner`
 21288 `\let\varprop\textpropto`
 21289 `\let\varangle\textsphericalangle`
 21290 `\let\AngleSign\textsphericalangle`
 21291 `\let\AngleSign\textsphericalangle`
 21292 `\let\notdivides\textnmid`
 21293 `\let\varowedge\textowedge`
 21294 `\let\varovee\textovee`
 21295 `\let\varint\textint`
 21296 `\let\varoint\textoint`
 21297 `\let\downtherefore\textbecause`
 21298 `\let\textdotdiv\textdotminus`
 21299 `\let\AC\textsim`
 21300 `\let\wreath\textwr`
 21301 `\let\nthickapprox\textnapprox`
 21302 `\let\VHF\texttriplesim`
 21303 `\let\notasymp\textnasymp`
 21304 `\let\Doteq\textdoteqdot`
 21305 `\let\corresponds\texthateq`
 21306 `\let\Corresponds\texthateq`
 21307 `\let\nequal\textneq`
 21308 `\let\Congruent\textequiv`
 21309 `\let\NotCongruent\textnequiv`
 21310 `\let\notequiv\textnequiv`

21311 \let\LessOrEqual\textleq
 21312 \let\LargerOrEqual\textgeq
 21313 \let\apprle\textlessim
 21314 \let\apprge\textgtrsim
 21315 \let\varoplus\textoplus
 21316 \let\varominus\textominus
 21317 \let\varotimes\textotimes
 21318 \let\varoslash\textoslash
 21319 \let\varodot\textodot
 21320 \let\ocirc\textcircledcirc
 21321 \let\varocircle\textcircledcirc
 21322 \let\varoast\textcircledast
 21323 \let\oasterisk\textcircledast
 21324 \let\rightvdash\textvdash
 21325 \let\leftvdash\textdashv
 21326 \let\leftvdash\textndashv
 21327 \let\downvdash\texttop
 21328 \let\upvdash\textbot
 21329 \let\nperp\textnupvdash
 21330 \let\models\textvDash
 21331 \let\rightmodels\textvDash
 21332 \let\rightVdash\textVdash
 21333 \let\rightModels\textVDash
 21334 \let\rightvdash\textnvdash
 21335 \let\rightmodels\textnvDash
 21336 \let\models\textnvDash
 21337 \let\rightVdash\textnVdash
 21338 \let\rightModels\textnVDash
 21339 \let\lessclosed\textlhd
 21340 \let\gtrclosed\textrhd
 21341 \let\leqclosed\textunlhd
 21342 \let\trianglelefteq\textunlhd
 21343 \let\geqclosed\textunrhd
 21344 \let\trianglerighteq\textunrhd
 21345 \let\Bowtie\textbowtie
 21346 \let\varcurlyvee\textcurlyvee
 21347 \let\varcurlywedge\textcurlywedge
 21348 \let\doublecap\textCap
 21349 \let\doublecup\textCup
 21350 \let\varsubsetneq\textsubsetneq
 21351 \let\varsupsetneq\textsupsetneq
 21352 \let\lessclosed\textntriangleleft
 21353 \let\ngtrclosed\textntriangleright
 21354 \let\Clocklogo\textclock
 21355 \let\ClockLogo\textclock
 21356 \let\baro\textstmaryrdbaro
 21357 \let\varparallelinv\textbbslash
 21358 \let\CleaningA\textCircledA
 21359 \let\Kutline\textCuttingLine
 21360 \let\CutLine\textCuttingLine
 21361 \let\Cutline\textCuttingLine
 21362 \let\MoveUp\textUParrow
 21363 \let\APLup\textbigtriangleup
 21364 \let\Bleech\textbigtriangleup
 21365 \let\MoveDown\textDOWNarrow
 21366 \let\APLdown\textbigtriangledown
 21367 \let\Diamond\textdiamond

21368 \let\varbigcirc\textbigcircle
 21369 \let\Telefon\textPhone
 21370 \let\Box\textboxempty
 21371 \let\CheckedBox\textCheckedbox
 21372 \let\XBox\textCrossedbox
 21373 \let\CrossedBox\textCrossedbox
 21374 \let\rightpointleft\textHandLeft
 21375 \let\leftpointright\textHandRight
 21376 \let\PointingHand\textHandRight
 21377 \let\Pointinghand\textHandRight
 21378 \let\Radiation\textRadioactivity
 21379 \let\Yinyang\textYinYang
 21380 \let\YingYang\textYinYang
 21381 \let\Yingyang\textYinYang
 21382 \let\Frowny\textfrownie
 21383 \let\Smiley\textsmiley
 21384 \let\Sun\textsun
 21385 \let\Mercury\textmercury
 21386 \let\textfemale\textPUfemale
 21387 \let\female\textPUfemale
 21388 \let\venus\textPUfemale
 21389 \let\Venus\textPUfemale
 21390 \let\Female\textPUfemale
 21391 \let\Earth\textearth
 21392 \let\mars\textmale
 21393 \let\Mars\textmale
 21394 \let\Male\textmale
 21395 \let\Jupiter\textjupiter
 21396 \let\Saturn\textsaturn
 21397 \let\Uranus\texturanus
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 21422 \let\Football\textSoccerBall
 21423 \let\CutLeft\textScissorRightBrokenBottom
 21424 \let\Cutright\textScissorRightBrokenBottom

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21426 \let\Leftscissors\textScissorRight
21427 \let\Letter\textEnvelope
21428 \let\Writinghand\textWritingHand
21429 \let\checkmark\textCheckmark
21430 \let\davidstar\textDavidStar
21431 \let\llbracket\textlbrackdbl
21432 \let\rrbracket\textrrackdbl
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21434 \let\Righttorque\textlcurvearrowdown
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