

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      \cname ver@\HyC@package.sty\endcsname
39    }%
```

```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \LaTeX 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 \LaTeX '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{kvdefinekeys}[2011/04/07]
259 \RequirePackage{pdfescape}[2007/11/11]
260 \RequirePackage{ifvtex}

```

```

261 \RequirePackage{ifxetex}[2006/08/21]
262 \RequirePackage{hycolor}
263 \RequirePackage{letltxmacro}[2008/06/13]
264 \RequirePackage{auxhook}[2009/12/14]
265 \def\Hy@Error{\@PackageError{hyperref}}
266 \def\Hy@Warning{\@PackageWarning{hyperref}}
267 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
268 \def\Hy@Info{\@PackageInfo{hyperref}}
269 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
270 \def\Hy@Message#1{%
271   \GenericWarning{%
272     (hyperref)\@spaces\@spaces\@spaces\@spaces
273   }{%
274     Package hyperref Message: #1\ltx@gobble
275   }%
276 }

```

4.2 Version check

\Hy@VersionChecked

```

277 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

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

```

```

312      * \y: hyperref.sty\MessageBreak
313      * \z: \a
314      }\@ehd
315      \fi
316      \fi
317    }%
318  }%
319 \endgroup
320 \chardef\Hy@VersionChecked=1 %
321 }

```

\Hy@@VersionCheck

```

322 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
323 \def#1{#2 #3}%
324 }

```

4.3 Checks with regular expressions

```

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

```

```

364 \def\ltx@leftbracechar{0}%
365 }%
366 \begingroup
367 \lccode'0='}\relax
368 \lowercase{\endgroup
369 \def\ltx@rightbracechar{0}%
370 }%
371 }%
372 }

```

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 \LaTeX processing.

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

```

373 \@ifundefined{AfterBeginDocument}{%
374 \def\AfterBeginDocument{\AtBeginDocument}%
375 }{}%

```

`\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.

```

376 \def\Hy@AtBeginDocument{%
377 \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
378 }

```

`\Hy@AtEndOfPackage`

```

379 \def\Hy@AtEndOfPackage{%
380 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
381 }

```

`\Hy@AtBeginDocumentHook`

```

382 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

383 \let\Hy@AtEndOfPackageHook\ltx@empty

```

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

```

384 \AtEndOfPackage{%
385 \Hy@AtEndOfPackageHook
386 \let\Hy@AtEndOfPackageHook\@undefined
387 \AfterBeginDocument{%
388 \Hy@AtBeginDocumentHook}%
389 \let\Hy@AtBeginDocumentHook\@undefined
390 }%
391 }

```

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

```

392 \RequirePackage{kvoptions}[2009/07/21]

```

4.5 Switches

```
393 \newif\ifHy@stoppeearly
394 \newif\ifHy@typexml
395 \newif\ifHy@activeanchor
396 \newif\ifHy@backref
397 \newif\ifHy@bookmarks
398 \newif\ifHy@bookmarksnumbered
399 \newif\ifHy@bookmarksopen
400 \newif\ifHy@breaklinks
401 \newif\ifHy@pdfcenterwindow
402 \newif\ifHy@CJKbookmarks
403 \newif\ifHy@colorlinks
404 \newif\ifHy@destlabel
405 \newif\ifHy@draft
406 \let\Hy@finaltrue\Hy@draftfalse
407 \let\Hy@finalfalse\Hy@drafttrue
408 \newif\ifHy@pdfescapeform
409 \newif\ifHy@hyperfigures
410 \newif\ifHy@pdfwindow
411 \newif\ifHy@frenchlinks
412 \newif\ifHy@hyperfootnotes
413 \newif\ifHy@hyperindex
414 \newif\ifHy@hypertextnames
415 \newif\ifHy@implicit
416 \newif\ifHy@linktocpage
417 \newif\ifHy@localanchorname
418 \newif\ifHy@pdfmenubar
419 \newif\ifHy@naturalnames
420 \newif\ifHy@nesting
421 \newif\ifHy@pdfnewwindowset
422 \newif\ifHy@pdfnewwindow
423 \newif\ifHy@ocgcolorlinks
424 \newif\ifHy@pageanchor
425 \newif\ifHy@pdfpagelabels
426 \newif\ifHy@pdfpagehidden
427 \newif\ifHy@pdfstring
428 \newif\ifHy@plainpages
429 \newif\ifHy@psize
430 \newif\ifHy@raiselinks
431 \newif\ifHy@seminarslides
432 \newif\ifHy@setpagesize
433 \newif\ifHy@texht
434 \newif\ifHy@psdextra
435 \newif\ifHy@pdftoolbar
436 \newif\ifHy@unicode
437 \newif\ifHy@pdfusetitle
438 \newif\ifHy@verbose
439 \let\Hy@debugtrue\Hy@verbosetrue
440 \let\Hy@debugfalse\Hy@verbosefalse
441 \newif\ifHy@pdfwindowui
442 \newif\ifHy@pdfdisplaydoctitle
443 \newif\ifHy@pdfa
```

Defaults for the switches are now set.

```
444 \Hy@backreffalse
445 \Hy@bookmarksnumberedfalse
446 \Hy@bookmarksopenfalse
```



```

447 \Hy@bookmarkstrue
448 \Hy@breaklinksfalse
449 \Hy@pdfcenterwindowfalse
450 \Hy@CJKbookmarksfalse
451 \Hy@destlabelfalse
452 \Hy@pdfescapeformfalse
453 \Hy@hyperfiguresfalse
454 \Hy@pdffitwindowfalse
455 \Hy@hyperfootnotesttrue
456 \Hy@hyperindextrue
457 \Hy@hypertextnamestrue
458 \Hy@implicitttrue
459 \Hy@linktocpagefalse
460 \Hy@localanchornamefalse
461 \Hy@pdfmenubartrue
462 \Hy@naturalnamesfalse
463 \Hy@nestingfalse
464 \Hy@pdfnewwindowsetfalse
465 \Hy@pdfnewwindowfalse
466 \Hy@pageanchortrue
467 \Hy@pdfpagelabelstrue
468 \Hy@pdfpagehiddenfalse
469 \Hy@pdfstringfalse
470 \Hy@plainpagesfalse
471 \Hy@raiselinksfalse
472 \Hy@setpagesizetrue
473 \Hy@texhtfalse
474 \Hy@psdextrafalse
475 \Hy@pdftoolbartrue
476 \Hy@typexmlfalse
477 \Hy@unicodefalse
478 \Hy@pdfusetitlefalse
479 \Hy@verbosefalse
480 \Hy@pdfwindowuitrue
481 \Hy@pdfdisplaydoctitlefalse
482 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

485 \newdimen\@linkdim
486 \let\Hy@driver\ltx@empty
487 \let\MaybeStopEarly\relax
488 \newcount\Hy@linkcounter
489 \newcount\Hy@pagecounter
490 \Hy@linkcounter0
491 \Hy@pagecounter0

```

5.1 Macros for recursions

```

492 \let\Hy@ReturnEnd\@empty
493 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}

```

```
494 \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.

```
495 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
496 \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`

```
497 \begingroup\expandafter\expandafter\expandafter\endgroup
498 \expandafter\ifx\csname dimexpr\endcsname\relax
499 \def\hypercalcbpdef#1#2{%
500   \begingroup
501     \toks@{}%
502     \HyCal@scan#2\hypercalcbp\@nil
503   \expandafter\endgroup
504   \expandafter\def\expandafter#1\expandafter{\the\toks@}%
505 }%
506 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
507   \toks@\expandafter{\the\toks@ #1}%
508   \ifx\#2\%
509     \else
510       \ltx@ReturnAfterFi{%
511         \HyCal@do#2\@nil
512       }%
513     \fi
514 }
```

```

513 \fi
514 }%
515 \def\HyCal@do#1#2\@nil{%
516 \@ifpackageloaded{calc}{}{%
517 \Hy@Warning{%
518 For calculations \string\hypercalcbp\space needs\MessageBreak
519 package calc or e-TeX%
520 }%
521 }%
522 \setlength{\dimen@}{#1}%
523 \setlength{\dimen@}{0.99626401\dimen@}%
524 \edef\x{%
525 \toks@{%
526 \the\toks@
527 \strip@pt\dimen@
528 }%
529 }\x
530 \HyCal@scan#2\@nil
531 }%
532 \else
533 \def\hypercalcbp#1{%
534 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
535 }%
536 \def\hypercalcbpdef{\def}%
537 \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 T_EX'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 T_EX 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 T_EX 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 T_EX, because the tokens have only cat-codes 10 until 12.

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

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

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

```
539 \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 T_EX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard L^AT_EX behaviour.

```
540 \escapechar'\%
```

From the view of T_EX a 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.

```
541 \edef\0{\string\0}%
```

```
542 \edef\1{\string\1}%
```

```
543 \edef\2{\string\2}%
```

```
544 \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.

```

545 \ifHy@unicode
546 \edef\8{\string\8}%
547 \edef\9{\string\9}%
548 \fontencoding{PU}%
549 \HyPsd@UTFviii
550 \def\ifpdfstringunicode###1##2{##1}%
551 \else
552 \fontencoding{PD1}%
553 \def\ifpdfstringunicode###1##2{##2}%
554 \fi
555 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
556 \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).

```

557 \@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).

```

558 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

559 \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.

```

560 \let\{\textbraceleft
561 \let\}\textbraceright
562 \let\\\textbackslash
563 \let\#\textnumbersign
564 \let\$\textdollar
565 \let\%\textpercent
566 \let\&\textampersand
567 \% \let\~\textasciitilde
568 \let\_ \textunderscore
569 \let\P\textparagraph
570 \let\ldots\textellipsis
571 \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.

```
572 \def\{\pdfstringdefWarn\}%
573 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
574 \def\TeX{\TeX}%
575 \def\LaTeX{\LaTeX}%
576 \def\LaTeXe{%
577   \LaTeX2%
578   \ifHy@unicode\textepsilon\else e\fi
579 }%
580 \def\eTeX{%
581   \ifHy@unicode\textepsilon\else e\fi
582   -\TeX%
583 }%
584 \def\SlTeX{\SlTeX}%
585 \def\MF{Metafont}%
586 \def\MP{Metapost}%
```

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

```
587 \let\fontencoding\@gobble
588 \let\fontfamily\@gobble
589 \let\fontseries\@gobble
590 \let\fontshape\@gobble
591 \let\fontsize\@gobbletwo
592 \let\selectfont\@empty
593 \let\usefont\@gobblefour
594 \let\emph\@firstofone
595 \let\textnormal\@firstofone
596 \let\textrm\@firstofone
597 \let\textsf\@firstofone
598 \let\texttt\@firstofone
599 \let\textbf\@firstofone
600 \let\textmd\@firstofone
601 \let\textit\@firstofone
602 \let\textsc\@firstofone
603 \let\textsl\@firstofone
604 \let\textup\@firstofone
605 \let\normalfont\@empty
606 \let\rmfamily\@empty
607 \let\sffamily\@empty
608 \let\ttfamily\@empty
```

```

609 \let\bfseries\@empty
610 \let\mdseries\@empty
611 \let\itshape\@empty
612 \let\scshape\@empty
613 \let\slshape\@empty
614 \let\upshape\@empty
615 \let\em\@empty
616 \let\rm\@empty
617 \let\Huge\@empty
618 \let\LARGE\@empty
619 \let\Large\@empty
620 \let\footnotesize\@empty
621 \let\huge\@empty
622 \let\large\@empty
623 \let\normalsize\@empty
624 \let\scriptsize\@empty
625 \let\small\@empty
626 \let\tiny\@empty
627 \let\mathversion\@gobble
628 \let\phantom\@gobble
629 \let\vphantom\@gobble
630 \let\hphantom\@gobble

```

Package pifont.

```

631 \let\ding\HyPsd@ding
632 \let\Cube\HyPsd@DieFace
633 %* \HyPsd@DieFace -> \epsdice (epsdice)
634 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

635 \def\begin#1{\csname#1\endcsname}%
636 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

638 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
639 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

640 \ifHy@psdextra
641 \ifHy@unicode
642 \csname psdmapshortnames\endcsname
643 \csname psdaliasnames\endcsname
644 \fi
645 \fi

```

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

```

646 \let\foreignlanguage\@secondoftwo
647 \let\textlatin\@firstofone
648 \ltx@ifundefined{language@group}{\@firstofone}{\@secondoftwo}%

```

```

649 \csname HyPsd@babel@\language@group\endcsname
650 }%
651 \HyPsd@GreekPatch
652 \HyPsd@SpanishPatch
653 \HyPsd@RussianPatch
654 \HyPsd@BabelPatch
655 \let\@safe@activetrue\relax
656 \let\@safe@activesfalse\relax
    Disable \cyr, used in russianb.ldf.
657 \let\cyr\relax
    Redefine \es@roman, used in spanish.ldf.
658 \let\es@roman\@Roman

```

Package german.

```

659 \let\glqq\textglqq
660 \let\grqq\textgrqq
661 \let\glq\textglq
662 \let\grq\textgrq
663 \let\flqq\textflqq
664 \let\frqq\textfrqq
665 \let\flq\textflq
666 \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}
667 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

668 \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.

```

669 \let\hspace\HyPsd@hspace

```

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

```

670 \let\label\@gobble
671 \let\index\@gobble
672 \let\glossary\@gobble
673 \let\href\HyPsd@href
674 \let\@mkboth\@gobbletwo
    The \ref and \pageref is much more complicate because of their star form.
675 \let\ref\HyPsd@ref
676 \let\pageref\HyPsd@pageref
677 \let\nameref\HyPsd@nameref
678 \let\autoref\HyPsd@autoref

```


Miscellaneous commands.

```
679 \let\leavevmode\@empty
680 \let\mbox\@empty
```

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

```
681 \def\halign{\pdfstringdefWarn\halign\@gobble}%
682 \let\ignorespaces\HyPsd@ignorespaces
683 \let\Hy@SectionAnchorHref\@gobble
684 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
685 \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 `\pdfstringdef-PreHook`.

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`).

```
686 \Hy@pdfstringtrue
687 \pdfstringdefPreHook
```

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

```
688 \HyPsd@LetUnexpandableSpace\space
689 \HyPsd@LetUnexpandableSpace\ %
690 \HyPsd@LetUnexpandableSpace~%
691 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
692 \ltx@ifundefined{@xspace}{%
693 \let\xspace\HyPsd@ITALCORR
694 }{%
695 \let\xspace\HyPsd@XSPACE
696 }%
697 \let\/\HyPsd@ITALCORR
698 \let\bgroup\/%
699 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
700 \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 expandible 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:

```

701 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
702 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
703 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
704 \let\@protected@testopt\HyPsd@protected@testopt

```

Support for package ‘xargs’:

```

705 \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).

```

706 \begingroup
707 \let\GenericError\@gobblefour
708 \let\GenericWarning\@gobbletwo
709 \let\GenericInfo\@gobbletwo

```

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

```

710 \ifx\nofrenchguillemets\@undefined
711 \else
712 \nofrenchguillemets
713 \fi

```

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

```

714 \let\Hy@temp\xdef
715 \let\def\HyPsd@DefCommand
716 \let\gdef\HyPsd@DefCommand
717 \let\edef\HyPsd@DefCommand
718 \let\xdef\HyPsd@DefCommand
719 \let\futurelet\HyPsd@LetCommand
720 \let\let\HyPsd@LetCommand
721 \Hy@temp#1{#2}%
722 \endgroup

```

6.2.3 Postprocessing

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

```

723 \ifx#1\@empty
724 \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 an marker for the xspace support.
- `TEX` silently removes the outmost 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.

```

725 \HyPsd@ProtectSpaces#1%
726 \let\HyPsd@String\@empty
727 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
728 \global\let#1\HyPsd@String

```

Check tokens. After removing the spaces and the grouping characters the string now should only consists 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.

```

729 \let\HyPsd@SPACEOPTI\relax
730 {%
731 \let\HyPsd@String\@empty
732 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
733 \global\let#1\HyPsd@String
734 }%
735 \expandafter\HyPsd@RemoveMask\expandafter
736 |\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.

```

737 \expandafter
738 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
739 \let\HyPsd@String\@empty
740 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
741 \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.

```
742 \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.ldf` can produce an additional space before `\guillemotright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```

743 \ifHy@unicode
744 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
745 \HyPsd@SPACEOPTI#1%
746 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
747 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
748 {\HyPsd@SPACEOPTI\80\273}#1%
749 \else
750 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
751 \expandafter\HyPsd@Subst\expandafter{%
752 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
753 \string\273}\HyPsd@SPACEOPTI\273}#1%
754 \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.

```

755 \ifHy@unicode
756 \HyPsd@StringSubst{\}){\80\051}#1%
757 \HyPsd@Subst){\80\051}#1%
758 \let\HyPsd@empty\relax
759 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
760 {\HyPsd@empty\80\051}#1%
761 \else
762 \HyPsd@StringSubst{\}){\051}#1%
763 \HyPsd@Subst){\051}#1%
764 \let\HyPsd@empty\relax
765 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
766 \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`.

```

767 \expandafter\HyPsd@Subst\expandafter{\//}\HyPsd@empty#1%
768 \ltx@ifundefined{@xspace}{%
769 }{%
770 \let\HyPsd@xspace\relax
771 \expandafter\HyPsd@Subst\expandafter
772 {\HyPsd@XSPACE}\HyPsd@xspace#1%
773 \let\HyPsd@xspace\HyPsd@doxspace
774 }%
775 \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.

```

776 \HyPsd@Subst{---}\textemdash#1%
777 \HyPsd@Subst{--}\textendash#1%
778 % \HyPsd@Subst{fi}\textfi#1%
779 % \HyPsd@Subst{fl}\textfl#1%
780 \HyPsd@Subst{!}\textexclamdown#1%
781 \HyPsd@Subst{?}\textquestiondown#1%
```

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

```

782 \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.

```

783 \ifHy@unicode
784 \HyPsd@StringSubst\(\textparenleft#1%
785 \HyPsd@Subst\(\textparenleft#1%
786 \else
787 \HyPsd@StringSubst\({\050}#1%
788 \HyPsd@Subst({\050}#1%
789 \HyPsd@StringSubst{\050}{\string\)}#1%
790 \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.

```

791 \ifHy@unicode
792 \edef\HyPsd@SPACEOPTI{\80\040}%
793 \else
794 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
795 \fi
796 \xdef#1{#1\@empty}%
797 \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.

```

798 \endgroup
799 \begingroup
800 \ifHy@unicode
801 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```
802 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
803 \ltx@ifundefined{StringEncodingConvertTest}{%
804 }{%
805 \EdefUnescapeString\HyPsd@temp#1%
806 \ifxetex
807 \let\HyPsd@UnescapedString\HyPsd@temp
808 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
809 {utf16be}{ascii-print}{%
810 \EdefEscapeString\HyPsd@temp\HyPsd@temp
811 \global\let#1\HyPsd@temp
812 \HyPsd@EscapeTeX#1%
813 \Hy@unicodedefalse
814 }{%
815 \HyPsd@ToBigChars#1%
816 }%
817 \else
818 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
819 {utf16be}{pdfdoc}{%
820 \EdefEscapeString\HyPsd@temp\HyPsd@temp
821 \global\let#1\HyPsd@temp
822 \HyPsd@EscapeTeX#1%
823 \Hy@unicodedefalse
824 }{}}%
825 \fi
826 }%
827 \fi
828 \fi
829 \HyPsd@XeTeXBigCharsfalse
```

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

```
830 \pdfstringdefPostHook#1%
831 \endgroup
832 }
```

`\Hy@pdfstringdef`

```
833 \def\Hy@pdfstringdef#1#2{%
834 \pdfstringdef\Hy@gtemp{#2}%
835 \let#1\Hy@gtemp
836 }
```

6.3 Encodings

6.3.1 XeTeX

```
837 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
838 \catcode\z@=12 %
839 \ifxetex
840 \expandafter\@firstofone
841 \else
842 \let\HyPsd@XeTeXBigCharstrue\@empty
843 \let\HyPsd@XeTeXBigCharsfalse\@empty
844 \expandafter\@gobble
845 \fi
846 {%
847 \newif\ifHyPsd@XeTeXBigChars
```

```

848 \def\HyPsd@XeTeXBigCharsfalse{%
849   \global\let\ifHyPsd@XeTeXBigChars\iffalse
850 }%
851 \def\HyPsd@XeTeXBigCharstrue{%
852   \global\let\ifHyPsd@XeTeXBigChars\iftrue
853 }%
854 \def\HyPsd@ToBigChars#1{%
855   \ifHyPsd@XeTeXBigChars
856     \EdefEscapeHex\HyPsd@UnescapedString{%
857       \expandafter\@gobbletwo\HyPsd@UnescapedString
858     }%
859     \begingroup
860     \toks@{}%
861     \escapechar=92\relax
862     \let\x\HyPsd@ToBigChar
863     \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
864     \relax\relax\relax\relax\relax\relax\relax
865     \edef\x{%
866       \endgroup
867       \gdef\noexpand#1{\the\toks@}%
868     }%
869     \x
870   \fi
871 }%
872 \def\HyPsd@ToBigChar#1#2#3#4{%
873   \ifx\relax#1\relax
874     \let\x\relax
875   \else
876     \count@=#1#2#3#4\relax
877     \let\y\@empty
878     \lccode\z@=\count@
879     \ifnum\count@=40 % (
880       \let\y\@backslashchar
881     \else
882       \ifnum\count@=41 % )
883         \let\y\@backslashchar
884       \else
885         \ifnum\count@=92 % backslash
886           \let\y\@backslashchar
887         \else
888           \ifnum\count@=10 % newline
889             \edef\y##1{\string\n}%
890           \else
891             \ifnum\count@=13 % carriage return
892               \edef\y##1{\string\r}%
893             \fi
894           \fi
895         \fi
896       \fi
897     \fi
898   \lowercase{%
899     \toks@\expandafter{%
900       \the\expandafter\toks@
901       \y
902       ^^@%
903     }%
904   }%

```



```

905 \fi
906 \x
907 }%
908 }
909 \Hy@temp

```

6.3.2 Workaround for package linguex

```

910 \@ifpackageloaded{linguex}{%
911 \let\HyLinguex@OrgB\b
912 \let\HyLinguex@OrgC\c
913 \let\HyLinguex@OrgD\d
914 \def\HyLinguex@Restore{%
915 \let\b\HyLinguex@OrgB
916 \let\c\HyLinguex@OrgC
917 \let\d\HyLinguex@OrgD
918 }%
919 \Hy@AtEndOfPackage{%
920 \pdfstringdefDisableCommands{%
921 \ltx@ifundefined{oldb}{\let\b\oldb}%
922 \ltx@ifundefined{oldc}{\let\c\oldc}%
923 \ltx@ifundefined{oldd}{\let\d\oldd}%
924 }%
925 }%
926 }{%
927 \let\HyLinguex@Restore\relax
928 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

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

```

```

957 \catcode40 12 % (
958 \catcode41 12 % )
959 \catcode42 12 % *
960 \catcode46 12 % .
961 \catcode58 12 % :
962 \catcode60 12 % <
963 \catcode61 12 % =
964 \catcode62 12 % >
965 \catcode91 12 % [
966 \catcode92 0 % \
967 \catcode93 12 % ]
968 \catcode123 1 % {
969 \catcode124 12 % |
970 \catcode125 2 % }
971 \makeatletter
972 }

```

`\Hy@RestoreCatcodeSettings`

```

973 \def\Hy@RestoreCatcodeSettings#1{%
974   \csname Hy@cat@#1\endcsname
975   \expandafter\let\csname Hy@cat@#1\endcsname\relax
976 }

```

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.

```

977 \@ifundefined{T@PD1}{%
978   \Hy@SaveCatcodeSettings{pd1}%
979   \input{pd1enc.def}%
980   \Hy@RestoreCatcodeSettings{pd1}%
981   \HyLinguex@Restore
982 }{}
983 \DeclareFontFamily{PD1}{pdf}{}
984 \DeclareFontShape{PD1}{pdf}{m}{n}{<-> cmr10 }{}
985 \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`.

```

986 \def\HyPsd@LoadUnicode{%
987   \@ifundefined{T@PU}{%
988     \Hy@SaveCatcodeSettings{pu}%
989     \input{puenc.def}%
990     \Hy@RestoreCatcodeSettings{pu}%
991     \HyLinguex@Restore

```

```

992 }{}%
993 \DeclareFontFamily{PU}{pdf}{}%
994 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
995 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
996 \HyPsd@LoadExtra
997 \let\HyPsd@LoadUnicode\relax
998 }

```

`\HyPsd@LoadExtra`

```

999 \def\HyPsd@LoadExtra{%
1000 \ifHy@psdextra
1001 \ltx@iffileloaded{puenc.def}{%
1002 \Hy@SaveCatcodeSettings{psdextra}%
1003 \input{psdextra.def}%
1004 \Hy@RestoreCatcodeSettings{psdextra}%
1005 \let\HyPsd@LoadExtra\relax
1006 }{}%
1007 \fi
1008 }

```

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.

```

1009 \def\texorpdfstring{%
1010 \ifHy@pdfstring
1011 \expandafter\@secondoftwo
1012 \else
1013 \expandafter\@firstoftwo
1014 \fi
1015 }

```

6.4.2 Hooks for `\pdfstringdef`

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

`\pdfstringdefPostHook`

```

1016 \@ifundefined{pdfstringdefPreHook}{%
1017 \let\pdfstringdefPreHook\@empty
1018 }{}
1019 \@ifundefined{pdfstringdefPostHook}{%
1020 \let\pdfstringdefPostHook\@gobble
1021 }{}

```

`\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`.

```

1022 \def\pdfstringdefDisableCommands{%
1023   \begingroup
1024     \makeatletter
1025     \HyPsd@DisableCommands
1026 }

```

`\HyPsd@DisableCommands`

```

1027 \long\def\HyPsd@DisableCommands#1{%
1028   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1029   \endgroup
1030 }

```

`\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`.

```

1031 \def\pdfstringdefWarn#1{%
1032   \expandafter\noexpand\csname<>\string#1\endcsname
1033 }

```

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.

```

1034 \begingroup
1035   \catcode0=12 %
1036   \def\x{\endgroup
1037     \def\HyPsd@ignorespaces{%
1038       \romannumeral\expandafter'\expandafter^^@%
1039       \romannumeral'^^@%
1040     }%
1041   }%
1042   \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`.

```

1043 \def\HyPsd@BabelPatch{%
1044   \let\HyOrg@languageshorthands\languageshorthands
1045   \let\languageshorthands\HyPsd@LanguageShorthands
1046 }
1047 \begingroup\expandafter\expandafter\expandafter\endgroup
1048 \expandafter\ifx\csname pdf@stricmp\endcsname\relax
1049   \let\HyPsd@langshort@system\@empty
1050   \def\HyPsd@LanguageShorthands#1{%
1051     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1052       \HyPsd@langshort@system
1053     \expandafter\@gobble
1054   \else
1055     \expandafter\@firstofone
1056   \fi
1057   {%
1058     \HyOrg@languageshorthands{#1}%
1059   }%
1060 }%
1061 \else
1062   \def\HyPsd@LanguageShorthands#1{%
1063     \ifnum\pdf@stricmp{#1}{system}=\z@
1064       \expandafter\@gobble
1065     \else
1066       \expandafter\@firstofone
1067     \fi
1068     {%
1069       \HyOrg@languageshorthands{#1}%
1070     }%
1071   }%
1072 \fi
1073 \def\Hy@temp{%
1074   \@ifpackageloaded{babel}{%
1075     \@ifpackagelater{babel}{2008/03/16}{%
1076       \let\Hy@temp\@empty
1077     }{%
1078       \def\HyPsd@BabelPatch{%
1079         \let\HyOrg@languageshorthands\languageshorthands
1080       }%
1081     }%
1082   }{}%
1083 }
1084 \Hy@temp
1085 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1086 \newif\ifHy@next

```

Nothing to do for english.

```

1087 \ltx@ifundefined{danish@sh@"@sel}{}{%
1088   \def\HyPsd@babel@danish{%
1089     \declare@shorthand{danish}{"}{}%

```

```

1090 \declare@shorthand{danish}{~}{-}%
1091 }%
1092 }
1093 \ltx@ifundefined{dutch@sh@}{@sel}{-}{%
1094 \def\HyPsd@babel@dutch{%
1095 \declare@shorthand{dutch}{~}{-}%
1096 \declare@shorthand{dutch}{~}{-}%
1097 }%
1098 }
1099 \ltx@ifundefined{finnish@sh@}{@sel}{-}{%
1100 \def\HyPsd@babel@finnish{%
1101 \declare@shorthand{finnish}{~}{-}%
1102 }%
1103 }
1104 \ltx@ifundefined{french@sh@}{@sel}{-}{%
1105 \def\HyPsd@babel@frenchb{%
1106 \def\guill@spacing{ }%
1107 }%
1108 }
1109 \ltx@ifundefined{german@sh@}{@sel}{-}{%
1110 \def\HyPsd@babel@german{%
1111 \declare@shorthand{german}{f}{f}%
1112 \declare@shorthand{german}{~}{-}%
1113 \declare@shorthand{german}{~}{-}%
1114 }%
1115 }
1116 \ltx@ifundefined{macedonian@sh@}{@sel}{-}{%
1117 \def\HyPsd@babel@macedonian{%
1118 \declare@shorthand{macedonian}{~}{-}%
1119 \declare@shorthand{macedonian}{~}{-}%
1120 }%
1121 }{}
1122 \ltx@ifundefined{ngerman@sh@}{@sel}{-}{%
1123 \def\HyPsd@babel@ngerman{%
1124 \declare@shorthand{ngerman}{~}{-}%
1125 \declare@shorthand{ngerman}{~}{-}%
1126 }%
1127 }
1128 \ltx@ifundefined{portuges@sh@}{@sel}{-}{%
1129 \def\HyPsd@babel@portuges{%
1130 \declare@shorthand{portuges}{~}{-}%
1131 }%
1132 }
1133 \ltx@ifundefined{russian@sh@}{@sel}{-}{%
1134 \def\HyPsd@babel@russian{%
1135 \declare@shorthand{russian}{~}{-}%
1136 \declare@shorthand{russian}{~}{-}%
1137 }%
1138 }
1139 \ltx@ifundefined{slovene@sh@}{@sel}{-}{%
1140 \def\HyPsd@babel@slovene{%
1141 \declare@shorthand{slovene}{~}{-}%
1142 }%
1143 }

```

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

```

1144 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
1145 \def\HyPsd@babel@spanish{%

```

```

1146 \declare@shorthand{spanish}{<<}{\guillemotleft}%
1147 \declare@shorthand{spanish}{>>}{\guillemotright}%
1148 \declare@shorthand{spanish}{"}={-}%
1149 \declare@shorthand{spanish}{'~}{-}%
1150 \declare@shorthand{spanish}{"!}{\textexclamdown}%
1151 \declare@shorthand{spanish}{"?}{\textquestiondown}%
1152 }%
1153 }
1154 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
1155 \def\HyPsd@babel@swedish{%
1156 \declare@shorthand{swedish}{"}|}{-}%
1157 \declare@shorthand{swedish}{'~}{-}%
1158 }%
1159 }
1160 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
1161 \def\HyPsd@babel@ukrainian{%
1162 \declare@shorthand{ukrainian}{"}|}{-}%
1163 \declare@shorthand{ukrainian}{'~}{-}%
1164 }%
1165 }
1166 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
1167 \def\HyPsd@babel@usorbian{%
1168 \declare@shorthand{usorbian}{"}f}{f}%
1169 \declare@shorthand{usorbian}{"}|}{-}%
1170 }%
1171 }
1172 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
1173 \let\HyPsd@GreekPatch@empty
1174 }{%
1175 \def\HyPsd@GreekPatch{%
1176 \let\greeknumeral\HyPsd@greeknumeral
1177 \let\Greeknumeral\HyPsd@Greeknumeral
1178 }%
1179 }
1180 \def\HyPsd@greeknumeral#1{%
1181 \HyPsd@GreekNum\@firstoftwo{#1}%
1182 }
1183 \def\HyPsd@Greeknumeral#1{%
1184 \HyPsd@GreekNum\@secondoftwo{#1}%
1185 }
1186 \def\HyPsd@GreekNum#1#2{%
1187 \ifHy@unicode
1188 \ifnum#2<\@ne
1189 \@arabic{#2}%
1190 \else
1191 \ifnum#2<1000000 %
1192 \HyPsd@@GreekNum#1{#2}%
1193 \else
1194 \@arabic{#2}%
1195 \fi
1196 \fi
1197 \else
1198 \@arabic{#2}%
1199 \fi
1200 }
1201 \def\HyPsd@@GreekNum#1#2{%
1202 \ifnum#2<\@m

```

```

1203 \ifnum#2<10 %
1204 \expandafter\HyPsd@GreekNumI
1205 \expandafter\@gobble\expandafter#1\number#2%
1206 \else
1207 \ifnum#2<100 %
1208 \expandafter\HyPsd@GreekNumII
1209 \expandafter\@gobble\expandafter#1\number#2%
1210 \else
1211 \expandafter\HyPsd@GreekNumIII
1212 \expandafter\@gobble\expandafter#1\number#2%
1213 \fi
1214 \fi
1215 \ifnum#2>\z@
1216 \textnumeralsigngreek
1217 \fi
1218 \else
1219 \ifnum#2<\@M
1220 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1221 \else
1222 \ifnum#2<100000 %
1223 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1224 \else
1225 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1226 \fi
1227 \fi
1228 \fi
1229 }
1230 \def\HyPsd@GreekNumI#1#2#3{%
1231 #1{%
1232 \ifnum#3>\z@
1233 \textnumeralsignlowergreek
1234 \fi
1235 }%
1236 \expandafter#2%
1237 \ifcase#3 %
1238 {}{}%
1239 \or\textalpha\textAlpha
1240 \or\textbeta\textBeta
1241 \or\textgamma\textGamma
1242 \or\textdelta\textDelta
1243 \or\textepsilon\textEpsilon
1244 \or\textstigmagreek\textStigmagreek
1245 \or\textzeta\textZeta
1246 \or\texteta\textEta
1247 \or\texttheta\textTheta
1248 \else
1249 {}{}%
1250 \fi
1251 }
1252 \def\HyPsd@GreekNumII#1#2#3#4{%
1253 #1{%
1254 \ifnum#3>\z@
1255 \textnumeralsignlowergreek
1256 \fi
1257 }%
1258 \expandafter#2%
1259 \ifcase#3 %

```



```

1260  {}{}%
1261  \or\textiota\textIota
1262  \or\textkappa\textKappa
1263  \or\textlambda\textLambda
1264  \or\textmu\textMu
1265  \or\textnu\textNu
1266  \or\textxi\textXi
1267  \or\textomicron\textOmicron
1268  \or\textpi\textPi
1269  \or\textkoppagreek\textKoppagreek
1270  \else
1271  {}{}%
1272  \fi
1273  \HyPsd@GreekNumI#1#2#4%
1274  }
1275  \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1276  #1{%
1277    \ifnum#3>\z@
1278      \textnumeralsignlowergreek
1279    \fi
1280  }%
1281  \expandafter#2%
1282  \ifcase#3 %
1283    {}{}%
1284    \or\textrho\textRho
1285    \or\textsigma\textSigma
1286    \or\texttau\textTau
1287    \or\textupsilon\textUpsilon
1288    \or\textphi\textPhi
1289    \or\textchi\textChi
1290    \or\textpsi\textPsi
1291    \or\textomega\textOmega
1292    \or\textsampigreek\textSampigreek
1293  \else
1294    {}{}%
1295  \fi
1296  \HyPsd@GreekNumII#1#2#4#5%
1297  }
1298  \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1299  \HyPsd@GreekNumI\@firstofone#1#2%
1300  \HyPsd@@GreekNum#1{#3#4#5}%
1301  }
1302  \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1303  \HyPsd@GreekNumII\@firstofone#1#2#3%
1304  \HyPsd@@GreekNum#1{#4#5#6}%
1305  }
1306  \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1307  \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1308  \HyPsd@@GreekNum#1{#5#6#7}%
1309  }
1310  \def\HyPsd@SpanishPatch{%
1311  \ltx@ifundefined{es@save@dot}{%
1312  }{%
1313    \let\.\es@save@dot
1314  }%
1315  }

```

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

```

1316 \def\HyPsd@RussianPatch{%
1317 \ltx@ifundefined{russian@sh@"@-@}{%
1318 }{%
1319 \@namedef{russian@sh@"@-@}{-}%
1320 }%
1321 }

```

6.5.3 CJK patch

```

1322 \RequirePackage{intcalc}[2007/09/27]

\HyPsd@CJKhook

1323 \def\HyPsd@CJKhook{%
1324 \ltx@ifpackageloaded{CJK}{%
1325 \let\CJK@kern\relax
1326 \let\CJKkern\relax
1327 \let\CJK@CJK\relax
1328 \ifHy@CJKbookmarks
1329 \HyPsd@CJKhook@bookmarks
1330 \fi
1331 \HyPsd@CJKhook@unicode
1332 }{}%
1333 }

```

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 ($\geq 0x40$).

```

1334 \begingroup
1335 \catcode"7F=\active
1336 \toks@{%
1337 \let\CJK@ignorespaces\empty
1338 \def\CJK@char#1{\@gobbletwo}%
1339 \let\CJK@charx\@gobblefour
1340 \let\CJK@punctchar\@gobblefour
1341 \def\CJK@punctcharx#1{\@gobblefour}%
1342 \catcode"7F=\active
1343 \def^^7f#1^^7f#2^^7f{%
1344 \string #1\HyPsd@DecimalToOctal{#2}%
1345 }%
1346 % ... ?
1347 \ifHy@unicode
1348 \def\Hy@cjkpu{\80}%
1349 \else
1350 \let\Hy@cjkpu\@empty
1351 \fi
1352 \HyPsd@CJKActiveChars

```

```

1353 }%
1354 \count@=127 %
1355 \@whilenum\count@<255 \do{%
1356   \advance\count@ by 1 %
1357   \lccode'\~=\count@
1358   \lowercase{%
1359     \toks@\expandafter{\the\toks@ ~}%
1360   }%
1361 }%
1362 \toks@\expandafter{\the\toks@ !}%
1363 \xdef\HyPsd@CJKhook@bookmarks{%
1364   \the\toks@
1365 }%
1366 \endgroup

```

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

```

1367 \def\HyPsd@CJKActiveChars#1{%
1368   \ifx#1!%
1369     \let\HyPsd@CJKActiveChars\relax
1370   \else
1371     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1372   \fi
1373   \HyPsd@CJKActiveChars
1374 }

```

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

```

1375 \def\HyPsd@DecimalToOctal#1{%
1376   \ifcase #1 %
1377     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1378     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1379     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1380     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1381     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1382     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1383     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1384     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1385     \or @\or A\or B\or C\or D\or E\or F\or G%
1386     \or H\or I\or J\or K\or L\or M\or N\or O%
1387     \or P\or Q\or R\or S\or T\or U\or V\or W%
1388     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1389     \or \140\or a\or b\or c\or d\or e\or f\or g%
1390     \or h\or i\or j\or k\or l\or m\or n\or o%
1391     \or p\or q\or r\or s\or t\or u\or v\or w%
1392     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1393     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1394     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1395     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1396     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1397     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1398     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1399     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1400     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1401     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1402     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1403     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1404     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%

```

```

1405 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1406 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1407 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1408 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1409 \fi
1410 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1411 \def\HyPsd@CJKhook@unicode{%
1412 \let\Unicode\HyPsd@CJK@Unicode
1413 \let\CJKnumber\HyPsd@CJKnumber
1414 \let\CJKdigits\HyPsd@CJKdigits
1415 }

```

\HyPsd@CJK@Unicode

```

1416 \def\HyPsd@CJK@Unicode#1#2{%
1417 \ifnum#1<256 %
1418 \HyPsd@DecimalToOctalFirst{#1}%
1419 \HyPsd@DecimalToOctalSecond{#2}%
1420 \else
1421 \933%
1422 \expandafter\expandafter\expandafter\HyPsd@HighA
1423 \intcalcDiv{#1}{4}!%
1424 \933%
1425 \ifcase\intcalcMod{#1}{4} %
1426 4\or 5\or 6\or 7%
1427 \fi
1428 \HyPsd@DecimalToOctalSecond{#2}%
1429 \fi
1430 }

1431 \def\HyPsd@HighA#1!{%
1432 \expandafter\expandafter\expandafter\HyPsd@HighB
1433 \IntCalcDiv#1!64!!%
1434 \expandafter\expandafter\expandafter\HyPsd@HighD
1435 \IntCalcMod#1!64!!%
1436 }
1437 \def\HyPsd@HighB#1!{%
1438 \expandafter\expandafter\expandafter\HyPsd@HighC
1439 \IntCalcDec#1!!%
1440 }
1441 \def\HyPsd@HighC#1!{%
1442 \IntCalcDiv#1!4!%
1443 \@backslashchar
1444 \IntCalcMod#1!4!%
1445 }
1446 \def\HyPsd@HighD#1!{%
1447 \ifcase\IntCalcDiv#1!8! %
1448 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1449 \fi
1450 \ifcase\IntCalcMod#1!8! %
1451 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1452 \fi
1453 }
1454 \def\HyPsd@DecimalToOctalFirst#1{%

```

```

1455 \9%
1456 \ifcase#1 %
1457     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1458     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1459     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1460     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1461     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1462     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1463     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1464     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1465     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1466     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1467     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1468     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1469     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1470     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1471     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1472     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1473     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1474     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1475     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1476     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1477     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1478     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1479     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1480     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1481     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1482     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1483     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1484     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1485     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1486     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1487     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1488     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1489 \fi
1490 }
1491 \def\HyPsd@DecimalToOctalSecond#1{%
1492     \ifcase #1 %
1493         \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1494         \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1495         \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1496         \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1497         \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1498         \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1499         \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1500         \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1501         \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1502         \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1503         \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1504         \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1505         \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1506         \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1507         \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1508         \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1509         \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1510         \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1511         \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%

```

```

1512 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1513 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1514 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1515 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1516 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1517 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1518 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1519 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1520 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1521 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1522 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1523 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1524 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1525 \fi
1526 }

1527 \def\HyPsd@CJKnumber#1{%
1528 \ifnum#1<\z@
1529 \CJK@minus
1530 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1531 \else
1532 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1533 \fi
1534 }

1535 \def\HyPsd@@CJKnumber#1{%
1536 \ifcase#1 %
1537 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1538 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1539 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1540 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1541 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1542 \CJK@ten\CJK@nine
1543 \else
1544 \ifnum#1<10000 %
1545 \HyPsd@CJKnumberFour#1!\@empty{20}%
1546 \@empty
1547 \else
1548 \ifnum#1<100000000 %
1549 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1550 \IntCalcDiv#1!10000!%
1551 !\{20}%
1552 \CJK@tenthousand
1553 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1554 \IntCalcMod#1!10000!%
1555 !\CJK@zero{10}%
1556 \@empty
1557 \else
1558 \expandafter\HyPsd@CJKnumberLarge
1559 \number\IntCalcDiv#1!100000000!\expandafter!%
1560 \number\IntCalcMod#1!100000000!!%
1561 \fi
1562 \fi
1563 \fi
1564 }

1565 \def\HyPsd@CJKnumberLarge#1!#2!{%
1566 \HyPsd@CJKnumberFour#1!\{20}%
1567 \CJK@hundredmillion
1568 \ifnum#2=\z@

```

```

1569 \else
1570 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1571 \IntCalcDiv#2!10000!%
1572 !\CJK@zero{10}%
1573 \CJK@tenthousand
1574 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1575 \IntCalcMod#2!10000!%
1576 !\CJK@zero{10}%
1577 \@empty
1578 \fi
1579 }
1580 \def\HyPsd@CJKnumberFour#1!#2#3{%
1581 \ifnum#1=\z@
1582 \expandafter\@gobble
1583 \else
1584 \ifnum#1<1000 %
1585 #2%
1586 \HyPsd@CJKnumberThree#1!#{#3}%
1587 \else
1588 \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1589 \CJK@thousand
1590 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1591 \IntCalcMod#1!1000!%
1592 !\CJK@zero{10}%
1593 \fi
1594 \fi
1595 }
1596 \def\HyPsd@CJKnumberThree#1!#2#3{%
1597 \ifnum#1=\z@
1598 \else
1599 \ifnum#1<100 %
1600 #2%
1601 \HyPsd@CJKnumberTwo#1!#{#3}%
1602 \else
1603 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1604 \CJK@hundred
1605 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1606 \IntCalcMod#1!100!%
1607 !\CJK@zero{10}%
1608 \fi
1609 \fi
1610 }
1611 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1612 \ifnum#1=\z@
1613 \else
1614 \ifnum#1<#3 %
1615 #2%
1616 \HyPsd@@CJKnumber{#1}%
1617 \else
1618 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1619 \CJK@ten
1620 \ifnum\IntCalcMod#1!10!=\z@
1621 \else
1622 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1623 \fi
1624 \fi
1625 \fi

```

```

1626 }
1627 \def\HyPsd@CJKdigits#1{%
1628   \ifx*#1\relax
1629     \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1630   \else
1631     \HyPsd@@CJKdigits\CJK@null{#1}%
1632   \fi
1633 }
1634 \def\HyPsd@@CJKdigits#1#2{%
1635   \ifx\#2\%
1636   \else
1637     \HyPsd@@@CJKdigits#1#2\@nil
1638   \fi
1639 }%
1640 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1641   \HyPsd@CJKdigit#1{#2}%
1642   \ifx\#3\%
1643     \expandafter\@gobble
1644   \else
1645     \expandafter\@firstofone
1646   \fi
1647   {%
1648     \HyPsd@@@CJKdigits#1#3\@nil
1649   }%
1650 }
1651 \def\HyPsd@CJKdigit#1#2{%
1652   \ifcase#2 %
1653     #1\or
1654     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1655     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1656   \fi
1657 }

```

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` ($=\text{\relax}$).

```

\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}

1658 \def\HyPsd@inmathwarn#1#2{%
1659   \ifx#2\expandafter
1660     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1661       \HyPsd@GLYPHERR
1662       \expandafter\@gobble\string#1%
1663     >%
1664     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1665   \else
1666     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1667   \fi
1668 \else
1669   \expandafter#2%
1670 \fi
1671 }
1672 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1673 \def\HyPsd@EndWithElse#1\else\else}

\HyPsd@add@accent

1674 \def\HyPsd@add@accent#1#2{%
1675   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1676   #2%
1677 }%

```

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, `dimen`, and `skip` assignments.

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

```

1678 \def\HyPsd@LetUnexpandableSpace#1{%
1679   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1680 }

```

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

```
1681 \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.

```
1682 \edef\HyPsd@XSPACE{\string#\string X}
1683 \edef\HyPsd@ITALCORR{\string#\string I}
1684 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1685 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*END}
```

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

```
1686 \def\HyPsd@@hspace#1*#2END{%
1687   \ifx\#2\%
1688     \HyPsd@hspacetest{#1}%
1689   \else
1690     \expandafter\HyPsd@hspacetest
1691   \fi
1692 }
```

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

```
1693 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1694 \ltx@ifundefined{tocsection}{%
1695   \let\HyPsd@AMSclassfix\relax
1696 }{%
1697   \def\HyPsd@AMSclassfix{%
1698     \let\tocpart\HyPsd@tocsection
1699     \let\tocchapter\HyPsd@tocsection
1700     \let\tocappendix\HyPsd@tocsection
1701     \let\tocsection\HyPsd@tocsection
1702     \let\tocsubsection\HyPsd@tocsection
1703     \let\tocsubsubsection\HyPsd@tocsection
1704     \let\tocparagraph\HyPsd@tocsection
1705   }%
1706   \def\HyPsd@tocsection#1#2#3{%
1707     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1708     #3%
1709   }%
1710 }
```

6.5.11 Reference commands

`\HyPsd@href`

```
1711 \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.

```
1712 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1713 \def\HyPsd@@ref#1*#2\END{%
1714   \ifx\#2\%
1715     \HyPsd@@@ref{#1}%
1716   \else
1717     \expandafter\HyPsd@@@ref
1718   \fi
1719 }%
```

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

```
1720 \def\HyPsd@@@ref#1{%
1721   \expandafter\ifx\csname r@#1\endcsname\relax
1722     ??%
1723   \else
1724     \expandafter\expandafter\expandafter
1725     \@car\csname r@#1\endcsname\@nil
1726   \fi
1727 }
```

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

```
1728 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```
1729 \def\HyPsd@@pageref#1*#2\END{%
1730   \ifx\#2\%
1731     \HyPsd@@@pageref{#1}%
1732   \else
1733     \expandafter\HyPsd@@@pageref
1734   \fi
1735 }
```

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

```
1736 \def\HyPsd@@@pageref#1{%
1737   \expandafter\ifx\csname r@#1\endcsname\relax
1738     ??%
1739   \else
1740     \expandafter\expandafter\expandafter\expandafter
1741     \expandafter\expandafter\expandafter\@car
1742     \expandafter\expandafter\expandafter\@gobble
1743     \csname r@#1\endcsname{}\@nil
1744   \fi
1745 }
```

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

```
1746 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```
1747 \def\HyPsd@@nameref#1*#2\END{%
1748   \ifx\#2\%
1749     \HyPsd@@@nameref{#1}%
```

```

1750 \else
1751 \expandafter\HyPsd@@@nameref
1752 \fi
1753 }

```

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

```

1754 \def\HyPsd@@@nameref#1{%
1755 \expandafter\ifx\csname r@#1\endcsname\relax
1756 ??%
1757 \else
1758 \expandafter\expandafter\expandafter\expandafter
1759 \expandafter\expandafter\expandafter\@car
1760 \expandafter\expandafter\expandafter\@gobbletwo
1761 \csname r@#1\endcsname\}\}\@nil
1762 \fi
1763 }

```

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

```

1764 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1765 \def\HyPsd@@autoref#1*#2\END{%
1766 \ifx\#2\%
1767 \HyPsd@@@autoref{#1}%
1768 \else
1769 \expandafter\HyPsd@@@autoref
1770 \fi
1771 }

```

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

```

1772 \def\HyPsd@@@autoref#1{%
1773 \expandafter\ifx\csname r@#1\endcsname\relax
1774 ??%
1775 \else
1776 \expandafter\expandafter\expandafter\HyPsd@autorefname
1777 \csname r@#1\endcsname\}\}\}\@nil
1778 \expandafter\expandafter\expandafter
1779 \@car\csname r@#1\endcsname\@nil
1780 \fi
1781 }

```

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

```

1782 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1783 \ifx\#4\%
1784 \else
1785 \HyPsd@@@autorefname#4.\@nil
1786 \fi
1787 }

```

\HyPsd@@@autorefname

```

1788 \def\HyPsd@@@autorefname#1.#2\@nil{%
1789 \ltx@ifundefined{#1autorefname}{%
1790 \ltx@ifundefined{#1name}{%
1791 }{%
1792 \csname#1name\endcsname\space
1793 }%

```

```

1794 }{%
1795   \csname#1\autorefname\endcsname\space
1796 }%
1797 }

```

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 unmachted `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```

\HyPsd@DefCommand
\HyPsd@LetCommand
1798 \begingroup
1799   \def\x#1#2{%
1800     \endgroup
1801     \let#1\def
1802     \def\HyPsd@DefCommand##1##2###{%
1803       #1%
1804       \expandafter\noexpand
1805         \csname\expandafter\@gobble\string##1\@empty\endcsname
1806       \@gobble
1807     }%
1808     \let#2\let
1809     \def\HyPsd@@LetCommand##1{%
1810       \expandafter\ifx\csname##1\expandafter\endcsname
1811         \csname iftrue\endcsname
1812         \pdfstringdefWarn\let
1813         \expandafter\@gobble
1814       \else
1815         \expandafter\ifx\csname##1\expandafter\endcsname
1816           \csname iffalse\endcsname

```

```

1817     \pdfstringdefWarn\let
1818     \expandafter\expandafter\expandafter\@gobble
1819     \else
1820     #2%
1821     \expandafter\noexpand
1822     \csname##1\expandafter\expandafter\expandafter\endcsname
1823     \fi
1824     \fi
1825     }%
1826     }%
1827 \expandafter\x\csname <def>-command\expandafter\endcsname
1828     \csname <let>-command\endcsname
1829 \def\HyPsd@LetCommand#1{%
1830 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1831 \expandafter\expandafter\expandafter{%
1832 \expandafter\@gobble\string#1\@empty
1833 }%
1834 }

```

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).

```

1835 \def\HyPsd@ifnextchar#1{%
1836 \pdfstringdefWarn#1%
1837 \expandafter\@gobbletwo\@gobble
1838 }

```

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`.

```

1839 \def\HyPsd@protected@testopt#1{%
1840 \pdfstringdefWarn#1%
1841 \@gobbletwo
1842 }

```

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:

```

1843 \def\HyPsd@Warning#1{%
1844   \begingroup
1845   \let\space\ltx@space
1846   \Hy@Warning{#1}%
1847 \endgroup
1848 }

```

6.6.2 Protecting spaces

```

1849 \RequirePackage{etexcmds}[2007/09/09]
1850 \ifetex@unexpanded
1851   \expandafter\@secondoftwo
1852 \else
1853   \expandafter\@firstoftwo
1854 \fi
1855 {%

```

`\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`.

```

1856 \def\HyPsd@ProtectSpaces#1{%
1857   \iftrue
1858     \expandafter\HyPsd@@ProtectSpacesFi
1859     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1860   \fi
1861 }%

```

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

```

1862 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1863   \fi
1864   \ifx\scrollmode#2\scrollmode
1865     \HyPsd@RemoveMask#1\HyPsd@End#3%
1866   \else
1867     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1868     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1869   \fi
1870 }%

```

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.

```

1871 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1872   \toks@\expandafter{#1}%
1873   \xdef#2{\the\toks@}%
1874 }%

1875 }{%
1876   \let\HyPsd@fi\fi
1877   \def\HyPsd@ProtectSpaces#1{%
1878     \xdef#1{%
1879       \iftrue
1880         \expandafter\HyPsd@@ProtectSpacesFi

```

```

1881      \expandafter\expandafter\@empty#1| %
1882      \HyPsd@fi
1883    }%
1884    \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1885  }%
1886  \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1887    \fi
1888    \etex@unexpanded{#1}%
1889    \ifx\scrollmode#2\scrollmode
1890    \else
1891      \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1892      \HyPsd@fi
1893    }%
1894    \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1895      \xdef#2{\etex@unexpanded\expandafter{#1}}%
1896    }%
1897  }

```

6.6.3 Remove grouping braces

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

```

1898 \def\HyPsd@RemoveBraces#1{%
1899   \ifx\scrollmode#1\scrollmode
1900   \else
1901     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1902   \fi
1903 }

```

`\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`.

```

1904 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1905   \fi
1906   \def\Hy@temp@A{#1#2}%
1907   \def\Hy@temp@B{#3}%
1908   \ifx\Hy@temp@A\Hy@temp@B
1909     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1910       \HyPsd@String#1%
1911     }%
1912   \ifx\scrollmode#2\scrollmode
1913   \else
1914     \Hy@ReturnAfterFiFiEnd{%
1915       \HyPsd@RemoveBraces{#2}%
1916     }%
1917   \fi
1918 \else
1919   \def\Hy@temp@A{#1}%
1920   \HyPsd@AppendItalcrr\HyPsd@String

```



```

1921 \ifx\Hy@temp@A\@empty
1922 \Hy@ReturnAfterElseFiFiEnd{%
1923 \HyPsd@RemoveBraces{#2}%
1924 }%
1925 \else
1926 \HyPsd@ProtectSpaces\Hy@temp@A
1927 \HyPsd@AppendItalcorr\Hy@temp@A
1928 \Hy@ReturnAfterFiFiEnd{%
1929 \expandafter\HyPsd@RemoveBraces\expandafter
1930 {\Hy@temp@A#2}%
1931 }%
1932 \fi
1933 \fi
1934 \Hy@ReturnEnd
1935 }

```

`\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`.

```

1936 \def\HyPsd@AppendItalcorr#1{%
1937 \expandafter\HyPsd@@AppendItalcorr\expandafter{/}%#1%
1938 }
1939 \def\HyPsd@@AppendItalcorr#1#2{%
1940 \expandafter\def\expandafter#2\expandafter{#2#1}%
1941 }

```

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>.

```

1942 \ltx@ifundefined{directlua}{%
1943 }{%
1944 \expandafter\ifx\csname\endcsname\relax\fi
1945 }

```

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`.

```

1946 \begingroup
1947 \catcode'\Q=\active
1948 \let Q\ltx@empty
1949 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1950 \global\let\HyPsd@Rest\relax
1951 \ifcat\relax\noexpand#1\relax

```

```

1952 \ifx#1\protect
1953 \else
1954 \ifx#1\penalty
1955 \setbox\z@=\hbox{%
1956 \afterassignment\HyPsd@AfterCountRemove
1957 \count@=#2\HyPsd@End
1958 }%
1959 \else
1960 \ifx#1\kern
1961 \setbox\z@=\hbox{%
1962 \afterassignment\HyPsd@AfterDimenRemove
1963 \dimen@=#2\HyPsd@End
1964 }%
1965 \else
1966 \ifx#1\hskip
1967 \setbox\z@=\hbox{%
1968 \afterassignment\HyPsd@AfterSkipRemove
1969 \skip@=#2\HyPsd@End
1970 }%
1971 \else
1972 \HyPsd@CatcodeWarning{#1}%
1973 \fi
1974 \fi
1975 \fi
1976 \fi
1977 \else
1978 \ifcat\noexpand#1\noexpandQ% active character
1979 \expandafter\expandafter\expandafter\def
1980 \expandafter\expandafter\expandafter\HyPsd@String
1981 \expandafter\expandafter\expandafter{%
1982 \expandafter\HyPsd@String\string#1%
1983 }%
1984 \else
1985 \ifcat#1A% letter
1986 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1987 \HyPsd@String#1%
1988 }%
1989 \else
1990 \ifcat#1 % SPACE
1991 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1992 \HyPsd@String\HyPsd@SPACEOPTI
1993 }%
1994 \else
1995 \ifcat$#1%
1996 \HyPsd@CatcodeWarning{math shift}%
1997 \else
1998 \ifcat&#1%
1999 \HyPsd@CatcodeWarning{alignment tab}%
2000 \else
2001 \ifcat^#1%
2002 \HyPsd@CatcodeWarning{superscript}%
2003 \else
2004 \ifcat_#1%
2005 \HyPsd@CatcodeWarning{subscript}%
2006 \else
2007 \expandafter\def\expandafter\HyPsd@String\expandafter{%
2008 \HyPsd@String#1%

```

```

2009         }%
2010         \fi
2011     \fi
2012 \fi
2013 \fi
2014 \fi
2015 \fi
2016 \fi
2017 \fi
2018 \ifx\HyPsd@Rest\relax
2019 \ifx\scrollmode#2\scrollmode
2020 \else
2021 \Hy@ReturnAfterFiFiEnd{%
2022 \HyPsd@CheckCatcodes#2\HyPsd@End
2023 }%
2024 \fi
2025 \else
2026 \ifx\HyPsd@Rest\@empty
2027 \else
2028 \Hy@ReturnAfterFiFiEnd{%
2029 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2030 }%
2031 \fi
2032 \fi
2033 \Hy@ReturnEnd
2034 }%
2035 \endgroup

```

Remove counts, dimens, skips.

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

```

2036 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2037 \gdef\HyPsd@Rest{#1}%
2038 }

```

`\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.

```

2039 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
2040 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2041 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2042 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2043 \else
2044 \ifdim\dimen@=\z@
2045 \else
2046 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2047 \fi
2048 \gdef\HyPsd@Rest{#1}%
2049 \fi
2050 }

```

`\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).

```

2051 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
2052 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2053 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%

```

```

2054 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2055 \else
2056 \ifdim\skip@=\z@
2057 \else
2058 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2059 \fi
2060 \gdef\HyPsd@Rest{#1}%
2061 \fi
2062 }

```

Catcode warnings.

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

```

2063 \def\HyPsd@CatcodeWarning#1{%
2064 \HyPsd@Warning{%
2065 Token not allowed in a PDF string (%)
2066 \ifHy@unicode
2067 Unicode%
2068 \else
2069 PDFDocEncoding%
2070 \fi
2071 }:%
2072 \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
2073 }%
2074 }
2075 \begingroup
2076 \catcode'\|=0 %
2077 \catcode'\|=12 %
2078 \gdef\HyPsd@RemoveCmdPrefix#1{%
2079 |expandafter\HyPsd@@RemoveCmdPrefix
2080 |string#1|@empty\<>-|@empty|@empty
2081 }%
2082 \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
2083 \endgroup

```

\HyPsd@RemoveSpaceWarning

```

2084 \def\HyPsd@RemoveSpaceWarning#1{%
2085 \HyPsd@Warning{%
2086 Token not allowed in a PDF string (%)
2087 \ifHy@unicode
2088 Unicode%
2089 \else
2090 PDFDocEncoding%
2091 \fi
2092 }:%
2093 \MessageBreak #1\MessageBreak
2094 removed%
2095 }%
2096 }

```

\HyPsd@ReplaceSpaceWarning

```

2097 \def\HyPsd@ReplaceSpaceWarning#1{%
2098 \HyPsd@Warning{%
2099 Token not allowed in a PDF string (%)
2100 \ifHy@unicode
2101 Unicode%
2102 \else

```

```

2103     PDFDocEncoding%
2104     \fi
2105     ):%
2106     \MessageBreak #1\MessageBreak
2107     replaced by space%
2108     }%
2109 }

```

6.6.5 Check for wrong glyphs

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

```

2110 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2111     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2112         \HyPsd@String#1%
2113     }%
2114     \ifx\#2\%
2115     \else
2116         \ltx@ReturnAfterFi{%
2117             \HyPsd@GlyphProcessWarning#2\@empty
2118         }%
2119     \fi
2120 }
2121 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2122     \HyPsd@@@GlyphProcessWarning#1++>%
2123     \HyPsd@GlyphProcess#2\@empty
2124 }
2125 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2126     \ifx\#2\%
2127         \HyPsd@Warning{%
2128             Glyph not defined in %
2129             P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2130             removing '@backslashchar#1'%
2131         }%
2132     \else
2133         \HyPsd@Warning{%
2134             Composite letter '@backslashchar#1+#2'\MessageBreak
2135             not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2136             \MessageBreak
2137             removing '@backslashchar#1'%
2138         }%
2139     \fi
2140 }

```

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`.

```

2141 \def\HyPsd@spaceopti#1{ % first space
2142     \ifx\HyPsd@spaceopti#1%
2143         \040%
2144     \else
2145         #1%
2146     \fi
2147 }%

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is a 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.
2148 \def\HyPsd@Subst#1#2#3{%
2149   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2150     \fi
2151     ##1%
2152     \ifx\scrollmode##2\scrollmode
2153     \else
2154       #2%
2155       \HyPsd@@ReplaceFi##2\END
2156     \fi
2157   }%
2158   \xdef#3{%
2159     \iftrue
2160       \expandafter\HyPsd@@ReplaceFi#3#1\END
2161     \fi
2162   }%
2163 }
```

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

```
2164 \def\HyPsd@StringSubst#1{%
2165   \expandafter\HyPsd@Subst\expandafter{\string#1}%
2166 }
```

`\HyPsd@EscapeTeX`

```
2167 \begingroup
2168   \lccode'\!='\%%
2169   \lccode'\|='\%%
2170   \lccode'\(='\{%
2171   \lccode'\)='\}%
2172   \lccode'0=\ltx@zero
2173   \lccode'1=\ltx@zero
2174   \lccode'3=\ltx@zero
2175   \lccode'4=\ltx@zero
2176   \lccode'5=\ltx@zero
2177   \lccode'7=\ltx@zero
2178 \lowercase{\endgroup
2179   \def\HyPsd@EscapeTeX#1{%
2180     \HyPsd@Subst!{|045}#1%
2181     \HyPsd@Subst({|173}#1%
2182     \HyPsd@Subst){|175}#1%
2183   }%
2184 }
```

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.

```

2185 \def\HyPsd@doxspace#1{%
2186   \ifx#1\relax\else
2187     \ifx#1.\else
2188       \ifx#1:\else
2189         \ifx#1,\else
2190         \ifx#1;\else
2191         \ifx#1!\else
2192         \ifx#1?\else
2193         \ifx#1/\else
2194         \ifx#1-\else
2195         \ifx#1'\else
2196         \HyPsd@SPACEOPTI
2197       \fi
2198     \fi
2199   \fi
2200 \fi
2201 \fi
2202 \fi
2203 \fi
2204 \fi
2205 \fi
2206 \fi
2207 #1%
2208 }%

```

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.

```

2209 \begingroup
2210 \catcode'\|=0 %
2211 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

2212 |gdef|HyPsd@ConvertToUnicode#1{%
2213   |xdef#1{%
2214     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2215   }%
2216   |ifx#1|@empty
2217   |else
2218     |xdef#1{%
2219       \376\377%
2220       #1%
2221     }%
2222   |fi
2223 }%

```

\HyPsd@DoConvert

```

2224 |gdef|HyPsd@DoConvert#1{%
2225   |ifx#1|@empty
2226   |else
2227     |ltx@ReturnAfterFi{%
2228       |ifx#1\%%
2229       \%%
2230       |expandafter|HyPsd@DoEscape
2231     |else

```

```

2232         |HyPsd@Char{#1}%
2233         |expandafter|HyPsd@DoConvert
2234     |fi
2235 }%
2236 |fi
2237 }%

```

\HyPsd@DoEscape

```

2238 |gdef|HyPsd@DoEscape#1{%
2239 |ifx#19%
2240 |expandafter|HyPsd@GetTwoBytes
2241 |else
2242 |ltx@ReturnAfterFi{%
2243 |ifx#18%
2244 00%
2245 |expandafter|HyPsd@GetTwoBytes
2246 |else
2247 #1%
2248 |expandafter|HyPsd@GetOneByte
2249 |fi
2250 }%
2251 |fi
2252 }%

```

\HyPsd@GetTwoBytes

```

2253 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2254 #1\#2#3#4%
2255 |HyPsd@DoConvert
2256 }%

```

\HyPsd@GetOneByte

```

2257 |gdef|HyPsd@GetOneByte#1#2{%
2258 #1#2%
2259 |HyPsd@DoConvert
2260 }%
2261 |endgroup

```

\HyPsd@@GetNextTwoTokens TeX does only allow nine parameters, so we need another macro to get more arguments.

```

2262 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2263 \xdef#4{#4#1#2}%
2264 \HyPsd@@ConvertToUnicode#3\END#4%
2265 }

```

\HyPsd@Char

```

2266 \begingroup
2267 \catcode0=9 %
2268 \catcode'\^=7 %
2269 \catcode'\^^=12 %
2270 \def\x{^^^^0000}%
2271 \expandafter\endgroup
2272 \ifx\x\@empty
2273 \def\HyPsd@Char#1{%
2274 \ifnum'#1<128 %
2275 \@backslashchar 000#1%
2276 \else
2277 \ifnum'#1<65536 %

```



```

2278 \expandafter\HyPsd@CharTwoByte\number'#1!%
2279 \else
2280 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2281 \intcalcSub{'#1}{65536}!%
2282 \fi
2283 \fi
2284 }%
2285 \def\HyPsd@CharTwoByte#1!{%
2286 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2287 \IntCalcDiv#1!256!!%
2288 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2289 \IntCalcMod#1!256!!%
2290 }%
2291 \def\HyPsd@CharOctByte#1!{%
2292 \@backslashchar
2293 \IntCalcDiv#1!64!%
2294 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2295 \IntCalcMod#1!8!%
2296 }%
2297 \def\HyPsd@CharSurrogate#1!{%
2298 \@backslashchar 33%
2299 \IntCalcDiv#1!262144!%
2300 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2301 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2302 \@backslashchar 33%
2303 \expandafter\expandafter\expandafter\IntCalcAdd
2304 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2305 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2306 \IntCalcMod#1!256!!%
2307 }%
2308 \else
2309 \def\HyPsd@Char#1{%
2310 \@backslashchar 000#1%
2311 }%
2312 \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`

```

2313 \begingroup\expandafter\expandafter\expandafter\endgroup
2314 \expandafter\ifx\csname numexpr\endcsname\relax
2315 \let\HyPsd@UTFviii\relax
2316 \else
2317 \begingroup
2318 \lccode'\~='^^f4\relax
2319 \lowercase{\endgroup
2320 \def\HyPsd@UTFviii{%

```

```

2321 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2322 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2323 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2324 \ifx~\HyPsd@UTFviii@ccxliv@undef
2325 \let~\HyPsd@UTFviii@ccxliv@def
2326 \fi
2327 \let\unichar\HyPsd@unichar
2328 }%
2329 }%
2330 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}}%
2331 \edef\HyPsd@UTFviii@ccxliv@def{%
2332 \noexpand\UTFviii@four@octets\string~^f4%
2333 }%

```

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.

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

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

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

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

$$(5)$$

```

2334 \def\HyPsd@UTFviii@two#1#2{%
2335 \expandafter\HyPsd@UTFviii@@two
2336 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2337 \number'#1\expandafter| %
2338 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2339 \number'#2 \@nil
2340 }%
2341 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2342 \expandafter\8%
2343 \number\numexpr #1-48\expandafter\relax
2344 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2345 \number\numexpr #3-8*%
2346 \number\dimexpr.125\dimexpr'#3sp\relax\relax\expandafter\relax
2347 \number\numexpr #4-8*#3\relax
2348 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2349 \def\HyPsd@UTFviii@three#1#2#3{%
2350 \expandafter\HyPsd@UTFviii@@three
2351 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2352 \number'#1\expandafter| %

```

```

2353 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2354 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2355 \number'#2\expandafter| %
2356 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2357 \number'#3 \@nil
2358 }%
2359 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2360 \expandafter\9%
2361 \number\numexpr #1-56\expandafter\relax
2362 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2363 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2364 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2365 \number\numexpr #6-16\expandafter\relax
2366 \number\numexpr #7-8*#6\relax
2367 }%

```

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

```

```

2368 \def\HyPsd@UTFviii@four#1#2{%
2369 \expandafter\HyPsd@@UTFviii@four\number
2370 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2371 \expandafter|\number
2372 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2373 }%
2374 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2375 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2376 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2377 \ifodd#2 %
2378 \number\numexpr(#2-1)/2\relax
2379 \else
2380 \number\numexpr#2/2\relax
2381 \fi
2382 \number\numexpr\ifodd#2 4+\fi
2383 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2384 \933%
2385 \expandafter\HyPsd@@@UTFviii@four\number
2386 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2387 }%
2388 \def\HyPsd@@@UTFviii@four#1|#2{%
2389 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2390 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2391 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2392 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2393 }%

```

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

```

2394 \def\HyPsd@unichar#1{%
2395 \ifHy@unicode
2396 \ifnum#1>"10FFFF %
2397 \HyPsd@UnicodeReplacementCharacter % illegal
2398 \else
2399 \ifnum#1>"FFFF %

```

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

```
2400      \expandafter\HyPsd@unichar\expandafter{%
2401      \number\numexpr 55296+%
2402      \dimexpr.0009765625\dimexpr\number#1sp-\p@
2403      \relax\relax\relax
2404      }%
```

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

```
2405      \expandafter\HyPsd@unichar\expandafter{%
2406      \number\numexpr#1-9216%
2407      -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2408      \relax\relax\relax
2409      }%
2410      \else
2411      \ifnum#1>"7FF %
2412      \9%
2413      \expandafter\HyPsd@unichar@first@byte\expandafter{%
2414      \number
2415      \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2416      }%
2417      \else
2418      \8%
2419      \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2420      \fi
2421      \expandafter\HyPsd@unichar@second@byte\expandafter{%
2422      \number
2423      \numexpr#1-256*\number
2424      \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2425      }%
2426      \fi
2427      \fi
2428      \else
2429      .% unsupported (Unicode -> PDF Doc Encoding)
2430      \fi
2431      }%
2432      \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2433      \def\HyPsd@unichar@first@byte#1{%
2434      \number\dimexpr.015625\dimexpr#1sp\relax\relax
2435      \expandafter\HyPsd@unichar@octtwo\expandafter{%
2436      \number
2437      \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2438      \relax\relax\relax
2439      }%
2440      }%
2441      \def\HyPsd@unichar@second@byte#1{%
2442      \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2443      \expandafter\HyPsd@unichar@octtwo\expandafter{%
2444      \number
2445      \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2446      \relax\relax\relax
2447      }%
2448      }%
2449      \def\HyPsd@unichar@octtwo#1{%
2450      \number\dimexpr.125\dimexpr#1sp\relax\relax
2451      \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2452      \relax\relax\relax
2453      }%
```

2454 \fi

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

```
2455 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2456   \ifx\@gobble#1%
2457   \else
2458     [Please insert \textbackslash PrerenderUnicode%
2459     \textbraceleft#1\textbraceright\space
2460     into preamble]%
2461   \fi
2462 }%
```

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.

```
2463 \def\HyPsd@DieFace#1{%
2464   \ifHy@unicode
2465   \ifnum#1<1 %
2466     \HyPsd@UnicodeReplacementCharacter
2467   \else
2468     \ifnum#1>6 %
2469       \9046\205%
2470       \expandafter\expandafter\expandafter
2471       \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2472     \else
2473       \9046\20\intcalcDec{#1}%
2474     \fi
2475   \fi
2476 \else
2477   .% Die faces are not part of PDFDocEncoding
2478 \fi
2479 }
```

\HyPsd@DieFaceLarge

```
2480 \def\HyPsd@DieFaceLarge#1!{%
2481   \ifnum#1>6 %
2482     \expandafter\ltx@firstoftwo
2483   \else
2484     \expandafter\ltx@secondoftwo
2485   \fi
2486   {%
2487     \9046\205%
2488     \expandafter\expandafter\expandafter
2489     \HyPsd@DieFaceLarge\IntCalcSub#1!6!%
2490   }{%
2491     \9046\20\IntCalcDec#1!%
2492   }%
2493 }
```

6.6.11 Support for moon phases of package china2e

```
2494 \def\HyPsd@MoonPha#1{%
2495   \ifcase\intcalcNum{#1} %
2496     \HyPsd@UnicodeReplacementCharacter
2497   \or % 1
2498   % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2499   \9330\074\9337\032%
2500   \or % 2
2501   \HyPsd@UnicodeReplacementCharacter
2502   \or % 3
2503   % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2504   \9330\074\9337\035%
2505   \or % 4
2506   % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2507   \9330\074\9337\034%
2508   \else
2509     \HyPsd@UnicodeReplacementCharacter
2510   \fi
2511 }
2512 %* \HyPsd@MoonPha -> \MoonPha
```

6.6.12 Support for package pifont

\HyPsd@ding

```
2513 \def\HyPsd@ding#1{%
2514   \ifHy@unicode
2515     \ifnum#1<32 %
2516       \HyPsd@UnicodeReplacementCharacter
2517     \else
2518       \ifnum#1>254 %
2519         \HyPsd@UnicodeReplacementCharacter
2520       \else
2521         \ifnum#1<127 %
2522           \expandafter\expandafter\expandafter
2523           \HyPsd@@@ding\intcalcNum{#1}!%
2524         \else
2525           \ifnum#1>160 %
2526             \expandafter\expandafter\expandafter
2527             \HyPsd@@@ding\intcalcNum{#1}!%
2528           \else
2529             \HyPsd@UnicodeReplacementCharacter
2530           \fi
2531         \fi
2532       \fi
2533     \fi
2534   \else
2535     .% Dingbats are not part of PDFDocEncoding
2536   \fi
2537 }
```

\HyPsd@@@ding

```
2538 \def\HyPsd@@@ding#1!{%
2539   \ltx@ifundefined{HyPsd@ding@#1}{%
2540     \ifnum#1<127 %
2541       \9047%
2542       \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2543     \else
```

```

2544 \ifnum#1<168 %
2545 \9047\14\IntCalcSub#1!160!%
2546 \else
2547 \ifnum#1>181 %
2548 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2549 \else
2550 % 172..181 -> U+2460..U+2469
2551 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2552 \fi
2553 \fi
2554 \fi
2555 }{%
2556 \csname HyPsd@ding@#1\endcsname
2557 }%
2558 }

2559 \@namedef{HyPsd@ding@32}{\space}
2560 % U+260E BLACK TELEPHONE
2561 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2562 % U+261B BLACK RIGHT POINTING INDEX
2563 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2564 % U+261E WHITE RIGHT POINTING INDEX
2565 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2566 % U+2605 BLACK STAR
2567 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2568 % U+25CF BLACK CIRCLE
2569 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2570 % U+25A0 BLACK SQUARE
2571 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2572 % U+25B2 BLACK UP-POINTING TRIANGLE
2573 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2574 % U+25BC BLACK DOWN-POINTING TRIANGLE
2575 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2576 % U+25C6 BLACK DIAMOND
2577 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2578 % U+25D7 RIGHT HALF BLACK CIRCLE
2579 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2580 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2581 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2582 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2583 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2584 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2585 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2586 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2587 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2588 \@ifclassloaded{memoir}{%
2589 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2590 }{}

```

7.2 Package subfigure

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

```

2591 \ifpackageloaded{subfigure}{%
2592   \ltx@ifundefined{sub@label}{%
2593     \Hy@hypertexnamesfalse
2594   }{%
2595     \renewcommand*{\sub@label}[1]{%
2596       \@bsphack
2597       \subfig@oldlabel{#1}%
2598       \if@filesw
2599         \begingroup
2600         \edef\@currentlabstr{%
2601           \expandafter\strip@prefix\meaning\@currentlabelname
2602         }%
2603         \protected@write\@auxout{}{%
2604           \string\newlabel{sub@#1}{%
2605             {\@nameuse{\@thesub\@captype}}%
2606             {\thepage}%
2607             {%
2608               \expandafter\strip@period\@currentlabstr
2609               \relax.\relax\@@@%
2610             }%
2611             {\@currentHref}%
2612             {}%
2613           }%
2614         }%
2615         \endgroup
2616       \fi
2617       \@esphack
2618     }%
2619     \@ifpackagelater{subfigure}{2002/03/26}{%
2620       \providecommand*\toclevel@subfigure{1}%
2621       \providecommand*\toclevel@subtable{1}%
2622     }%
2623   }%
2624 }{}

```

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:

```

2625 \ltx@ifundefined{XR@addURL}{%
2626 }{}

```

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.

```

2627 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2628 \def\xr@dURL#1#2#3#4#5\\{%
2629   {#1}{#2}%
2630   \if!#4!%
2631   \else
2632     {#3}{#4}{\xr@URL}%
2633   \fi
2634 }%
2635 }

2636 \def\Hy@true{true}
2637 \def\Hy@false{false}

```

Providing dummy definitions.


```

2638 \let\literalps@out\@gobble
2639 \newcommand\pdfbookmark[3][{}]{
2640 \def\Acrobatmenu#1#2{\leavevmode#2}
2641 \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

```

2642 \let\HyperRaiseLinkHook\@empty
2643 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

2644 \newcount\Hy@SavedSpaceFactor
2645 \def\Hy@SaveSpaceFactor{%
2646 \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2647 }
2648 \def\Hy@RestoreSpaceFactor{%
2649 \relax
2650 \ifhmode
2651 \ifnum\Hy@SavedSpaceFactor>\z@
2652 \spacefactor=\Hy@SavedSpaceFactor
2653 \fi
2654 \fi
2655 }
2656 \def\Hy@SaveSavedSpaceFactor{%
2657 \edef\Hy@RestoreSavedSpaceFactor{%
2658 \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2659 }%
2660 }
2661 \def\Hy@raisedlink#1{%
2662 \ifvmode
2663 #1%
2664 \else
2665 \Hy@SaveSpaceFactor
2666 \penalty\@M
2667 \smash{%
2668 \begingroup
2669 \let\HyperRaiseLinkLength\@tempdima
2670 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2671 \HyperRaiseLinkHook
2672 \expandafter\endgroup
2673 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2674 \Hy@RestoreSpaceFactor
2675 #1%
2676 \Hy@SaveSpaceFactor

```

```

2677 }%
2678 }%
2679 \Hy@RestoreSpaceFactor
2680 \fi
2681 }

```

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

```

2682 \def\Hy@SaveLastskip{%
2683 \let\Hy@RestoreLastskip\relax
2684 \ifvmode
2685 \ifdim\lastskip=\z@
2686 \let\Hy@RestoreLastskip\nobreak
2687 \else
2688 \begingroup
2689 \skip@=-\lastskip
2690 \edef\x{%
2691 \endgroup
2692 \def\noexpand\Hy@RestoreLastskip{%
2693 \noexpand\ifvmode
2694 \noexpand\nobreak
2695 \vskip\the\skip@
2696 \vskip\the\lastskip\relax
2697 \noexpand\fi
2698 }%
2699 }%
2700 \x
2701 \fi
2702 \else
2703 \ifhmode
2704 \ifdim\lastskip=\z@
2705 \let\Hy@RestoreLastskip\nobreak
2706 \else
2707 \begingroup
2708 \skip@=-\lastskip
2709 \edef\x{%
2710 \endgroup
2711 \def\noexpand\Hy@RestoreLastskip{%
2712 \noexpand\ifhmode
2713 \noexpand\nobreak
2714 \hskip\the\skip@
2715 \hskip\the\lastskip\relax
2716 \noexpand\fi
2717 }%
2718 }%
2719 \x
2720 \fi
2721 \fi
2722 \fi
2723 }%

```

9 Options

```

2724 \SetupKeyvalOptions{%
2725 family=Hyp,%
2726 prefix=HyOpt%
2727 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```
2728 \def\IfHyperBooleanExists#1{%
2729   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2730     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2731   }%
2732 }

2733 \@namedef{KV@Hyp@stoppeearly@default}{}
```

`\IfHyperBoolean`

```
2734 \def\IfHyperBoolean#1{%
2735   \IfHyperBooleanExists{#1}{%
2736     \csname ifHy@#1\endcsname
2737     \expandafter\ltx@firstoftwo
2738   \else
2739     \expandafter\ltx@secondoftwo
2740   \fi
2741 } \ltx@secondoftwo
2742 }
```

`\Hy@boolkey`

```
2743 \def\Hy@boolkey#1#2{%
2744   \edef\Hy@tempa{#2}%
2745   \lowercase\expandafter{%
2746     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2747   }%
2748   \ifx\Hy@tempa\@empty
2749     \let\Hy@tempa\Hy@true
2750   \fi
2751   \ifx\Hy@tempa\Hy@true
2752   \else
2753     \ifx\Hy@tempa\Hy@false
2754     \else
2755       \let\Hy@tempa\relax
2756     \fi
2757   \fi
2758   \ifx\Hy@tempa\relax
2759     \Hy@WarnOptionValue{#2}{#1}{‘true’ or ‘false’}%
2760   \else
2761     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2762     \csname Hy@#1\Hy@tempa\endcsname
2763   \fi
2764 }
```

`\Hy@WarnOptionValue`

```
2765 \def\Hy@WarnOptionValue#1#2#3{%
2766   \Hy@Warning{%
2767     Unexpected value ‘#1’\MessageBreak
2768     of option ‘#2’ instead of\MessageBreak
2769     #3%
2770   }%
2771 }
```

`\Hy@DisableOption`

```
2772 \def\Hy@DisableOption#1{%
```

```

2773 \ltx@ifundefined{KV@Hyp@#1@default}{%
2774   \define@key{Hyp}{#1}%
2775 }{%
2776   \define@key{Hyp}{#1}[]%
2777 }%
2778 {\Hy@WarnOptionDisabled{#1}}%
2779 }

```

`\Hy@WarnOptionDisabled`

```

2780 \def\Hy@WarnOptionDisabled#1{%
2781   \Hy@Warning{%
2782     Option ‘#1’ has already been used,\MessageBreak
2783     setting the option has no effect%
2784   }%
2785 }

```

`\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`.

```

2786 \def\Hy@CheckOptionValue#1#2#3{%
2787   \begingroup
2788   \edef\x{#1}%
2789   \@onelevel@sanitize\x
2790   \let\y=y%
2791   \def\do##1##2{%
2792     \def\z{##1}%
2793     \@onelevel@sanitize\z
2794     \ifx\x\z
2795       \let\y=n%
2796       \let\do\@gobbletwo
2797     \fi
2798   }%
2799   #3%
2800   \ifx\y y%
2801     \def\do##1##2{%
2802       * ‘##1’%
2803       \ifx\\##2\\\else\space(##2)\fi
2804       \MessageBreak
2805     }%
2806     \Hy@Warning{%
2807       Values of option ‘#2’: \MessageBreak
2808       #3%
2809       * An empty value disables the option.\MessageBreak
2810       Unknown value ‘\x’%
2811     }%
2812   \fi
2813   \endgroup
2814 }

```

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

```

2815 \def\Hy@DefNameKey#1{%
2816   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2817 }

```

```

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
2818 \def\Hy@@DefNameKey#1#2#3{%
2819 \define@key{Hyp}{#2}{%
2820 \edef#1{##1}%
2821 \ifx#1\@empty
2822 \else
2823 \Hy@CheckOptionValue{##1}{#2}{#3}%
2824 \fi
2825 }%
2826 \let#1\@empty
2827 }

```

```

\Hy@UseNameKey
2828 \def\Hy@UseNameKey#1#2{%
2829 \ifx#2\@empty
2830 \else
2831 /#1/#2%
2832 \fi
2833 }

```

9.2 Defining the options

```

2834 \define@key{Hyp}{implicit}[true]{%
2835 \Hy@boolkey{implicit}{#1}%
2836 }
2837 \define@key{Hyp}{draft}[true]{%
2838 \Hy@boolkey{draft}{#1}%
2839 }
2840 \define@key{Hyp}{final}[true]{%
2841 \Hy@boolkey{final}{#1}%
2842 }
2843 \let\KV@Hyp@nolinks\KV@Hyp@draft
2844 \def\Hy@ObsoletePaperOption#1{%
2845 \Hy@WarningNoLine{%
2846 Option ‘#1’ is no longer used%
2847 }%
2848 \define@key{Hyp}{#1}[true]{}%
2849 }
2850 \def\Hy@temp#1{%
2851 \define@key{Hyp}{#1}[true]{%
2852 \Hy@ObsoletePaperOption{#1}%
2853 }%
2854 }
2855 \Hy@temp{a4paper}
2856 \Hy@temp{a5paper}
2857 \Hy@temp{b5paper}
2858 \Hy@temp{letterpaper}
2859 \Hy@temp{legalpaper}
2860 \Hy@temp{executivepaper}
2861 \define@key{Hyp}{setpagesize}[true]{%
2862 \Hy@boolkey{setpagesize}{#1}%
2863 }
2864 \define@key{Hyp}{debug}[true]{%
2865 \Hy@boolkey{debug}{#1}%

```

```

2866 }
2867 \define@key{Hyp}{linktocpage}[true]{%
2868   \Hy@boolkey{linktocpage}{#1}%
2869   \ifHy@linktocpage
2870     \let\Hy@linktoc\Hy@linktoc@page
2871   \else
2872     \let\Hy@linktoc\Hy@linktoc@section
2873   \fi
2874 }
2875 \chardef\Hy@linktoc@none=0 %
2876 \chardef\Hy@linktoc@section=1 %
2877 \chardef\Hy@linktoc@page=2 %
2878 \chardef\Hy@linktoc@all=3 %
2879 \ifHy@linktocpage
2880   \let\Hy@linktoc\Hy@linktoc@page
2881 \else
2882   \let\Hy@linktoc\Hy@linktoc@section
2883 \fi
2884 \define@key{Hyp}{linktoc}{%
2885   \@ifundefined{Hy@linktoc@#1}{%
2886     \Hy@Warning{%
2887       Unexpected value '#1' of\MessageBreak
2888       option 'linktoc' instead of 'none',\MessageBreak
2889       'section', 'page' or 'all'%
2890     }%
2891   }{%
2892     \expandafter\let\expandafter\Hy@linktoc
2893     \csname Hy@linktoc@#1\endcsname
2894   }%
2895 }
2896 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2897 \let\XR@ext\relax
2898 \define@key{Hyp}{verbose}[true]{%
2899   \Hy@boolkey{verbose}{#1}%
2900 }
2901 \define@key{Hyp}{typexml}[true]{%
2902   \Hy@boolkey{typexml}{#1}%
2903 }

```

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.

```

2904 \define@key{Hyp}{raiselinks}[true]{%
2905   \Hy@boolkey{raiselinks}{#1}%
2906 }

```

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

```

2907 \def\Hy@setbreaklinks#1{%
2908   \csname breaklinks#1\endcsname
2909 }
2910 \def\Hy@breaklinks@unsupported{%
2911   \ifx\Hy@setbreaklinks\@gobble
2912     \ifHy@breaklinks
2913       \Hy@WarningNoLine{%
2914         You have enabled option 'breaklinks'\MessageBreak
2915         But driver '\Hy@driver.def' does not support this.\MessageBreak
2916         Expect trouble with the link areas of broken links%

```

```

2917     }%
2918   \fi
2919 \fi
2920 }

2921 \define@key{Hyp}{breaklinks}[true]{%
2922   \Hy@boolkey{breaklinks}{#1}%
2923   \let\Hy@setbreaklinks\@gobble
2924 }

2925 \define@key{Hyp}{localanchorname}[true]{%
2926   \Hy@boolkey{localanchorname}{#1}%
2927 }

```

Determines whether an automatic anchor is put on each page

```

2928 \define@key{Hyp}{pageanchor}[true]{%
2929   \Hy@boolkey{pageanchor}{#1}%
2930 }

```

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.

```

2931 \define@key{Hyp}{plainpages}[true]{%
2932   \Hy@boolkey{plainpages}{#1}%
2933 }

```

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

```

2934 \define@key{Hyp}{naturalnames}[true]{%
2935   \Hy@boolkey{naturalnames}{#1}%
2936 }

```

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

```

2937 \define@key{Hyp}{hypertextnames}[true]{%
2938   \Hy@boolkey{hypertextnames}{#1}%
2939 }

```

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

```

2940 \define@key{Hyp}{nesting}[true]{%
2941   \Hy@boolkey{nesting}{#1}%
2942 }

```

```

2943 \define@key{Hyp}{destlabel}[true]{%
2944   \Hy@boolkey{destlabel}{#1}%
2945 }

```

```

2946 \define@key{Hyp}{unicode}[true]{%
2947   \Hy@boolkey{unicode}{#1}%
2948   \ifHy@unicode
2949     \def\HyPsd@pdfencoding{unicode}%
2950     \HyPsd@LoadUnicode
2951   \else
2952     \def\HyPsd@pdfencoding{pdfdoc}%
2953   \fi
2954 }

```

```

2955 \Hy@AtBeginDocument{%
2956   \ifx\HyPsd@LoadUnicode\relax
2957   \else
2958     \def\HyPsd@LoadUnicode{%
2959       \Hy@Error{%
2960         Unicode support for bookmarks is not available.\MessageBreak
2961         Activate unicode support by using one of the options\MessageBreak

```

```

2962     'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2963     in the preamble%
2964 } \@ehc
2965 \global\let\HyPsd@LoadUnicode\relax
2966 \global\Hy@unicodedefalse
2967 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2968 }%
2969 \fi
2970 }

2971 \define@key{Hyp}{pdfencoding}{%
2972 \edef\HyPsd@temp{#1}%
2973 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2974 \let\HyPsd@pdfencoding\HyPsd@temp
2975 \Hy@unicodedefalse
2976 \else
2977 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2978 \z@
2979 \else
2980 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2981 \z@
2982 \else
2983 \@ne
2984 \fi
2985 \fi
2986 \let\HyPsd@pdfencoding\HyPsd@temp
2987 \hypersetup{unicode}%
2988 \ifHy@unicode
2989 \def\HyPsd@pdfencoding{#1}%
2990 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2991 \HyPsd@LoadStringEncoding
2992 \fi
2993 \else
2994 \Hy@Warning{Cannot switch to unicode bookmarks}%
2995 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2996 \fi
2997 \else
2998 \@onelevel@sanitize\HyPsd@temp
2999 \Hy@Warning{%
3000 Values of option 'pdfencoding':\MessageBreak
3001 'pdfdoc', 'unicode', 'auto'.\MessageBreak
3002 Ignoring unknown value '\HyPsd@temp'%
3003 }%
3004 \fi
3005 \fi
3006 }
3007 \def\HyPsd@pdfencoding@auto{auto}
3008 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3009 \def\HyPsd@pdfencoding@unicode{unicode}
3010 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3011 \def\HyPsd@LoadStringEncoding{%
3012 \RequirePackage{stringenc}[2009/12/15]%
3013 \let\HyPsd@LoadStringEncoding\relax
3014 }
3015 \Hy@AtBeginDocument{%
3016 \@ifpackageloaded{stringenc}{%
3017 \let\HyPsd@LoadStringEncoding\relax
3018 }{%

```



```

3019 \def\HyPsd@LoadStringEnc{%
3020 \Hy@WarningNoLine{%
3021   Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
3022   in the preamble or load the package there%
3023 }%
3024 }%
3025 }%
3026 }

3027 \define@key{Hyp}{psdextra}[true]{%
3028 \Hy@boolkey{psdextra}{#1}%
3029 \HyPsd@LoadExtra
3030 }

3031 \def\hypersetup{\kvsetkeys{Hyp}}

3032 \newif\ifHy@setpdfversion
3033 \define@key{Hyp}{pdfversion}{%
3034 \ifundefined{Hy@pdfversion@#1}{%
3035 \PackageWarning{hyperref}{%
3036   Unsupported PDF version '#1'.\MessageBreak
3037   Valid values: 1.2 until 1.9%
3038 }%
3039 }{%
3040 \Hy@setpdfversiontrue
3041 \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3042 }%
3043 }
3044 \@namedef{Hy@pdfversion@1.2}{2}%
3045 \@namedef{Hy@pdfversion@1.3}{3}%
3046 \@namedef{Hy@pdfversion@1.4}{4}%
3047 \@namedef{Hy@pdfversion@1.5}{5}%
3048 \@namedef{Hy@pdfversion@1.6}{6}%
3049 \@namedef{Hy@pdfversion@1.7}{7}%
3050 \@namedef{Hy@pdfversion@1.8}{8}%
3051 \@namedef{Hy@pdfversion@1.9}{9}%
3052 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

3053 \newif\ifHy@DviMode
3054 \let\Hy@DviErrMsg\ltx@empty
3055 \ifpdf
3056 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3057 \else
3058 \ifxetex
3059 \def\Hy@DviErrMsg{XeTeX is running}%
3060 \else
3061 \ifvtex
3062 \ifvtexdvi
3063 \Hy@DviModetrue
3064 \else
3065 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3066 \fi
3067 \else
3068 \Hy@DviModetrue
3069 \fi
3070 \fi
3071 \fi

```

```

3072 \def\HyOpt@CheckDvi#1{%
3073   \ifHy@DviMode
3074     \expandafter\ltx@firstofone
3075   \else
3076     \Hy@Error{%
3077       Wrong DVI mode driver option '#1',\MessageBreak
3078       because \Hy@DviErrMsg
3079     }\@ehc
3080   \expandafter\ltx@gobble
3081   \fi
3082 }

3083 \DeclareVoidOption{tex4ht}{%
3084   \Hy@texhttrue
3085   \kvsetkeys{Hyp}{colorlinks=true}%
3086   \def\BeforeTeXIVht{\RequirePackage{color}}}%
3087   \def\Hy@driver{htex4ht}%
3088   \def\MaybeStopEarly{%
3089     \Hy@Message{Stopped early}%
3090   \Hy@AtBeginDocument{%
3091     \PDF@FinishDoc
3092     \gdef\PDF@FinishDoc{}}%
3093   }%
3094   \endinput
3095 }%
3096 }

3097 \DeclareVoidOption{pdftex}{%
3098   \ifpdf
3099     \def\Hy@driver{hpdftex}%
3100   \else
3101     \Hy@Error{%
3102       Wrong driver option 'pdftex',\MessageBreak
3103       because pdfTeX in PDF mode is not detected%
3104     }\@ehc
3105   \fi
3106 }

3107 \DeclareVoidOption{nativepdf}{%
3108   \HyOpt@CheckDvi{nativepdf}{%
3109     \def\Hy@driver{hdvips}%
3110   }%
3111 }

3112 \DeclareVoidOption{dvipdfm}{%
3113   \HyOpt@CheckDvi{dvipdfm}{%
3114     \def\Hy@driver{hdvipdfm}%
3115   }%
3116 }

3117 \DeclareVoidOption{dvipdfmx}{%
3118   \HyOpt@CheckDvi{dvipdfmx}{%
3119     \def\Hy@driver{hdvipdfm}%
3120   }%
3121 }

3122 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3123   \expandafter\ifx\csname if#1\expandafter\endcsname
3124     \csname iftrue\endcsname
3125   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3126   \else
3127     \chardef\SpecialDvipdfmxOutlineOpen\z@
3128   \fi

```

```

3129 }
3130 \DeclareVoidOption{xetex}{%
3131   \ifxetex
3132     \def\Hy@driver{hxtex}%
3133   \else
3134     \Hy@Error{%
3135       Wrong driver option 'xetex',\MessageBreak
3136       because XeTeX is not detected%
3137     }\@ehc
3138   \fi
3139 }
3140 \DeclareVoidOption{pdfmark}{%
3141   \HyOpt@CheckDvi{pdfmark}{%
3142     \def\Hy@driver{hdvips}%
3143   }%
3144 }
3145 \DeclareVoidOption{dvips}{%
3146   \HyOpt@CheckDvi{dvips}{%
3147     \def\Hy@driver{hdvips}%
3148   }%
3149 }
3150 \DeclareVoidOption{hypertex}{%
3151   \HyOpt@CheckDvi{hypertex}{%
3152     \def\Hy@driver{hypertex}%
3153   }%
3154 }
3155 \let\Hy@MaybeStopNow\relax
3156 \DeclareVoidOption{vtex}{%
3157   \ifvtex
3158     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3159     \def\Hy@driver{hvtex}%
3160   \else
3161     \ifnum\OpMode=10\relax
3162       \def\Hy@driver{hvtexhtm}%
3163       \def\MaybeStopEarly{%
3164         \Hy@Message{Stopped early}%
3165         \Hy@AtBeginDocument{%
3166           \PDF@FinishDoc
3167           \gdef\PDF@FinishDoc{}%
3168         }%
3169       \endinput
3170     }%
3171   \else
3172     \Hy@Error{%
3173       Wrong driver option 'vtex',\MessageBreak
3174       because of wrong OpMode (\the\OpMode)%
3175     }\@ehc
3176   \fi
3177 }
3178 \else
3179   \Hy@Error{%
3180     Wrong driver option 'vtex',\MessageBreak
3181     because VTeX is not running%
3182   }\@ehc
3183 }
3184 }
3185 \DeclareVoidOption{vtexpdfmark}{%

```

```

3186 \ifvtex
3187 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3188 \def\Hy@driver{hvtexmrk}%
3189 \else
3190 \Hy@Error{%
3191   Wrong driver option 'vtexpdfmark',\MessageBreak
3192   because of wrong OpMode (\the\OpMode)%
3193 } \@ehc
3194 \fi
3195 \else
3196 \Hy@Error{%
3197   Wrong driver option 'vtexpdfmark',\MessageBreak
3198   because VTeX is not running%
3199 } \@ehc
3200 \fi
3201 }
3202 \DeclareVoidOption{dviwindo}{%
3203 \HyOpt@CheckDvi{dviwindo}{%
3204 \def\Hy@driver{hdviwind}%
3205 \kvsetkeys{Hyp}{colorlinks}%
3206 \PassOptionsToPackage{dviwindo}{color}%
3207 }%
3208 }
3209 \DeclareVoidOption{dvipsone}{%
3210 \HyOpt@CheckDvi{dvipsone}{%
3211 \def\Hy@driver{hdvipson}%
3212 }%
3213 }
3214 \DeclareVoidOption{textures}{%
3215 \HyOpt@CheckDvi{textures}{%
3216 \def\Hy@driver{htexture}%
3217 }%
3218 }
3219 \DeclareVoidOption{latex2html}{%
3220 \HyOpt@CheckDvi{latex2html}{%
3221 \Hy@AtBeginDocument{\@@latextohtmlX}%
3222 }%
3223 }
No more special treatment for ps2pdf. Let it sink or swim.
3224 \DeclareVoidOption{ps2pdf}{%
3225 \HyOpt@CheckDvi{ps2pdf}{%
3226 \def\Hy@driver{hdvips}%
3227 }%
3228 }
3229 \let\HyOpt@DriverFallback\ltx@empty
3230 \define@key{Hyp}{driverfallback}{%
3231 \ifHy@DviMode
3232 \def\HyOpt@DriverFallback{#1}%
3233 \Hy@Match\HyOpt@DriverFallback{%
3234 ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3235 latex2html|tex4ht)$%
3236 }{ }{%
3237 \let\HyOpt@DriverFallback\ltx@empty
3238 }%
3239 \fi
3240 }

```

```

3241 \let\HyOpt@CustomDriver\ltx@empty
3242 \define@key{Hyp}{customdriver}{%
3243   \IfFileExists{#1.def}{%
3244     \def\HyOpt@CustomDriver{#1}%
3245   }{%
3246     \Hy@Warning{%
3247       Missing driver file '#1.def',\MessageBreak
3248       ignoring custom driver%
3249     }%
3250   }%
3251 }

```

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.

```

3252 \define@key{Hyp}{hyperfigures}[true]{%
3253   \Hy@boolkey{hyperfigures}{#1}%
3254 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

3255 \define@key{Hyp}{hyperfootnotes}[true]{%
3256   \Hy@boolkey{hyperfootnotes}{#1}%
3257 }

```

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

```

3258 \def\back@none{none}
3259 \def\back@section{section}
3260 \def\back@page{page}
3261 \def\back@slide{slide}
3262 \define@key{Hyp}{backref}[section]{%
3263   \lowercase{\def\Hy@tempa{#1}}%
3264   \ifx\Hy@tempa\@empty
3265     \let\Hy@tempa\back@section
3266   \fi
3267   \ifx\Hy@tempa\Hy@false
3268     \let\Hy@tempa\back@none
3269   \fi
3270   \ifx\Hy@tempa\back@slide
3271     \let\Hy@tempa\back@section
3272   \fi
3273   \ifx\Hy@tempa\back@page
3274     \PassOptionsToPackage{hyperpageref}{backref}%
3275     \Hy@backreftrue
3276   \else
3277     \ifx\Hy@tempa\back@section
3278       \PassOptionsToPackage{hyperref}{backref}%
3279       \Hy@backreftrue
3280     \else
3281       \ifx\Hy@tempa\back@none
3282         \Hy@backreffalse
3283       \else
3284         \Hy@WarnOptionValue{#1}{backref}{%
3285           'section', 'slide', 'page', 'none',\MessageBreak
3286           or 'false'}%
3287       \fi
3288     \fi
3289   \fi

```

```

3290 }
3291 \define@key{Hyp}{pagebackref}[true]{%
3292   \edef\Hy@tempa{#1}%
3293   \lowercase\expandafter{%
3294     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3295   }%
3296   \ifx\Hy@tempa\@empty
3297     \let\Hy@tempa\Hy@true
3298   \fi
3299   \ifx\Hy@tempa\Hy@true
3300     \PassOptionsToPackage{hyperpageref}{backref}%
3301     \Hy@backreftrue
3302   \else
3303     \ifx\Hy@tempa\Hy@false
3304       \Hy@backreffalse
3305     \else
3306       \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
3307     \fi
3308   \fi
3309 }

```

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

```

3310 \define@key{Hyp}{hyperindex}[true]{%
3311   \Hy@boolkey{hyperindex}{#1}%
3312 }

```

Configuration of encap char.

```

3313 \define@key{Hyp}{encap}[|]{%
3314   \def\HyInd@EncapChar{#1}%
3315 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3316 \def\HyLang@afrikaans{%
3317   \def\equationautorefname{Vergelyking}%
3318   \def\footnoteautorefname{Voetnota}%
3319   \def\itemautorefname{Item}%
3320   \def\figureautorefname{Figuur}%
3321   \def\tableautorefname{Tabel}%
3322   \def\partautorefname{Deel}%
3323   \def\appendixautorefname{Bylae}%
3324   \def\chapterautorefname{Hoofstuk}%
3325   \def\sectionautorefname{Afdeling}%
3326   \def\subsectionautorefname{Subafdeling}%
3327   \def\subsubsectionautorefname{Subsubafdeling}%
3328   \def\paragraphautorefname{Paragraaf}%
3329   \def\subparagraphautorefname{Subparagraaf}%
3330   \def\FancyVerbLineautorefname{Lyn}%
3331   \def\theoremautorefname{Teorema}%
3332   \def\pageautorefname{Bladsy}%
3333 }
3334 \def\HyLang@english{%
3335   \def\equationautorefname{Equation}%
3336   \def\footnoteautorefname{footnote}%
3337   \def\itemautorefname{item}%

```

```

3338 \def\figureautorefname{Figure}%
3339 \def\tableautorefname{Table}%
3340 \def\partautorefname{Part}%
3341 \def\appendixautorefname{Appendix}%
3342 \def\chapterautorefname{chapter}%
3343 \def\sectionautorefname{section}%
3344 \def\subsectionautorefname{subsection}%
3345 \def\subsubsectionautorefname{subsubsection}%
3346 \def\paragraphautorefname{paragraph}%
3347 \def\subparagraphautorefname{subparagraph}%
3348 \def\FancyVerbLineautorefname{line}%
3349 \def\theoremautorefname{Theorem}%
3350 \def\pageautorefname{page}%
3351 }
3352 \def\HyLang@french{%
3353 \def\equationautorefname{'Equation}%
3354 \def\footnoteautorefname{note}%
3355 \def\itemautorefname{item}%
3356 \def\figureautorefname{Figure}%
3357 \def\tableautorefname{Tableau}%
3358 \def\partautorefname{Partie}%
3359 \def\appendixautorefname{Appendice}%
3360 \def\chapterautorefname{chapitre}%
3361 \def\sectionautorefname{section}%
3362 \def\subsectionautorefname{sous-section}%
3363 \def\subsubsectionautorefname{sous-sous-section}%
3364 \def\paragraphautorefname{paragraphe}%
3365 \def\subparagraphautorefname{sous-paragraphe}%
3366 \def\FancyVerbLineautorefname{ligne}%
3367 \def\theoremautorefname{Th'eor'eme}%
3368 \def\pageautorefname{page}%
3369 }
3370 \def\HyLang@german{%
3371 \def\equationautorefname{Gleichung}%
3372 \def\footnoteautorefname{Fu'ss note}%
3373 \def\itemautorefname{Punkt}%
3374 \def\figureautorefname{Abbildung}%
3375 \def\tableautorefname{Tabelle}%
3376 \def\partautorefname{Teil}%
3377 \def\appendixautorefname{Anhang}%
3378 \def\chapterautorefname{Kapitel}%
3379 \def\sectionautorefname{Abschnitt}%
3380 \def\subsectionautorefname{Unterabschnitt}%
3381 \def\subsubsectionautorefname{Unterunterabschnitt}%
3382 \def\paragraphautorefname{Absatz}%
3383 \def\subparagraphautorefname{Unterabsatz}%
3384 \def\FancyVerbLineautorefname{Zeile}%
3385 \def\theoremautorefname{Theorem}%
3386 \def\pageautorefname{Seite}%
3387 }
3388 \def\HyLang@italian{%
3389 \def\equationautorefname{Equazione}%
3390 \def\footnoteautorefname{nota}%
3391 \def\itemautorefname{punto}%
3392 \def\figureautorefname{Figura}%
3393 \def\tableautorefname{Tabella}%
3394 \def\partautorefname{Parte}%

```

```

3395 \def\appendixautorefname{Appendice}%
3396 \def\chapterautorefname{Capitolo}%
3397 \def\sectionautorefname{sezione}%
3398 \def\subsectionautorefname{sottosezione}%
3399 \def\subsubsectionautorefname{sottosottosezione}%
3400 \def\paragraphautorefname{paragrafo}%
3401 \def\subparagraphautorefname{sottoparagrafo}%
3402 \def\FancyVerbLineautorefname{linea}%
3403 \def\theoremautorefname{Teorema}%
3404 \def\pageautorefname{Pag.\@}%
3405 }
3406 \def\HyLang@magyar{%
3407 \def\equationautorefname{Egyenlet}%
3408 \def\footnoteautorefname{l\'abjegyzet}%
3409 \def\itemautorefname{Elem}%
3410 \def\figureautorefname{'Abra}%
3411 \def\tableautorefname{T\'abl\'azat}%
3412 \def\partautorefname{R\'esz}%
3413 \def\appendixautorefname{F\'uggel\'ek}%
3414 \def\chapterautorefname{fejezet}%
3415 \def\sectionautorefname{szakasz}%
3416 \def\subsectionautorefname{alszakasz}%
3417 \def\subsubsectionautorefname{alalszakasz}%
3418 \def\paragraphautorefname{bekezd\'es}%
3419 \def\subparagraphautorefname{albekezd\'es}%
3420 \def\FancyVerbLineautorefname{sor}%
3421 \def\theoremautorefname{T\'etel}%
3422 \def\pageautorefname{oldal}%
3423 }
3424 \def\HyLang@portuges{%
3425 \def\equationautorefname{Equa\c c\~ao}%
3426 \def\footnoteautorefname{Nota de rodap\'e}%
3427 \def\itemautorefname{Item}%
3428 \def\figureautorefname{Figura}%
3429 \def\tableautorefname{Tabela}%
3430 \def\partautorefname{Parte}%
3431 \def\appendixautorefname{Ap\~endice}%
3432 \def\chapterautorefname{Cap\'itulo}%
3433 \def\sectionautorefname{Se\c c\~ao}%
3434 \def\subsectionautorefname{Subse\c c\~ao}%
3435 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3436 \def\paragraphautorefname{par\'agrafo}%
3437 \def\subparagraphautorefname{subpar\'agrafo}%
3438 \def\FancyVerbLineautorefname{linha}%
3439 \def\theoremautorefname{Teorema}%
3440 \def\pageautorefname{P\'agina}%
3441 }

```

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`.

```

3442 \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`?

```
3443 \def\equationautorefname{\cyr\cyrv\cyrry\cyrr.}%
```

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

```
3444 % \def\equationautorefname{%
3445 %   \cyr\cyrv\cyrry\cyrr\cyra\cyrrh\cyre\cyrn\cyri\cyre
3446 % }%
```

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

```
3447 \def\footnoteautorefname{%
3448   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3449 }%
```

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}`”

```
3450 % \def\footnoteautorefname{%
3451 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3452 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3453 % }%
```

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

```
3454 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3455 % \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.

```
3456 \def\itemautorefname{\cyr\cyrp.}%
3457 % \def\itemautorefname{\cyr\cyrp\cyru\cyrk\cyrt}%
```

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

```
3458 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3459 \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.

```
3460 \def\partautorefname{\cyr\cyrch.}%
3461 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3462 \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.

```
3463 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3464 % \def\appendixautorefname{%
3465 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\cyre\cyrn\cyri\cyre
3466 % }%
```

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.

```

3467 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3468 \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.

```

3469 \def\paragraphautorefname{\cyr\cyrp.}%
3470 \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.

```

3471 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3472 % \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.

```

3473 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```

3474 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3475 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

```

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

```

3476 % \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 ...

```

3477 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

```

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

```

3478 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3479 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

```

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

```

3480 \def\pageautorefname{\cyr\cyrs.}%
3481 }

```

```

3482 \def\HyLang@spanish{%
3483 \def\equationautorefname{Ecuaci'on}%
3484 \def\footnoteautorefname{Nota a pie de p'agina}%
3485 \def\itemautorefname{Elemento}%
3486 \def\figureautorefname{Figura}%
3487 \def\tableautorefname{Tabla}%
3488 \def\partautorefname{Parte}%
3489 \def\appendixautorefname{Ap'endice}%
3490 \def\chapterautorefname{Cap'itulo}%
3491 \def\sectionautorefname{Secci'on}%
3492 \def\subsectionautorefname{Subsecci'on}%
3493 \def\subsubsectionautorefname{Subsubsecci'on}%
3494 \def\paragraphautorefname{P'arrafo}%
3495 \def\subparagraphautorefname{Subp'arrafo}%
3496 \def\FancyVerbLineautorefname{L'inea}%
3497 \def\theoremautorefname{Teorema}%
3498 \def\pageautorefname{P'agina}%

```

```

3499 }
3500 \def\HyLang@vietnamese{%
3501   \def\equationautorefname{Ph\uhorn{}}\ohorn{}ng tr\`inh}%
3502   \def\footnoteautorefname{Ch\`u th\`ich}%
3503   \def\itemautorefname{m\`d{u}c}%
3504   \def\figureautorefname{H\`inh}%
3505   \def\tableautorefname{B\`h{a}ng}%
3506   \def\partautorefname{Ph\`acircumflex{}n}%
3507   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3508   \def\chapterautorefname{ch\uhorn{}}\ohorn{}ng}%
3509   \def\sectionautorefname{m\`d{u}c}%
3510   \def\subsectionautorefname{m\`d{u}c}%
3511   \def\subsubsectionautorefname{m\`d{u}c}%
3512   \def\paragraphautorefname{dj{}o\`d{a}n}%
3513   \def\subparagraphautorefname{dj{}o\`d{a}n}%
3514   \def\FancyVerbLineautorefname{d\`ong}%
3515   \def\theoremautorefname{DJ{}d{i}nh l\`y}%
3516   \def\pageautorefname{Trang}%
3517 }

```

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

```

3518 \def\HyLang@addto#1#2{%
3519   #2%
3520   \@temptokena{#2}%
3521   \ifx#1\relax
3522     \let#1\@empty
3523   \fi
3524   \ifx#1\@undefined
3525     \edef#1{\the\@temptokena}%
3526   \else
3527     \toks@\expandafter{#1}%
3528     \edef#1{\the\toks@\the\@temptokena}%
3529   \fi
3530   \@temptokena{}\toks@\@temptokena
3531 }

3532 \def\HyLang@DeclareLang#1#2#3{%
3533   \@ifpackagewith{babel}{#1}{%
3534     \expandafter\HyLang@addto
3535       \csname extras#1\expandafter\endcsname
3536       \csname HyLang@#2\endcsname
3537     \begingroup
3538       \edef\x{\endgroup
3539         #3%
3540       }%
3541       \x
3542       \@namedef{HyLang@#1@done}{}%
3543     }{}%
3544     \begingroup
3545       \edef\x##1##2{%
3546         \noexpand\ifx##2\relax
3547           \errmessage{No definitions for language #2' found!}%
3548         \noexpand\fi
3549       \endgroup
3550       \noexpand\define@key{Hyp}{#1}[]{%
3551         \noexpand\@ifundefined{HyLang@#1@done}{%
3552           \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%

```

```

3553      #3%
3554      \noexpand\@namedef{HyLang@#1@done}{}%
3555    }{}%
3556  }%
3557 }%
3558 \expandafter\x\csname extras#1\expandafter\endcsname
3559      \csname HyLang@#2\endcsname
3560 }
3561 \HyLang@DeclareLang{english}{english}{}
3562 \HyLang@DeclareLang{UKenglish}{english}{}
3563 \HyLang@DeclareLang{british}{english}{}
3564 \HyLang@DeclareLang{USenglish}{english}{}
3565 \HyLang@DeclareLang{american}{english}{}
3566 \HyLang@DeclareLang{german}{german}{}
3567 \HyLang@DeclareLang{austrian}{german}{}
3568 \HyLang@DeclareLang{ngerman}{german}{}
3569 \HyLang@DeclareLang{naustrian}{german}{}
3570 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3571 \HyLang@DeclareLang{brazil}{portuges}{}
3572 \HyLang@DeclareLang{brazilian}{portuges}{}
3573 \HyLang@DeclareLang{portuguese}{portuges}{}
3574 \HyLang@DeclareLang{spanish}{spanish}{}
3575 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3576 \HyLang@DeclareLang{french}{french}{}
3577 \HyLang@DeclareLang{frenchb}{french}{}
3578 \HyLang@DeclareLang{francais}{french}{}
3579 \HyLang@DeclareLang{acadian}{french}{}
3580 \HyLang@DeclareLang{canadien}{french}{}
3581 \HyLang@DeclareLang{italian}{italian}{}
3582 \HyLang@DeclareLang{magyar}{magyar}{}
3583 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3584 \DeclareVoidOption{vietnamese}{%
3585   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3586   \Hy@AtEndOfPackage{%
3587     \@ifundefined{T@PU}{}{}%
3588     \input{puvnenc.def}%
3589   }%
3590 }%
3591 }
3592 \DeclareVoidOption{vietnam}{%
3593   \HyLang@addto\extravietnam\HyLang@vietnamese
3594   \Hy@AtEndOfPackage{%
3595     \@ifundefined{T@PU}{}{}%
3596     \input{puvnenc.def}%
3597   }%
3598 }%
3599 }

```

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

```

3600 \DeclareVoidOption{arabic}{%
3601   \Hy@AtEndOfPackage{%
3602     \@ifundefined{T@PU}{}{}%
3603     \input{puarenc.def}%
3604   }%
3605 }%
3606 }

```

13 Options to change appearance of links

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

```
3607 \define@key{Hyp}{colorlinks}[true]{%
3608   \Hy@boolkey{colorlinks}{#1}%
3609 }
3610 \DeclareVoidOption{hidelinks}{%
3611   \Hy@colorlinksfalse
3612   \Hy@ocgcolorlinksfalse
3613   \Hy@frenchlinksfalse
3614   \def\Hy@colorlink##1{\begingroup}%
3615   \def\Hy@endcolorlink{\endgroup}%
3616   \def\@pdfborder{0 0 0}%
3617   \let\@pdfborderstyle\ltx@empty
3618 }
3619 \define@key{Hyp}{ocgcolorlinks}[true]{%
3620   \Hy@boolkey{ocgcolorlinks}{#1}%
3621 }
3622 \Hy@AtBeginDocument{%
3623   \begingroup
3624   \@ifundefined{OBJ@OCG@view}{%
3625     \ifHy@ocgcolorlinks
3626       \Hy@Warning{%
3627         Driver does not support ‘ocgcolorlinks’,\MessageBreak
3628         using ‘colorlinks’ instead%
3629       }%
3630     \fi
3631   }{%
3632   }%
3633 }
3634 \define@key{Hyp}{frenchlinks}[true]{%
3635   \Hy@boolkey{frenchlinks}{#1}%
3636 }
```

14 Bookmarking

```
3637 \begingroup\expandafter\expandafter\expandafter\endgroup
3638 \expandafter\ifx\csname chapter\endcsname\relax
3639   \def\toclevel@part{0}%
3640 \else
3641   \def\toclevel@part{-1}%
3642 \fi
3643 \def\toclevel@chapter{0}
3644 \def\toclevel@section{1}
3645 \def\toclevel@subsection{2}
3646 \def\toclevel@subsubsection{3}
3647 \def\toclevel@paragraph{4}
3648 \def\toclevel@subparagraph{5}
3649 \def\toclevel@figure{0}
3650 \def\toclevel@table{0}
3651 \@ifpackageloaded{listings}{%
3652   \providecommand*\theHlstlisting{\thelstlisting}%
3653   \providecommand*\toclevel@lstlisting{0}%
3654 }{}
3655 \@ifpackageloaded{listing}{%
3656   \providecommand*\theHlisting{\thelisting}%
3657 }
```

```

3657 \providecommand*\toclevel@listing{0}%
3658 }{}

```

```

3659 \define@key{Hyp}{bookmarks}[true]{%
3660   \Hy@boolkey{bookmarks}{#1}%
3661 }

```

```

3662 \define@key{Hyp}{bookmarksopen}[true]{%
3663   \Hy@boolkey{bookmarksopen}{#1}%
3664 }

```

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.

```

3665 \let\Hy@bookmarksdepth\c@tocdepth
3666 \define@key{Hyp}{bookmarksdepth}[]{}%
3667 \begingroup
3668   \edef\x{#1}%
3669   \ifx\x\empty
3670     \global\let\Hy@bookmarksdepth\c@tocdepth
3671   \else
3672     \@ifundefined{toclevel@\x}{%
3673       \@onelevel@sanitize\x
3674       \edef\y{\expandafter\@car\x\@nil}%
3675       \ifcase 0\expandafter\ifx\y-1\fi
3676         \expandafter\ifnum\expandafter'\y>47 %
3677         \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3678       \Hy@Warning{Unknown document division name (\x)}%
3679     \else
3680       \setbox\z@=\hbox{%
3681         \count@=\x
3682         \xdef\Hy@bookmarksdepth{\the\count@}%
3683       }%
3684     \fi
3685   }{}%
3686   \setbox\z@=\hbox{%
3687     \count@=\csname toclevel@\x\endcsname
3688     \xdef\Hy@bookmarksdepth{\the\count@}%
3689   }%
3690 }%
3691 \fi
3692 \endgroup
3693 }

```

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

```

3694 \define@key{Hyp}{bookmarksopenlevel}{%
3695   \def\@bookmarksopenlevel{#1}%
3696 }
3697 \def\@bookmarksopenlevel{\maxdimen}
3698 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3699 \define@key{Hyp}{bookmarkstype}{%
3700   \def\Hy@bookmarkstype{#1}%

```

```

3701 }
3702 \def\Hy@bookmarkstype{toc}

```

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

```

3703 \define@key{Hyp}{bookmarksnumbered}[true]{%
3704   \Hy@boolkey{bookmarksnumbered}{#1}%
3705 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3706 \define@key{Hyp}{CJKbookmarks}[true]{%
3707   \Hy@boolkey{CJKbookmarks}{#1}%
3708 }

3709 \def\Hy@temp#1{%
3710   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3711 }
3712 \def\Hy@@temp#1#2#3{%
3713   \define@key{Hyp}{#2color}{%
3714     \HyColor@HyperrefColor{##1}#1%
3715   }%
3716   \def#1{#3}%
3717 }
3718 \Hy@temp{link}{red}
3719 \Hy@temp{anchor}{black}
3720 \Hy@temp{cite}{green}
3721 \Hy@temp{file}{cyan}
3722 \Hy@temp{url}{magenta}
3723 \Hy@temp{menu}{red}
3724 \Hy@temp{run}{\@filecolor}
3725 \define@key{Hyp}{pagecolor}{%
3726   \Hy@WarningPageColor
3727 }
3728 \def\Hy@WarningPageColor{%
3729   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3730   \global\let\Hy@WarningPageColor\relax
3731 }
3732 \define@key{Hyp}{allcolors}{%
3733   \HyColor@HyperrefColor{#1}\@linkcolor
3734   \HyColor@HyperrefColor{#1}\@anchorcolor
3735   \HyColor@HyperrefColor{#1}\@citecolor
3736   \HyColor@HyperrefColor{#1}\@filecolor
3737   \HyColor@HyperrefColor{#1}\@urlcolor
3738   \HyColor@HyperrefColor{#1}\@menucolor
3739   \HyColor@HyperrefColor{#1}\@runcolor
3740 }

3741 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3742 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3743 \let\@baseurl\empty
3744 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3745 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3746 \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.

```

3747 \let\@pdfpagetransition\relax
3748 \define@key{Hyp}{pdfpagetransition}{%
3749   \def\@pdfpagetransition{#1}%
3750 }
```

`\@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.

```

3751 \let\@pdfpageduration\relax
3752 \define@key{Hyp}{pdfpageduration}{%
3753   \def\@pdfpageduration{#1}%
3754   \Hy@Match\@pdfpageduration{%
3755     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3756   }{}%
3757   \Hy@Warning{%
3758     Invalid value '\@pdfpageduration'\MessageBreak
3759     of option 'pdfpageduration'\MessageBreak
3760     is replaced by an empty value%
3761   }%
3762   \let\@pdfpageduration\ltx@empty
3763 }%
3764 }
```

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.

```

3765 \newif\ifHy@useHidKey
3766 \Hy@useHidKeyfalse
3767 \define@key{Hyp}{pdfpagehidden}[true]{%
3768   \Hy@boolkey{pdfpagehidden}{#1}%
3769   \ifHy@pdfpagehidden
3770     \global\Hy@useHidKeytrue
3771   \fi
3772 }
```

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).

```

3773 \def\Hy@ColorList{cite,file,link,menu,run,url}
3774 \@for\Hy@temp:=\Hy@ColorList\do{%
3775   \edef\Hy@temp{%
3776     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3777       \noexpand\HyColor@HyperrefBorderColor
3778         {##1}%
3779       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3780       {hyperref}%
3781       {\Hy@temp bordercolor}%
3782     }%
3783   }%
3784   \Hy@temp
```



```

3785 }
3786 \define@key{Hyp}{pagebordercolor}{%
3787 \Hy@WarningPageBorderColor
3788 }
3789 \def\Hy@WarningPageBorderColor{%
3790 \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3791 \global\let\Hy@WarningPageBorderColor\relax
3792 }
3793 \define@key{Hyp}{allbordercolors}{%
3794 \def\Hy@temp##1##2{%
3795 \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3796 }%
3797 \Hy@temp\@citebordercolor{cite}%
3798 \Hy@temp\@filebordercolor{file}%
3799 \Hy@temp\@linkbordercolor{link}%
3800 \Hy@temp\@menubordercolor{menu}%
3801 \Hy@temp\@runbordercolor{run}%
3802 \Hy@temp\@urlbordercolor{url}%
3803 }

3804 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3805 \Hy@DefNameKey{pdfhighlight}{%
3806 \do{/I}{Invert}%
3807 \do{/N}{None}%
3808 \do{/O}{Outline}%
3809 \do{/P}{Push}%
3810 }
3811 \define@key{Hyp}{pdfborder}{%
3812 \let\Hy@temp\@pdfborder
3813 \def\@pdfborder{#1}%
3814 \Hy@Match\@pdfborder{%
3815 ~\HyPat@NonNegativeReal/ %
3816 \HyPat@NonNegativeReal/ %
3817 \HyPat@NonNegativeReal/%
3818 ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*\])?}%
3819 }-{}{%
3820 \Hy@Warning{%
3821 Invalid value '\@pdfborder'\MessageBreak
3822 for option 'pdfborder'\MessageBreak
3823 Option setting is ignored%
3824 }%
3825 \let\@pdfborder\Hy@temp
3826 }%
3827 }
3828 \define@key{Hyp}{pdfborderstyle}{%
3829 \let\Hy@temp\@pdfborderstyle
3830 \def\@pdfborderstyle{#1}%
3831 \Hy@Match\@pdfborderstyle{%
3832 ~%
3833 ( */Type */Border%
3834 | */W +\HyPat@NonNegativeReal/%
3835 | */S */[SDBIU]%
3836 | */D *[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?\])?}%
3837 )* *}%
3838 }-{}{%
3839 \Hy@Warning{%
3840 Invalid value '\@pdfborderstyle'\MessageBreak
3841 for option 'pdfborderstyle'\MessageBreak

```

```

3842     Option setting is ignored%
3843 }%
3844 \let\@pdfborderstyle\Hy@temp
3845 }%
3846 }
3847 \def\Hy@setpdfborder{%
3848 \ifx\@pdfborder\@empty
3849 \else
3850 /Border[\@pdfborder]%
3851 \fi
3852 \ifx\@pdfborderstyle\@empty
3853 \else
3854 /BS<<\@pdfborderstyle>>%
3855 \fi
3856 }
3857 \Hy@DefNameKey{pdfpagemode}{%
3858 \do{UseNone}{}%
3859 \do{UseOutlines}{}%
3860 \do{UseThumbs}{}%
3861 \do{FullScreen}{}%
3862 \do{UseOC}{PDF 1.5}%
3863 \do{UseAttachments}{PDF 1.6}%
3864 }
3865 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3866 \do{UseNone}{}%
3867 \do{UseOutlines}{}%
3868 \do{UseThumbs}{}%
3869 \do{FullScreen}{}%
3870 \do{UseOC}{PDF 1.5}%
3871 \do{UseAttachments}{PDF 1.6}%
3872 }
3873 \Hy@DefNameKey{pdfdirection}{%
3874 \do{L2R}{Left to right}%
3875 \do{R2L}{Right to left}%
3876 }
3877 \Hy@DefNameKey{pdfviewarea}{%
3878 \do{MediaBox}{}%
3879 \do{CropBox}{}%
3880 \do{BleedBox}{}%
3881 \do{TrimBox}{}%
3882 \do{ArtBox}{}%
3883 }
3884 \Hy@DefNameKey{pdfviewclip}{%
3885 \do{MediaBox}{}%
3886 \do{CropBox}{}%
3887 \do{BleedBox}{}%
3888 \do{TrimBox}{}%
3889 \do{ArtBox}{}%
3890 }
3891 \Hy@DefNameKey{pdfprintarea}{%
3892 \do{MediaBox}{}%
3893 \do{CropBox}{}%
3894 \do{BleedBox}{}%
3895 \do{TrimBox}{}%
3896 \do{ArtBox}{}%
3897 }
3898 \Hy@DefNameKey{pdfprintclip}{%

```

```

3899 \do{MediaBox}{}%
3900 \do{CropBox}{}%
3901 \do{BleedBox}{}%
3902 \do{TrimBox}{}%
3903 \do{ArtBox}{}%
3904 }
3905 \Hy@DefNameKey{pdfprintscaling}{%
3906 \do{AppDefault}{}%
3907 \do{None}{}%
3908 }
3909 \Hy@DefNameKey{pdfduplex}{%
3910 \do{Simplex}{}%
3911 \do{DuplexFlipShortEdge}{}%
3912 \do{DuplexFlipLongEdge}{}%
3913 }
3914 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3915 \do{true}{}%
3916 \do{false}{}%
3917 }
3918 \define@key{Hyp}{pdfprintpagerange}{%
3919 \def\@pdfprintpagerange{#1}%
3920 }
3921 \Hy@DefNameKey{pdfnumcopies}{%
3922 \do{2}{two copies}%
3923 \do{3}{three copies}%
3924 \do{4}{four copies}%
3925 \do{5}{five copies}%
3926 }
3927 \define@key{Hyp}{pdfusetitle}[true]{%
3928 \Hy@boolkey{pdfusetitle}{#1}%
3929 }
3930 \def\HyXeTeX@CheckUnicode{%
3931 \ifxetex
3932 \ifHy@unicode
3933 \else
3934 \Hy@WarningNoLine{%
3935 XeTeX driver only supports unicode.\MessageBreak
3936 Enabling option 'unicode'%
3937 }%
3938 \kvsetkeys{Hyp}{unicode}%
3939 \fi
3940 \else
3941 \let\HyXeTeX@CheckUnicode\relax
3942 \fi
3943 }
3944 \def\HyPsd@PrerenderUnicode#1{%
3945 \begingroup
3946 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3947 \else
3948 \sbox0{%
3949 \let\GenericInfo\@gobbletwo
3950 \let\GenericWarning\@gobbletwo
3951 \let\GenericError\@gobblefour
3952 \PrerenderUnicode{#1}%
3953 }%
3954 \fi
3955 \endgroup

```

```

3956 }
3957 \define@key{Hyp}{pdftitle}{%
3958   \HyXeTeX@CheckUnicode
3959   \HyPsd@XeTeXBigCharstrue
3960   \HyPsd@PrerenderUnicode{#1}%
3961   \pdfstringdef\@pdftitle{#1}%
3962 }
3963 \define@key{Hyp}{pdfauthor}{%
3964   \HyXeTeX@CheckUnicode
3965   \HyPsd@XeTeXBigCharstrue
3966   \HyPsd@PrerenderUnicode{#1}%
3967   \pdfstringdef\@pdfauthor{#1}%
3968 }
3969 \define@key{Hyp}{pdfproducer}{%
3970   \HyXeTeX@CheckUnicode
3971   \HyPsd@XeTeXBigCharstrue
3972   \HyPsd@PrerenderUnicode{#1}%
3973   \pdfstringdef\@pdfproducer{#1}%
3974   \ifxetex
3975     \Hy@Warning{%
3976       pdfproducer: %
3977       xdvipdfmx will use its own setting\MessageBreak
3978       instead of the value given%
3979     }%
3980   \else
3981     \def\Hy@temp{hdvipdfm}%
3982     \ifx\Hy@driver\Hy@temp
3983       \Hy@Warning{%
3984         pdfproducer: %
3985         dvipdfm(x) will use its own setting\MessageBreak
3986         instead of the value given%
3987       }%
3988     \fi
3989   \fi
3990 }
3991 \define@key{Hyp}{pdfcreator}{%
3992   \HyXeTeX@CheckUnicode
3993   \HyPsd@XeTeXBigCharstrue
3994   \HyPsd@PrerenderUnicode{#1}%
3995   \pdfstringdef\@pdfcreator{#1}%
3996 }
3997 \define@key{Hyp}{pdfcreationdate}{%
3998   \begingroup
3999   \Hy@unicodetfalse
4000   \pdfstringdef\@pdfcreationdate{#1}%
4001   \endgroup
4002 }
4003 \define@key{Hyp}{pdfmoddate}{%
4004   \begingroup
4005   \Hy@unicodetfalse
4006   \pdfstringdef\@pdfmoddate{#1}%
4007   \endgroup
4008 }
4009 \define@key{Hyp}{pdfsubject}{%
4010   \HyXeTeX@CheckUnicode
4011   \HyPsd@XeTeXBigCharstrue
4012   \HyPsd@PrerenderUnicode{#1}%

```

```

4013 \pdfstringdef\@pdfsubject{#1}%
4014 }
4015 \define@key{Hyp}{pdfkeywords}{%
4016 \HyXeTeX@CheckUnicode
4017 \HyPsd@XeTeXBigCharstrue
4018 \HyPsd@PrerenderUnicode{#1}%
4019 \pdfstringdef\@pdfkeywords{#1}%
4020 }
4021 \define@key{Hyp}{pdftrapped}{%
4022 \lowercase{\edef\Hy@temp{#1}}}%
4023 \ifx\Hy@temp\HyInfo@trapped@true
4024 \def\@pdftrapped{True}%
4025 \else
4026 \ifx\Hy@temp\HyInfo@trapped@false
4027 \def\@pdftrapped{False}%
4028 \else
4029 \ifx\Hy@temp\HyInfo@trapped@unknown
4030 \def\@pdftrapped{Unknown}%
4031 \else
4032 \ifx\Hy@temp\@empty
4033 \else
4034 \Hy@Warning{%
4035     Unsupported value '#1'\MessageBreak
4036     for option 'pdftrapped'%
4037 }%
4038 \fi
4039 \def\@pdftrapped{}%
4040 \fi
4041 \fi
4042 \fi
4043 }
4044 \def\HyInfo@trapped@true{true}
4045 \def\HyInfo@trapped@false{false}
4046 \def\HyInfo@trapped@unknown{unknown}
4047 \def\HyInfo@TrappedUnsupported{%
4048 \ifx\@pdftrapped\@empty
4049 \else
4050 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4051 \gdef\HyInfo@TrappedUnsupported{}%
4052 \fi
4053 }
4054 \define@key{Hyp}{pdfinfo}{%
4055 \kvsetkeys{pdfinfo}{#1}%
4056 }
4057 \def\Hy@temp#1{%
4058 \lowercase{\Hy@temp@A{#1}}{#1}%
4059 }
4060 \def\Hy@temp@A#1#2{%
4061 \define@key{pdfinfo}{#2}{%
4062 \hypersetup{pdf#1={#1}}}%
4063 }%
4064 }
4065 \Hy@temp{Title}
4066 \Hy@temp{Author}
4067 \Hy@temp{Keywords}
4068 \Hy@temp{Subject}
4069 \Hy@temp{Creator}

```

```

4070 \Hy@temp{Producer}
4071 \Hy@temp{CreationDate}
4072 \Hy@temp{ModDate}
4073 \Hy@temp{Trapped}
4074 \newif\ifHyInfo@AddonUnsupported
4075 \kv@set@family@handler{pdfinfo}{%
4076   \HyInfo@AddonHandler{#1}{#2}%
4077 }
4078 \let\HyInfo@do\relax
4079 \def\HyInfo@AddonHandler#1#2{%
4080   \ifx\kv@value\relax
4081     \Hy@Warning{%
4082       Option 'pdfinfo': ignoring key '\kv@key' without value%
4083     }%
4084   \else
4085     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4086     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4087     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4088       \ifHyInfo@AddonUnsupported
4089         \Hy@Warning{%
4090           This driver does not support additional\MessageBreak
4091           information entries, therefore\MessageBreak
4092           '\kv@key' is ignored%
4093         }%
4094       \else
4095         \def\HyInfo@tmp##1{%
4096           \kv@define@key{pdfinfo}{##1}{%
4097             \HyXeTeX@CheckUnicode
4098             \HyPsd@XeTeXBigCharstrue
4099             \HyPsd@PrerenderUnicode{####1}%
4100             \pdfstringdef\HyInfo@Value{####1}%
4101             \global\expandafter
4102             \let\csname HyInfo@Value@##1\endcsname
4103               \HyInfo@Value
4104           }%
4105         }%
4106         \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4107         \global\expandafter
4108         \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4109         \csname KV@pdfinfo@\HyInfo@Key\endcsname
4110         \xdef\HyInfo@AddonList{%
4111           \HyInfo@AddonList
4112           \HyInfo@do{\HyInfo@Key}%
4113         }%
4114         \kv@parse@normalized{%
4115           \HyInfo@Key={#2}%
4116         }{%
4117           \kv@processor@default{pdfinfo}%
4118         }%
4119       \fi
4120     \else
4121       \kv@parse@normalized{%
4122         \HyInfo@Key={#2}%
4123       }{%
4124         \kv@processor@default{pdfinfo}%
4125       }%
4126     \fi

```

```

4127 \fi
4128 }
4129 \def\HyInfo@GenerateAddons{%
4130 \ifHyInfo@AddonUnsupported
4131 \def\HyInfo@Addons{%
4132 \else
4133 \begingroup
4134 \toks@{%
4135 \def\HyInfo@do##1{%
4136 \EdefEscapeName\HyInfo@Key{##1}%
4137 \edef\x{%
4138 \toks@{%
4139 \the\toks@
4140 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4141 }%
4142 }%
4143 \x
4144 }%
4145 \HyInfo@AddonList
4146 \edef\x{\endgroup
4147 \def\noexpand\HyInfo@Addons{\the\toks@}%
4148 }%
4149 \x
4150 \fi
4151 }
4152 \global\let\HyInfo@AddonList\ltx@empty
4153 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
4154 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4155 \let\setpdfinkmargin\@gobble
4156 \def\calculate@pdfview#1 #2\{%
4157 \def\@pdfview{#1}%
4158 \ifx\#2\%
4159 \def\@pdfviewparams{-32768}%
4160 \else
4161 \def\@pdfviewparams{#2}%
4162 \fi
4163 }
4164 \begingroup\expandafter\expandafter\expandafter\endgroup
4165 \expandafter\ifx\csname numexpr\endcsname\relax
4166 \def\Hy@number#1{%
4167 \expandafter\@firstofone\expandafter{\number#1}%
4168 }%
4169 \else
4170 \def\Hy@number#1{%
4171 \the\numexpr#1\relax
4172 }%
4173 \fi
4174 \define@key{Hyp}{pdfstartpage}{%
4175 \ifx\#1\%
4176 \let\@pdfstartpage\ltx@empty
4177 \else
4178 \edef\@pdfstartpage{\Hy@number{#1}}%
4179 \fi
4180 }%
4181 \define@key{Hyp}{pdfstartview}{%
4182 \ifx\#1\%
4183 \let\@pdfstartview\ltx@empty

```

```

4184 \else
4185 \hypercalcbpdef\@pdfstartview{/#1}%
4186 \fi
4187 }
4188 \def\HyPat@NonNegativeReal/{%
4189 \ *([0-9]+\.[0-9]*|0-9)*\.[0-9]+) *%
4190 }
4191 \define@key{Hyp}{pdfremotestartview}{%
4192 \ifx\#1\%
4193 \def\@pdfremotestartview{/Fit}%
4194 \else
4195 \hypercalcbpdef\@pdfremotestartview{#1}%
4196 \edef\@pdfremotestartview{\@pdfremotestartview}%
4197 \Hy@Match\@pdfremotestartview{%
4198 ^{XYZ -?(null|\HyPat@NonNegativeReal/) %
4199 -?(null|\HyPat@NonNegativeReal/) %
4200 (null|\HyPat@NonNegativeReal/)|%
4201 Fit(|B| %
4202 (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
4203 R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
4204 \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
4205 )}$%
4206 }{}{%
4207 \Hy@Warning{%
4208 Invalid value '\@pdfremotestartview'\MessageBreak
4209 of 'pdfremotestartview'\MessageBreak
4210 is replaced by 'Fit'%
4211 }%
4212 \let\@pdfremotestartview\@empty
4213 }%
4214 \ifx\@pdfremotestartview\@empty
4215 \def\@pdfremotestartview{/Fit}%
4216 \else
4217 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4218 \fi
4219 \fi
4220 }
4221 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4222 \define@key{Hyp}{pdftoolbar}[true]{%
4223 \Hy@boolkey{pdftoolbar}{#1}%
4224 }
4225 \define@key{Hyp}{pdfmenubar}[true]{%
4226 \Hy@boolkey{pdfmenubar}{#1}%
4227 }
4228 \define@key{Hyp}{pdfwindowui}[true]{%
4229 \Hy@boolkey{pdfwindowui}{#1}%
4230 }
4231 \define@key{Hyp}{pdffitwindow}[true]{%
4232 \Hy@boolkey{pdffitwindow}{#1}%
4233 }
4234 \define@key{Hyp}{pdfcenterwindow}[true]{%
4235 \Hy@boolkey{pdfcenterwindow}{#1}%
4236 }
4237 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4238 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4239 }
4240 \define@key{Hyp}{pdfa}[true]{%

```



```

4241 \Hy@boolkey{pdfa}{#1}%
4242 }
4243 \define@key{Hyp}{pdfnewwindow}[true]{%
4244 \def\Hy@temp{#1}%
4245 \ifx\Hy@temp\@empty
4246 \Hy@pdfnewwindowsetfalse
4247 \else
4248 \Hy@pdfnewwindowsettrue
4249 \Hy@boolkey{pdfnewwindow}{#1}%
4250 \fi
4251 }
4252 \def\Hy@SetNewWindow{%
4253 \ifHy@pdfnewwindowset
4254 /NewWindow %
4255 \ifHy@pdfnewwindow true\else false\fi
4256 \fi
4257 }
4258 \Hy@DefNameKey{pdfpagelayout}{%
4259 \do{SinglePage}{}%
4260 \do{OneColumn}{}%
4261 \do{TwoColumnLeft}{}%
4262 \do{TwoColumnRight}{}%
4263 \do{TwoPageLeft}{PDF 1.5}%
4264 \do{TwoPageRight}{PDF 1.5}%
4265 }
4266 \define@key{Hyp}{pdflang}{%
4267 \def\@pdflang{#1}%
4268 }
4269 \define@key{Hyp}{pdfpagelabels}[true]{%
4270 \Hy@boolkey{pdfpagelabels}{#1}%
4271 }
4272 \define@key{Hyp}{pdfescapeform}[true]{%
4273 \Hy@boolkey{pdfescapeform}{#1}%
4274 }

```

Default values:

```

4275 \def\@linkbordercolor{1 0 0}
4276 \def\@urlbordercolor{0 1 1}
4277 \def\@menubordercolor{1 0 0}
4278 \def\@filebordercolor{0 .5 .5}
4279 \def\@runbordercolor{0 .7 .7}
4280 \def\@citebordercolor{0 1 0}
4281 \def\@pdfhighlight{/I}
4282 \let\@pdftitle\ltx@empty
4283 \let\@pdfauthor\ltx@empty
4284 \let\@pdfproducer\relax
4285 \def\@pdfcreator{LaTeX with hyperref package}
4286 \let\@pdfcreationdate\ltx@empty
4287 \let\@pdfmoddate\ltx@empty
4288 \let\@pdfsubject\ltx@empty
4289 \let\@pdfkeywords\ltx@empty
4290 \let\@pdftrapped\ltx@empty
4291 \let\@pdfpagescrop\ltx@empty
4292 \def\@pdfstartview{/Fit}
4293 \def\@pdfremotestartview{/Fit}
4294 \def\@pdfstartpage{1}
4295 \let\@pdfprintpagerange\ltx@empty
4296 \let\@pdflang\ltx@empty

```

```

4297 \let\PDF@SetupDoc\@empty
4298 \let\PDF@FinishDoc\@empty
4299 \let\phantomsection\@empty
4300 \let\special@paper\@empty
4301 \def\HyperDestNameFilter#1{#1}
4302 \Hy@AtBeginDocument{%
4303   \begingroup
4304     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4305     \dimen@=\x\relax
4306     \ifdim\dimen@>\z@
4307       \else
4308         \dimen@=11in\relax
4309         \Hy@WarningNoLine{%
4310           Height of page (\expandafter\string\x) %
4311           is invalid (\the\x),\MessageBreak
4312           using 11in%
4313         }%
4314       \fi
4315       \dimen@=0.99626401\dimen@
4316       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4317     \endgroup
4318 }
4319 \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.

```

4320 \let\hyper@normalise\ExecuteOptions
4321 \let\ExecuteOptions\hypersetup
4322 \Hy@RestoreCatcodes
4323 \InputIfFileExists{hyperref.cfg}{\|}{\|}
4324 \Hy@SetCatcodes
4325 \let\ExecuteOptions\hyper@normalise
4326 \ifx\Hy@MaybeStopNow\relax
4327 \else
4328   \Hy@stoppeearlytrue
4329   \expandafter\Hy@MaybeStopNow
4330 \fi
4331 \Hy@stoppeearlyfalse

```

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.

```

4332 \SetupKeyvalOptions{family=Hyp}
4333 \DeclareLocalOptions{%
4334   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4335 }

```

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

```

4336 \@ifpackagewith{hyperref}{tex4ht}{%
4337 }{%
4338   \@ifpackageloaded{tex4ht}{%
4339     \PassOptionsToPackage{tex4ht}{hyperref}%
4340   }{%
4341     \ltx@ifundefined{HCode}{%
4342     }{%
4343       \begingroup
4344       \def\Hy@pkg{tex4ht}%
4345       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%

```

```

4346 \def\Hy@param{#2#3}%
4347 \ifx\Hy@param\ltx@empty
4348 \expandafter\ltx@gobble
4349 \else
4350 \def\Hy@param{#3}%
4351 \ifx\Hy@param\Hy@pkg
4352 \PassOptionsToPackage{#2}{tex4ht}%
4353 \expandafter\expandafter\expandafter\@gobble
4354 \else
4355 \expandafter\expandafter\expandafter\ltx@firstofone
4356 \fi
4357 \fi
4358 {\Hy@temp@A#4\Hy@NIL}%
4359 }%
4360 \expandafter
4361 \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4362 \endgroup
4363 \PassOptionsToPackage{tex4ht}{hyperref}%
4364 }%
4365 }%
4366 }

4367 \let\ReadBookmarks\relax
4368 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4369 \def\Hy@xspace@end{}
4370 \ltx@ifundefined{xspaceaddexceptions}{%
4371 \Hy@AtBeginDocument{%
4372 \ltx@ifundefined{xspaceaddexceptions}{%
4373 }{%
4374 \def\Hy@xspace@end{%
4375 \ltx@gobble{end for xspace}%
4376 }%
4377 \xspaceaddexceptions{%
4378 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4379 }%
4380 }%
4381 }%
4382 }{%
4383 \def\Hy@xspace@end{%
4384 \ltx@gobble{end for xspace}%
4385 }%
4386 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4387 }

```

15.2 Option draft

```

4388 \Hy@AtBeginDocument{%
4389 \ifHy@draft
4390 \let\hyper@@anchor\@gobble
4391 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4392 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4393 \def\hyper@anchorend{\Hy@xspace@end}%
4394 \let\hyper@linkstart\@gobbletwo
4395 \def\hyper@linkend{\Hy@xspace@end}%

```

```

4396 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4397 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4398 \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4399 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4400 \let\PDF@SetupDoc\@empty
4401 \let\PDF@FinishDoc\@empty
4402 \let\@fifthoffive\@secondoftwo
4403 \let\@secondoffive\@secondoftwo
4404 \let\ReadBookmarks\relax
4405 \let\WriteBookmarks\relax
4406 \Hy@WarningNoLine{Draft mode on}%
4407 \fi
4408 \Hy@DisableOption{draft}%
4409 \Hy@DisableOption{nolinks}%
4410 \Hy@DisableOption{final}%
4411 }

```

15.3 PDF/A

```

4412 \Hy@DisableOption{pdfa}
4413 \ifHy@pdfa
4414 \kvsetkeys{Hyp}{pdfversion=1.4}%
4415 \Hy@DisableOption{pdfversion}%
4416 \def\Hy@Acrobatmenu#1#2{%
4417 \leavevmode
4418 \begingroup
4419 \edef\x{#1}%
4420 \@onelevel@sanitize\x
4421 \ifx\x\Hy@NextPage
4422 \let\y=Y%
4423 \else
4424 \ifx\x\Hy@PrevPage
4425 \let\y=Y%
4426 \else
4427 \ifx\x\Hy@FirstPage
4428 \let\y=Y%
4429 \else
4430 \ifx\x\Hy@LastPage
4431 \let\y=Y%
4432 \else
4433 \let\y=N%
4434 \fi
4435 \fi
4436 \fi
4437 \fi
4438 \expandafter\endgroup
4439 \ifx\y Y%
4440 \else
4441 \Hy@Error{%
4442 PDF/A: Named action ‘#1’ is not permitted%
4443 }\@ehc
4444 {#2}%
4445 \expandafter\@gobble
4446 \fi
4447 }%
4448 \def\Hy@temp#1{%
4449 \expandafter\def\csname Hy@#1\endcsname{#1}%
4450 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname

```

```

4451 }%
4452 \Hy@temp{NextPage}%
4453 \Hy@temp{PrevPage}%
4454 \Hy@temp{FirstPage}%
4455 \Hy@temp{LastPage}%
4456 \else
4457 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4458 \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.

```

4459 \Hy@nextfalse
4460 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}
4461 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}
4462 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}
4463 \ifHy@next
4464 \let\texttilde\~%
4465 \fi

4466 \def\Hy@wrapper@babel#1#2{%
4467 \begingroup
4468 \Hy@safe@activetrue
4469 \set@display@protect
4470 \edef\x{#2}%
4471 \@onelevel@sanitize\x
4472 \toks@{#1}%
4473 \edef\x{\endgroup\the\toks@{\x}}%
4474 \x
4475 }
4476 \def\Hy@WrapperDef#1{%
4477 \begingroup
4478 \escapechar=\m@ne
4479 \xdef\Hy@gtemp{%
4480 \expandafter\noexpand\csname HyWrap@string#1\endcsname
4481 }%
4482 \endgroup
4483 \edef#1{%
4484 \noexpand\Hy@wrapper@babel
4485 \expandafter\noexpand\Hy@gtemp
4486 }%
4487 \expandafter\def\Hy@gtemp
4488 }

4489 \ifHy@hyperfigures
4490 \Hy@Info{Hyper figures ON}%
4491 \else
4492 \Hy@Info{Hyper figures OFF}%
4493 \fi
4494 \ifHy@nesting
4495 \Hy@Info{Link nesting ON}%
4496 \else
4497 \Hy@Info{Link nesting OFF}%
4498 \fi
4499 \ifHy@hyperindex
4500 \Hy@Info{Hyper index ON}%
4501 \else

```

```

4502 \Hy@Info{Hyper index OFF}%
4503 \fi
4504 \ifHy@plainpages
4505 \Hy@Info{Plain pages ON}%
4506 \else
4507 \Hy@Info{Plain pages OFF}%
4508 \fi
4509 \ifHy@backref
4510 \Hy@Info{Backreferencing ON}%
4511 \else
4512 \Hy@Info{Backreferencing OFF}%
4513 \fi
4514 \ifHy@typexml
4515 \Hy@AtEndOfPackage{%
4516 \RequirePackage{color}%
4517 \RequirePackage{nameref}[2012/07/28]%
4518 }%
4519 \fi
4520 \Hy@DisableOption{typexml}
4521 \ifHy@implicit
4522 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4523 \else
4524 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4525 \def\MaybeStopEarly{%
4526 \Hy@Message{Stopped early}%
4527 \Hy@AtBeginDocument{%
4528 \PDF@FinishDoc
4529 \gdef\PDF@FinishDoc{}%
4530 }%
4531 \endinput
4532 }%
4533 \Hy@AtBeginDocument{%
4534 \let\autoref\ref
4535 \let\autopageref\pageref
4536 \ifx\@pdfpagemode\@empty
4537 \gdef\@pdfpagemode{UseNone}%
4538 \fi
4539 \global\Hy@backreffalse
4540 }%
4541 \Hy@AtEndOfPackage{%
4542 \global\let\ReadBookmarks\relax
4543 \global\let\WriteBookmarks\relax
4544 }%
4545 \fi
4546 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4547 \Hy@AtEndOfPackage{%
4548 \@ifpackageloaded{tex4ht}{%
4549 \def\Hy@driver{htex4ht}%
4550 \Hy@texhttrue
4551 }{}%

```

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.

```

4552 \ifx\Hy@driver\@empty
4553 \else

```

```

4554 \def\Hy@temp{hpdftex}%
4555 \ifpdf
4556 \ifx\Hy@driver\Hy@temp
4557 \else
4558 \Hy@WarningNoLine{%
4559   Wrong driver '\Hy@driver.def';\MessageBreak
4560   pdfTeX is running in PDF mode.\MessageBreak
4561   Forcing driver '\Hy@temp.def"%
4562 }%
4563 \let\Hy@driver\Hy@temp
4564 \fi
4565 \else
4566 \ifx\Hy@driver\Hy@temp
4567 \Hy@WarningNoLine{%
4568   Wrong driver '\Hy@driver.def';\MessageBreak
4569   pdfTeX is not running in PDF mode.\MessageBreak
4570   Using default driver%
4571 }%
4572 \let\Hy@driver\@empty
4573 \fi
4574 \fi
4575 \fi
4576 \ifHy@texht
4577 \else
4578 \ifx\Hy@driver\@empty
4579 \else
4580 \def\Hy@temp{hxdetex}%
4581 \ifxdetex
4582 \ifx\Hy@driver\Hy@temp
4583 \else
4584 \Hy@WarningNoLine{%
4585   Wrong driver '\Hy@driver.def';\MessageBreak
4586   XeTeX is running.\MessageBreak
4587   Forcing driver '\Hy@temp.def' for XeTeX%
4588 }%
4589 \let\Hy@driver\Hy@temp
4590 \fi
4591 \fi
4592 \fi
4593 \fi
4594 \ifx\Hy@driver\@empty
4595 \else
4596 \def\Hy@temp{hvtexhtm}%
4597 \ifvtexhtml
4598 \ifx\Hy@driver\Hy@temp
4599 \else
4600 \Hy@WarningNoLine{%
4601   Wrong driver '\Hy@driver.def';\MessageBreak
4602   VTeX is running in HTML mode.\MessageBreak
4603   Forcing driver '\Hy@temp.def"%
4604 }%
4605 \let\Hy@driver\Hy@temp
4606 \fi
4607 \else
4608 \ifx\Hy@driver\Hy@temp
4609 \Hy@WarningNoLine{%
4610   Wrong driver '\Hy@driver.def';\MessageBreak

```

```

4611      VTeX is not running in HTML mode.\MessageBreak
4612      Using default driver%
4613    }%
4614    \let\Hy@driver\@empty
4615  \fi
4616 \fi
4617 \fi

If the driver is not given, find the right driver or use the default driver.
4618 \let\HyOpt@DriverType\ltx@empty
4619 \ifx\HyOpt@CustomDriver\ltx@empty
4620   \ifx\Hy@driver\@empty
4621     \def\HyOpt@DriverType{ (autodetected)}%
4622     \providecommand*{\Hy@defaultdriver}{hypertex}%
4623     \ifpdf
4624       \def\Hy@driver{hpdfTeX}%
4625     \else
4626       \ifxetex
4627         \def\Hy@driver{hxetex}%
4628       \else
4629         \ifvtexhtml
4630           \def\Hy@driver{hvtexhtm}%
4631           \def\MaybeStopEarly{%
4632             \Hy@Message{Stopped early}%
4633             \Hy@AtBeginDocument{%
4634               \PDF@FinishDoc
4635               \gdef\PDF@FinishDoc{}}%
4636             }%
4637           \endinput
4638           }%
4639         \else
4640           \ifvtexpdf
4641             \def\Hy@driver{hvtex}%
4642           \else
4643             \ifvtexps
4644               \def\Hy@driver{hvtex}%
4645             \else
4646               \ifx\HyOpt@DriverFallback\ltx@empty
4647                 \let\Hy@driver\Hy@defaultdriver
4648                 \def\HyOpt@DriverType{ (default)}%
4649               \else
4650                 \begingroup
4651                   \toks@{\expandafter{\HyOpt@DriverFallback}}%
4652                   \edef\x{\endgroup
4653                     \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4654                   }%
4655                 \x
4656               \ifx\Hy@driver\ltx@empty
4657                 \let\Hy@driver\Hy@defaultdriver
4658                 \def\HyOpt@DriverType{ (default)}%
4659               \else
4660                 \def\HyOpt@DriverType{ (fallback)}%
4661             \fi
4662           \fi
4663         \fi
4664       \fi
4665     \fi
4666   \fi

```



```

4667 \fi
4668 \ifx\Hy@driver\Hy@defaultdriver
4669 \def\Hy@temp{hdvwind}%
4670 \ifx\Hy@temp\Hy@driver
4671 \kvsetkeys{Hyp}{colorlinks}%
4672 \PassOptionsToPackage{dviwindo}{color}%
4673 \fi
4674 \fi
4675 \fi
4676 \else
4677 \def\HyOpt@DriverType{ (custom)}%
4678 \let\Hy@driver\HyOpt@CustomDriver
4679 \fi
4680 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4681 \chardef\Hy@VersionChecked=0 %
4682 \input{\Hy@driver.def}%
4683 \ifcase\Hy@VersionChecked
4684 \Hy@VersionCheck{\Hy@driver.def}%
4685 \fi
4686 \let\@unprocessedoptions\relax
4687 \Hy@RestoreCatcodes
4688 \Hy@DisableOption{tex4ht}%
4689 \Hy@DisableOption{pdftex}%
4690 \Hy@DisableOption{nativepdf}%
4691 \Hy@DisableOption{dvipdfm}%
4692 \Hy@DisableOption{dvipdfmx}%
4693 \Hy@DisableOption{dvipdfmx-outline-open}%
4694 \Hy@DisableOption{pdfmark}%
4695 \Hy@DisableOption{dvips}%
4696 \Hy@DisableOption{hypertex}%
4697 \Hy@DisableOption{vtex}%
4698 \Hy@DisableOption{vtexpdfmark}%
4699 \Hy@DisableOption{dviwindo}%
4700 \Hy@DisableOption{dvipsone}%
4701 \Hy@DisableOption{textures}%
4702 \Hy@DisableOption{latex2html}%
4703 \Hy@DisableOption{ps2pdf}%
4704 \Hy@DisableOption{xetex}%
4705 \Hy@DisableOption{driverfallback}%
4706 \Hy@DisableOption{customdriver}%
4707 \Hy@DisableOption{pdfversion}%
4708 }

```

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.

```

4709 \newif\ifHy@DvipdfmxOutlineOpen
4710 \ifxetex
4711 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4712 \else
4713 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4714 \Hy@DvipdfmxOutlineOpen>true
4715 \fi
4716 \fi
4717 \begingroup\expandafter\expandafter\expandafter\endgroup
4718 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4719 \else
4720 \ifnum\SpecialDvipdfmxOutlineOpen>\z@

```

```

4721 \Hy@DvipdfmxOutlineOpentru
4722 \fi
4723 \fi

```

15.4.2 Bookmarks

```

4724 \def\WriteBookmarks{0}
4725 \def\@bookmarkopenstatus#1{%
4726 \ifHy@bookmarkopen

```

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

```

4727 \ifnum#1<\expandafter\@firstofone\expandafter
4728     {\number\@bookmarkopenlevel} % explicit space
4729 \else
4730     -%
4731 \fi
4732 \else
4733     -%
4734 \fi
4735 }
4736 \ifHy@bookmarks
4737 \Hy@Info{Bookmarks ON}%
4738 \ifx\@pdfpagemode\@empty
4739 \def\@pdfpagemode{UseOutlines}%
4740 \fi
4741 \else
4742 \let\@bookmarkopenstatus\ltx@gobble
4743 \Hy@Info{Bookmarks OFF}%
4744 \Hy@AtEndOfPackage{%
4745 \global\let\ReadBookmarks\relax
4746 \global\let\WriteBookmarks\relax
4747 }%
4748 \ifx\@pdfpagemode\@empty
4749 \def\@pdfpagemode{UseNone}%
4750 \fi
4751 \fi
4752 \Hy@DisableOption{bookmarks}

```

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

```

4753 \def\Hy@CatcodeWrapper#1{%
4754 \let\Hy@endWrap\ltx@empty
4755 \def\TMP@EnsureCode##1##2{%
4756 \edef\Hy@endWrap{%
4757 \Hy@endWrap
4758 \catcode##1 \the\catcode##1\relax
4759 }%
4760 \catcode##1 ##2\relax
4761 }%
4762 \TMP@EnsureCode{10}{12}% ^^J
4763 \TMP@EnsureCode{33}{12}% !
4764 \TMP@EnsureCode{34}{12}% "
4765 \TMP@EnsureCode{36}{3}% $ (math)
4766 \TMP@EnsureCode{38}{4}% & (alignment)
4767 \TMP@EnsureCode{39}{12}% '
4768 \TMP@EnsureCode{40}{12}% (
4769 \TMP@EnsureCode{41}{12}% )
4770 \TMP@EnsureCode{42}{12}% *
4771 \TMP@EnsureCode{43}{12}% +
4772 \TMP@EnsureCode{44}{12}% ,

```

```

4773 \TMP@EnsureCode{45}{12}% -
4774 \TMP@EnsureCode{46}{12}% .
4775 \TMP@EnsureCode{47}{12}% /
4776 \TMP@EnsureCode{58}{12}% :
4777 \TMP@EnsureCode{59}{12}% ;
4778 \TMP@EnsureCode{60}{12}% <
4779 \TMP@EnsureCode{61}{12}% =
4780 \TMP@EnsureCode{62}{12}% >
4781 \TMP@EnsureCode{63}{12}% ?
4782 \TMP@EnsureCode{91}{12}% [
4783 \TMP@EnsureCode{93}{12}% ]
4784 \TMP@EnsureCode{94}{7}% ^ (superscript)
4785 \TMP@EnsureCode{95}{8}% _ (subscript)
4786 \TMP@EnsureCode{96}{12}% '
4787 \TMP@EnsureCode{124}{12}% |
4788 \TMP@EnsureCode{126}{13}% ~ (active)
4789 #1\relax
4790 \Hy@EndWrap
4791 }

```

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

```

4792 \Hy@AtBeginDocument{%
4793   \ifHy@ocgcolorlinks
4794     \kvsetkeys{Hyp}{colorlinks}%
4795     \ifHy@pdfa
4796       \Hy@Warning{%
4797         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4798         using 'colorlinks' instead of 'ocgcolorlinks'%
4799       }%
4800       \Hy@ocgcolorlinksfalse
4801     \fi
4802   \fi
4803   \ifHy@ocgcolorlinks
4804   \else
4805     \Hy@DisableOption{ocgcolorlinks}%
4806   \fi
4807   \ifHy@colorlinks
4808     \def\@pdfborder{0 0 0}%
4809     \let\@pdfborderstyle\@empty
4810     \ifHy@typexml
4811     \else
4812       \Hy@CatcodeWrapper{%
4813         \RequirePackage{color}%
4814       }%
4815     \fi
4816     \def\Hy@colorlink#1{%
4817       \begingroup
4818       \HyColor@UseColor#1%
4819     }%
4820     \def\Hy@endcolorlink{\endgroup}%
4821     \Hy@Info{Link coloring ON}%
4822   \else
4823     \ifHy@frenchlinks
4824       \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4825       \def\Hy@endcolorlink{\endgroup}%
4826       \Hy@Info{French linking ON}%
4827     \else

```

for grouping consistency:

```

4828 \def\Hy@colorlink#1{\begingroup}%
4829 \def\Hy@endcolorlink{\endgroup}%
4830 \Hy@Info{Link coloring OFF}%
4831 \fi
4832 \fi
4833 \Hy@DisableOption{colorlinks}%
4834 \Hy@DisableOption{frenchlinks}%
4835 \ifHy@texht
4836 \long\def\@firstoffive#1#2#3#4#5{#1}%
4837 \long\def\@secondoffive#1#2#3#4#5{#2}%
4838 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4839 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4840 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4841 \providecommand*\@safe@activetrue{}%
4842 \providecommand*\@safe@activesfalse{}%
4843 \def\T@ref#1{%
4844 \Hy@safe@activetrue
4845 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4846 \Hy@safe@activesfalse
4847 }%
4848 \def\T@pageref#1{%
4849 \Hy@safe@activetrue
4850 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4851 \Hy@safe@activesfalse
4852 }%
4853 \else
4854 \ifHy@typexml
4855 \else
4856 \Hy@CatcodeWrapper{%
4857 \RequirePackage{nameref}[2012/07/28]%
4858 }%
4859 \fi
4860 \fi
4861 \DeclareRobustCommand\ref{%
4862 \@ifstar\@crefstar\T@ref
4863 }%
4864 \DeclareRobustCommand\pageref{%
4865 \@ifstar\@pagerefstar\T@pageref
4866 }%
4867 % \@ifclassloaded{memoir}{%
4868 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4869 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4870 % }%
4871 % }\ltx@secondoftwo
4872 % {%
4873 % \DeclareRobustCommand*\nameref{%
4874 % \@ifstar\@mem@titlerefno link\@mem@titleref
4875 % }%
4876 % }{%
4877 \DeclareRobustCommand*\nameref{%
4878 \@ifstar\@namerefstar\T@nameref
4879 }%
4880 % }%
4881 }
4882 \Hy@AtBeginDocument{%
4883 \ifHy@texht

```

```

4884 \else
4885   \Hy@CatcodeWrapper\ReadBookmarks
4886 \fi
4887 }
4888 \ifHy@backref
4889 \RequirePackage{backref}%
4890 \else
4891 \let\Hy@backout\@gobble
4892 \fi
4893 \Hy@DisableOption{backref}
4894 \Hy@DisableOption{pagebackref}
4895 \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.

```

4896 \begingroup
4897 \endlinechar=-1 %
4898 \catcode'\^^A=14 %
4899 \catcode'\^^M\active
4900 \catcode'\%\active
4901 \catcode'\#\active
4902 \catcode'\_\active
4903 \catcode'\$\active
4904 \catcode'\&\active
4905 \gdef\hyper@normalise{^^A
4906   \begingroup
4907   \catcode'\^^M\active
4908   \def^^M{ }^^A
4909   \catcode'\%\active
4910   \let%\@percentchar
4911   \let\%\@percentchar
4912   \catcode'\#\active
4913   \def#{\hyper@hash}^^A
4914   \def\#{\hyper@hash}^^A
4915   \@makeother\&^^A
4916   \edef&{\string&}^^A
4917   \edef\&{\string&}^^A
4918   \edef\textunderscore{\string_}^^A
4919   \let\_ \textunderscore
4920   \catcode'\_\active
4921   \let\_ \textunderscore
4922   \let~\hyper@tilde
4923   \let~\hyper@tilde
4924   \let\textasciitilde\hyper@tilde
4925   \let\\\@backslashchar
4926   \edef${\string$}^^A
4927   \Hy@safe@activetrue
4928   \hyper@n@rmalise
4929 }^^A

```

```

4930 \catcode'\#=6 ^^A
4931 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4932 \gdef\hyper@n@rmalise#1#2{^^A
4933 \def\Hy@tempa{#2}^^A
4934 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4935 \ltx@ReturnAfterElseFi{^^A
4936 \hyper@@normalise{#1}^^A
4937 }^^A
4938 \else
4939 \ltx@ReturnAfterFi{^^A
4940 \hyper@@normalise{#1}{#2}^^A
4941 }^^A
4942 \fi
4943 }^^A
4944 \gdef\hyper@@normalise#1#2{^^A
4945 \edef\Hy@tempa{^^A
4946 \endgroup
4947 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4948 }^^A
4949 \Hy@tempa
4950 }^^A
4951 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4952 #1^^A
4953 \ifx\limits#2\limits
4954 \else
4955 \ltx@ReturnAfterFi{^^A
4956 \Hy@RemovePercentCr #2\@nil
4957 }^^A
4958 \fi
4959 }^^A
4960 \endgroup
4961 \providecommand*\hyper@chars{%
4962 \let\#\hyper@hash
4963 \let\%\@percentchar
4964 \Hy@safe@activestrue
4965 }

4966 \def\hyperlink#1#2{%
4967 \hyper@@link{#1}{#2}%
4968 }

4969 \def\Hy@VerboseLinkStart#1#2{%
4970 \ifHy@verbose
4971 \begingroup
4972 \Hy@safe@activestrue
4973 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4974 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4975 \xdef\Hy@VerboseGlobalTemp{%
4976 \Hy@VerboseGlobalTemp, %
4977 line \the\inputlineno
4978 }%
4979 \endgroup
4980 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4981 \@onelevel@sanitize\Hy@VerboseLinkInfo
4982 \fi
4983 }

4984 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4985 \def\Hy@VerboseLinkStop{%

```

```

4986 \ifHy@verbose
4987 \begingroup
4988 \edef\x{\endgroup
4989 \write\m@ne{%
4990 Package 'hyperref' Info: %
4991 End of reference \Hy@VerboseLinkInfo.%
4992 }%
4993 }%
4994 \x
4995 \fi
4996 }

4997 \def\Hy@VerboseAnchor#1{%
4998 \ifHy@verbose
4999 \begingroup
5000 \Hy@safe@activetrue
5001 \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
5002 \endgroup
5003 \fi
5004 }

5005 \def\Hy@AllowHyphens{%
5006 \relax
5007 \ifhmode
5008 \penalty\@M
5009 \hskip\z@skip
5010 \fi
5011 }

5012 \DeclareRobustCommand*{\href}[1][]{%
5013 \begingroup
5014 \setkeys{href}{#1}%
5015 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5016 }
5017 \def\Hy@href#1{%
5018 \hyper@normalise\href@
5019 }
5020 \begingroup
5021 \catcode'\$=6 %
5022 \catcode'\#=12 %
5023 \gdef\href@#1{\expandafter\href@split$1##\}%
5024 \gdef\href@split$1##$2##$3\\$4{%
5025 \hyper@@link{$1}{$2}{$3}{$4}%
5026 \endgroup
5027 }%
5028 \endgroup

```

Option 'page'.

```

5029 \define@key{href}{page}{%
5030 \def\Hy@href@page{#1}%
5031 }
5032 \let\Hy@href@page\@empty
5033 \newcount\c@Hy@tempcnt
5034 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5035 \def\Hy@MakeRemoteAction{%
5036 \ifx\Hy@href@page\@empty
5037 \def\Hy@href@page{0}%
5038 \else
5039 \setcounter{Hy@tempcnt}{\Hy@href@page}%
5040 \ifnum\c@Hy@tempcnt<\@ne

```

```

5041 \Hy@Warning{%
5042   Invalid page number (\theHy@tempcnt)\MessageBreak
5043   for remote PDF file.\MessageBreak
5044   Using page 1%
5045 }%
5046 \def\Hy@href@page{0}%
5047 \else
5048   \global\advance\c@Hy@tempcnt\m@ne
5049 \edef\Hy@href@page{\theHy@tempcnt}%
5050 \fi
5051 \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.

```

5052 \ifx\Hy@href@nextactionraw\@empty
5053 \else
5054   \Hy@pdfnewwindowsettrue
5055   \Hy@pdfnewwindowtrue
5056 \fi
5057 }

```

Option ‘pdfremotestartview’.

```

5058 \define@key{href}{pdfremotestartview}{%
5059   \setkeys{Hyp}{pdfremotestartview={#1}}}%
5060 }

```

Option ‘pdfnewwindow’.

```

5061 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5062 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5063 \newif\ifHy@href@ismap
5064 \define@key{href}{ismap}[true]{%
5065   \ltx@ifundefined{Hy@href@ismap#1}{%
5066     \Hy@Error{%
5067       Invalid value (#1) for key ‘ismap’.\MessageBreak
5068       Permitted values are ‘true’ or ‘false’.\MessageBreak
5069       Ignoring ‘ismap’%
5070     }\@ehc
5071   }{%
5072     \csname Hy@href@ismap#1\endcsname
5073   }%
5074 }

```

Option ‘nextactionraw’.

```

5075 \let\Hy@href@nextactionraw\@empty
5076 \define@key{href}{nextactionraw}{%
5077   \edef\Hy@href@nextactionraw{#1}%
5078   \ifx\Hy@href@nextactionraw\@empty
5079   \else
5080     \Hy@Match\Hy@href@nextactionraw{%
5081       ~(\HyPat@ObjRef/|<.*[/].+>>|%
5082       \[( ?\HyPat@ObjRef/|<.*[/].+>>)+ ?)]$%
5083     }{%
5084       \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
5085         \Hy@href@nextactionraw\MessageBreak
5086         The action is discarded%
5087     }%
5088   }%

```



```

5089 \ifx\Hy@href@nextactionraw\@empty
5090 \else
5091 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5092 \fi
5093 \fi
5094 }
5095 \def\HyPat@ObjRef/{.+}

```

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

```

5096 \RequirePackage{url}
5097 \let\HyOrg@url\url
5098 \def\Hurl{\begingroup \Url}
5099 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
5100 \def\nolinkurl@#1{\Hurl{#1}}
5101 \DeclareRobustCommand*\url{\hyper@normalise\url@}
5102 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5103 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5104 \providecommand\hyper@image[2]{#2}

5105 \def\hypertarget#1#2{%
5106 \ifHy@nesting
5107 \hyper@@anchor{#1}{#2}%
5108 \else
5109 \hyper@@anchor{#1}{\relax}#2%
5110 \fi
5111 }

```

`\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.

```

5112 \DeclareRobustCommand*\hyperref{%
5113 \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5114 }
5115 \def\Hy@babelnormalise#1[#2]{%
5116 \begingroup
5117 \Hy@safe@activestrue
5118 \edef\Hy@tempa{%
5119 \endgroup
5120 \noexpand#1[#2]}%
5121 }%
5122 \Hy@tempa
5123 }
5124 \def\@hyperref{\hyper@normalise\@hyperref}
5125 \def\@hyperref#1#2#3{%
5126 \edef\ref@one{\ifx\\#2\\else#2.\fi#3}%
5127 \expandafter\tryhyper@link\ref@one\\{#1}%
5128 }
5129 \def\tryhyper@link#1\\#2{%
5130 \hyper@@link{#2}{#1}%
5131 }

5132 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5133 \def\@hyperdef#1#2#3{%, category, name, text
5134 \ifx\\#1\\%

```

```

5135 \def\Hy@AnchorName{#2}%
5136 \else
5137 \def\Hy@AnchorName{#1.#2}%
5138 \fi
5139 \ifHy@nesting
5140 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5141 \else
5142 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5143 \fi
5144 }

```

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.

```

5145 \def\label@hyperref[#1]{%
5146 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5147 }%
5148 \def\label@@hyperref#1#2#3{%
5149 \ifx#1\relax
5150 \protect\G@refundefinedtrue
5151 \@latex@warning{%
5152 Hyper reference ‘#2’ on page \thepage \space undefined%
5153 }%
5154 \begingroup
5155 #3%
5156 \endgroup
5157 \else
5158 \hyper@@link{\expandafter\@fifthoffive#1}%
5159 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5160 \fi
5161 }
5162 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5163 % anchor text
5164 \@bsphack
5165 \ifx\#2\%
5166 \def\Hy@AnchorName{#3}%
5167 \else
5168 \def\Hy@AnchorName{#2.#3}%
5169 \fi
5170 \if@filesw
5171 \protected@write\@auxout{}{%
5172 \string\newlabel{#1}{\{ }\{ }\{ }\Hy@AnchorName\} }%
5173 }%
5174 \fi
5175 \@esphack
5176 \ifHy@nesting
5177 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5178 \else
5179 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5180 \fi
5181 }

```

16.1 Link box support for XeTeX

```

5182 \newdimen\XeTeXLinkMargin
5183 \setlength{\XeTeXLinkMargin}{2pt}
5184 \ifxetex
5185 \font\XeTeXLink@font=pzdr at 1sp\relax
5186 \newcommand*\XeTeXLink@space{%

```

```

5187 \begingroup
5188 \XeTeXLink@font
5189 \@xxxii
5190 \endgroup
5191 }%
5192 \newcommand{\XeTeXLinkBox}[1]{%
5193 \begingroup
5194 \leavevmode
5195 \sbox\z@{\#1}%
5196 \begingroup
5197 \dimen@=\dp\z@
5198 \advance\dimen@\XeTeXLinkMargin
5199 \setbox\tw@=\llap{%
5200 \hb@xt@\XeTeXLinkMargin{%
5201 \lower\dimen@\hbox{\XeTeXLink@space}%
5202 \hss
5203 }%
5204 }%
5205 \dp\tw@=\dp\z@
5206 \ht\tw@=\ht\z@
5207 \copy\tw@
5208 \endgroup
5209 \copy\z@
5210 \dimen@=\ht\z@
5211 \advance\dimen@\XeTeXLinkMargin
5212 \setbox\tw@=\rlap{%
5213 \hb@xt@\XeTeXLinkMargin{%
5214 \hss
5215 \raise\dimen@\hbox{\XeTeXLink@space}%
5216 }%
5217 }%
5218 \dp\tw@=\dp\z@
5219 \ht\tw@=\ht\z@
5220 \copy\tw@
5221 \endgroup
5222 }%
5223 \else
5224 \newcommand*\XeTeXLinkBox[1]{%
5225 \begingroup
5226 \leavevmode
5227 \sbox\z@{\#1}%
5228 \copy\z@
5229 \endgroup
5230 }%
5231 \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.

```

5232 \def\hyper@link{\let\Hy@reserved@a\relax
5233 \@ifnextchar[\hyper@link@]{\hyper@link@[link]}%
5234 }
5235 % #1: type
5236 % #2: URL

```

```

5237 % #3: destination name
5238 % #4: text
5239 \def\hyper@link@[#1]#2#3#4{%
5240   \ltx@ifempty{#4}{% link text
5241     \Hy@Warning{Suppressing empty link}%
5242   }{%
5243     \begingroup
5244       \protected@edef\Hy@tempa{#2}%
5245       \edef\Hy@tempb{#3}%
5246       \ifx\Hy@tempa\ltx@empty
5247         \ifx\Hy@tempb\ltx@empty
5248           \Hy@Warning{Suppressing link with empty target}%
5249         \toks@{%
5250           \endgroup
5251           \ltx@secondoftwo
5252         }%
5253       \else
5254         \toks@{%
5255           \endgroup
5256           \hyper@link{#1}%
5257         }%
5258       \fi
5259     \else
5260       \toks@{%
5261         \endgroup
5262         \expandafter\hyper@readexternallink#2\{#1}%
5263       }%
5264     \fi
5265     \Hy@safe@activesfalse
5266     \toks@\expandafter{%
5267       \the\expandafter\toks@
5268       \expandafter{\Hy@tempb}{#4}%
5269     }%
5270     \the\toks@
5271   }%
5272 }

```

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.

```

5273 \def\hyper@readexternallink#1\{#2#3#4{%
5274   \begingroup
5275     \let\\\relax
5276   \expandafter\endgroup
5277   \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5278 }
5279 \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.

```
5280 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5281 }
```

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

```
5282 \def\@pdftempwordfile{file}%
5283 \def\@pdftempwordrun{run}%
5284 \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:

```
5285 \ifx\\\#6\\\%
5286 \@hyper@linkfile file:#7\\\{#3}{#2}{#7}%
5287 \else
5288 \ifx\\\#4\\\%
5289 \@hyper@linkfile file:#7\\\{#3}{#2}{#7}%
5290 \else
```

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

```
5291 \def\@pdftempa{#4}%
5292 \ifx\@pdftempa\@pdftempwordfile
5293 \@hyper@linkfile#7\\\{#3}{#2}{#7}%
5294 \else
```

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

```
5295 \ifx\@pdftempa\@pdftempwordrun
5296 \ifHy@pdfa
5297 \Hy@Error{%
5298 PDF/A: Launch action is prohibited%
5299 }\@ehc
5300 \begingroup
5301 \leavevmode
5302 #2%
5303 \endgroup
5304 \else
5305 \@hyper@launch#7\\\{#3}{#2}%
5306 \fi
5307 \else
```

otherwise its a URL

```
5308 \hyper@linkurl{#3}{#7\ifx\\\#2\\\else\hyper@hash#2\fi}%
5309 \fi
5310 \fi
5311 \fi
5312 \fi
5313 }
```

By default, turn run: into file:

```
5314 \def\@hyper@launch run:#1\\\#2#3{% filename, anchor text, linkname
5315 \hyper@linkurl{#2}{%
5316 \Hy@linkfileprefix
5317 #1%
5318 \ifx\\\#3\\\%
5319 \else
```

```

5320 \hyper@hash
5321 #3%
5322 \fi
5323 }%
5324 }

```

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

```

5325 \def\@hyper@linkfile file:#1\|#2#3#4{%
5326 %file url,link string, name, original uri
5327 \filename@parse{#1}%
5328 \ifx\filename@ext\relax
5329 \edef\filename@ext{\XR@ext}%
5330 \fi
5331 \def\use@file{\filename@area\filename@base.\filename@ext}%
5332 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5333 \hyper@linkfile{#2}{\use@file}{#3}%
5334 }{%
5335 \ifx\@baseurl\@empty
5336 \hyper@linkurl{#2}{%
5337 #4\ifx\|#3\\\else\hyper@hash#3\fi
5338 }%
5339 \else
5340 \hyper@linkurl{#2}{\use@file\ifx\|#3\\\else\hyper@hash#3\fi}%
5341 \fi
5342 }%
5343 }

5344 \def\Hy@IfStringEndsWith#1#2{%
5345 \begingroup
5346 \edef\x{#1}%
5347 \@onelevel@sanitize\x
5348 \edef\x{.\x}%
5349 \edef\y{#2}%
5350 \@onelevel@sanitize\y
5351 \edef\y{.\y}%
5352 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5353 \endgroup
5354 \ifx\relax##2\relax
5355 \expandafter\ltx@secondoftwo
5356 \else
5357 \expandafter\ltx@firstoftwo
5358 \fi
5359 }%
5360 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5361 }

5362 \def\Hy@StringLocalhost{localhost}
5363 \@onelevel@sanitize\Hy@StringLocalhost
5364 \def\Hy@CleanupFile#1{%
5365 \edef#1{#1}%
5366 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5367 }
5368 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5369 \begingroup
5370 \toks@{\endgroup}%
5371 \def\x{#1}%
5372 \ifx\x\@empty
5373 \def\x{#2}%

```

```

5374 \ifx\x\@empty
5375 \toks@{\endgroup\def#5{/#3}}%
5376 \else
5377 \@onelevel@sanitize\x
5378 \ifx\x\Hy@StringLocalhost
5379 \toks@{\endgroup\def#5{/#3}}%
5380 \fi
5381 \fi
5382 \fi
5383 \the\toks@
5384 }

```

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.

```

5385 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5386 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5387 \ifx\#1\%
5388 #2\Hy@Warning{Ignoring empty anchor}%
5389 \else
5390 \def\anchor@spot{#2#3}%
5391 \let\put@me@back\@empty
5392 \ifx\relax#2\relax
5393 \else
5394 \ifHy@nesting
5395 \else
5396 \ifcat a\noexpand#2\relax
5397 \else
5398 \ifcat 0\noexpand#2 \relax
5399 \else
5400 % \typeout{Anchor start is not alphanumeric %
5401 % on input line\the\inputlineno%
5402 % }%
5403 \let\anchor@spot\@empty
5404 \def\put@me@back{#2#3}%
5405 \fi
5406 \fi
5407 \fi
5408 \fi
5409 \ifHy@activeanchor
5410 \anchor@spot
5411 \else
5412 \hyper@anchor{#1}%
5413 \fi
5414 \expandafter\put@me@back
5415 \fi
5416 \let\anchor@spot\@empty
5417 }
5418 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5419 \ifHy@destlabel

\hyper@newdestlabel
5420 \def\hyper@newdestlabel#1#2{%
5421   \begingroup
5422   \Hy@safe@activetrue
5423   \edef\x{\endgroup
5424     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5425   }%
5426   \x
5427 }%

\hyper@destlabel@hook
5428 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename
5429 \newcommand*\Hy@DestRename[2]{%
5430   \ltx@ifundefined{HyDL!#1}{%
5431     \begingroup
5432     \Hy@safe@activetrue
5433     \edef\dest@name{#1}%
5434     \edef\label@name{#2}%
5435     \hyper@destlabel@hook
5436     \Hy@IsNotEmpty{dest@name}{%
5437       \Hy@IsNotEmpty{label@name}{%
5438         \global\expandafter
5439         \let\csname HyDL!#1\endcsname\ltx@empty
5440         \if@files
5441           \protected@write\@auxout{}{%
5442             \string\hyper@newdestlabel
5443             {#1}%
5444             {\label@name}%
5445           }%
5446         \fi
5447       }%
5448     }%
5449   \endgroup
5450 }{}%
5451 }%

\HyperDestRename
5452 \newcommand*\HyperDestRename[2]{%
5453   \AtBeginDocument{%
5454     \Hy@DestRename{#1}{#2}%
5455   }%
5456 }%
5457 \AtBeginDocument{%
5458   \let\HyperDestRename\Hy@DestRename
5459 }%

\Hy@IsNotEmpty
5460 \def\Hy@IsNotEmpty#1{%
5461   \ltx@ifundefined{#1}\ltx@gobble{%
5462     \expandafter\ifx\csname#1\endcsname\ltx@empty
5463     \expandafter\ltx@gobble
5464   \else
5465     \expandafter\ltx@firstofone

```



```

5466     \fi
5467   }%
5468 }%

5469 \ltx@GlobalAppendToMacro\label@hook{%
5470   \HyperDestRename\@currentHref\label@name
5471 }%

\HyperDestLabelReplace

5472 \def\HyperDestLabelReplace#1{%
5473   \ltx@ifundefined{HyDL@#1}{%
5474     #1%
5475   }{%
5476     \csname HyDL@#1\endcsname
5477   }%
5478 }%

\HyperDestNameFilter

5479 \let\HyperDestNameFilter\HyperDestLabelReplace

5480 \else

\hyper@newdestlabel

5481 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace

5482 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename

@gobbletwo

5483 \fi

5484 \Hy@DisableOption{destlabel}

Provide a dummy default definition of \hyper@newdestlabel inside the .aux
files.

5485 \AddLineBeginAux{%
5486   \string\providecommand\string\hyper@newdestlabel[2]{}%
5487 }

```

19 Compatibility with the *L^AT_EX*2html 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.

```

5488 \let\htmladding\hyperimage

5489 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5490 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5491 \def\htmlref#1#2{% anchor text, label
5492   \label@hyperref[#{#2}]{#1}%
5493 }

```

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.

```

5494 \def\@@latextohtmlX{%
5495   \let\hhyperref\hyperref
5496   \def\hyperref##1##2##3##4{% anchor text for HTML
5497     % text to print before label in print
5498     % label
5499     % post-label text in print
5500     ##2\ref{##4}##3%
5501   }%
5502 }
```

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.

```

5503 \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

```

5504 \def\HyField@NewFlag#1#2{%
5505   \lowercase{\HyField@NewOption{#2}}%
5506   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5507 }
```

`\HyField@NewFlagOnly`

```

5508 \def\HyField@NewFlagOnly#1#2{%
5509   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5510 }
```

`\HyField@NewOption` #1: option name

```

5511 \def\HyField@NewOption#1{%
5512   \expandafter\newif\csname ifFld@#1\endcsname
5513   \define@key{Field}{#1}[true]{%
5514     \lowercase{\Field@boolkey{##1}}{#1}%
5515   }%
5516 }
```

`\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

```
5517 \def\HyField@NewBitsetFlag#1#2#3#4{%
5518   \begingroup
5519     \count@=#4\relax
5520     \advance\count@\m@ne
5521     \def\x##1{%
5522       \endgroup
5523       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5524       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5525         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5526           (\number#4) #2%
5527         }%
5528       \else
5529         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5530           \csname HyField@#3@#1\endcsname
5531           /#2%
5532         }%
5533       \fi
5534     }%
5535   \expandafter\x\expandafter{\the\count@}%
5536 }
```

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

```
5537 \def\HyField@UseFlag#1#2{%
5538   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5539 }
```

\HyField@@UseFlag

```
5540 \def\HyField@@UseFlag#1#2{%
5541   \bitsetSetValue{HyField@#2}{%
5542     \csname HyField@#2@#1\endcsname
5543   }{%
5544     \csname ifFld@#1\endcsname 1\else 0\fi
5545   }%
5546 }
```

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

```
5547 \def\HyField@SetFlag#1#2{%
5548   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5549 }
```

\HyField@@SetFlag

```
5550 \def\HyField@@SetFlag#1#2{%
5551   \bitsetSetValue{HyField@#2}{%
5552     \csname HyField@#2@#1\endcsname
5553   }{1}%
5554 }
```

\HyField@PrintFlags

```
5555 \def\HyField@PrintFlags#1#2{%
5556   \ifHy@verbose
5557     \begingroup
5558     \let\Hy@temp\@empty
5559     \let\MessageBreak\relax
```

```

5560 \expandafter \@for \expandafter \x \expandafter : \expandafter = %
5561 \bitsetGetSetBitList{HyField@#1} \do{%
5562 \edef\Hy@temp{%
5563 \Hy@temp
5564 \csname HyField@#1@\x\endcsname\MessageBreak
5565 }%
5566 }%
5567 \edef\x{\endgroup
5568 \noexpand\Hy@Info{%
5569 Field flags: %
5570 \expandafter \ifx \@car#1\@nil S\else/\fi
5571 #1 %
5572 \bitsetGetDec{HyField@#1} %
5573 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5574 \Hy@temp
5575 for #2%
5576 }%
5577 }\x
5578 \fi
5579 }

```

20.1.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5580 \HyField@NewFlag{Ff}{ReadOnly}{1}
5581 \HyField@NewFlag{Ff}{Required}{2}
5582 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5583 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5584 \HyField@NewFlag{Ff}{Radio}{16}
5585 \HyField@NewFlag{Ff}{Pushbutton}{17}
5586 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5587 \HyField@NewFlag{Ff}{Multiline}{13}
5588 \HyField@NewFlag{Ff}{Password}{14}
5589 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5590 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5591 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5592 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5593 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5594 \HyField@NewFlag{Ff}{Combo}{18}
5595 \HyField@NewFlag{Ff}{Edit}{19}
5596 \HyField@NewFlag{Ff}{Sort}{20}
5597 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5598 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5599 \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.

```

5600 \newif\ifFld@popdown
5601 \define@key{Field}{popdown}[true]{%
5602 \lowercase{\Field@boolkey{#1}}{popdown}%
5603 }

```

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.

```

5604 \HyField@NewFlag{F}{Invisible}{1}
5605 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5606 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5607 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5608 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5609 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5610 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5611 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5612 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7
5613 \ifHy@pdfa
5614   \def\HyField@PDFAFIWarning#1#2{%
5615     \Hy@Warning{%
5616       PDF/A: Annotation flag ‘#1’ must\MessageBreak
5617       be set to ‘#2’%
5618     }%
5619   }%
5620   \Fld@invisiblefalse
5621   \def\Fld@invisibletrue{%
5622     \HyField@PDFAFIWarning{invisible}{false}%
5623   }%
5624   \Fld@hiddenfalse
5625   \def\Fld@hiddentruetrue{%
5626     \HyField@PDFAFIWarning{hidden}{false}%
5627   }%
5628   \Fld@printtrue
5629   \def\Fld@printfalse{%
5630     \HyField@PDFAFIWarning{print}{true}%
5631   }%
5632   \Fld@nozoomtrue
5633   \def\Fld@nozoomfalse{%
5634     \HyField@PDFAFIWarning{nozoom}{true}%
5635   }%
5636   \Fld@norotatetrue
5637   \def\Fld@norotatefalse{%
5638     \HyField@PDFAFIWarning{norotate}{true}%
5639   }%
5640   \Fld@noviewfalse
5641   \def\Fld@noviewtrue{%
5642     \HyField@PDFAFIWarning{noview}{false}%
5643   }%
5644 \fi

```

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

```

5645 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5646 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5647 \HyField@NewFlag{Submit}{GetMethod}{4}
5648 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5649 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5650 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5651 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5652 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}

```

```

5653 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5654 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5655 \HyField@NewFlag{Submit}{ExclFKey}{12}
5656 \HyField@NewFlag{Submit}{EmbedForm}{14}

5657 \define@key{Field}{export}{%
5658   \lowercase{\def\Hy@temp{#1}}%
5659   \@ifundefined{Fld@export@\Hy@temp}{%
5660     \@onelevel@sanitize\Hy@temp
5661     \Hy@Error{%
5662       Unknown export format '\Hy@temp'.\MessageBreak
5663       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5664     }}\@ehc
5665   }{%
5666     \let\Fld@export\Hy@temp
5667   }%
5668 }
5669 \def\Fld@export{fdf}
5670 \@namedef{Fld@export@fdf}{0}%
5671 \@namedef{Fld@export@html}{1}%
5672 \@namedef{Fld@export@xfdf}{2}%
5673 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5674 \def\HyField@FlagsSubmit{%
5675   \bitsetReset{HyField@Submit}%
5676   \ifcase\@nameuse{Fld@export@\Fld@export} %
5677     % FDF
5678     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5679     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5680     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5681     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5682     \HyField@UseFlag{Submit}{CanonicalFormat}%
5683     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5684     \HyField@UseFlag{Submit}{ExclFKey}%
5685     \HyField@UseFlag{Submit}{EmbedForm}%
5686   \or % HTML
5687     \HyField@SetFlag{Submit}{ExportFormat}%
5688     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5689     \HyField@UseFlag{Submit}{GetMethod}%
5690     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5691     \HyField@UseFlag{Submit}{CanonicalFormat}%
5692   \or % XFDF
5693     \HyField@SetFlag{Submit}{XFDF}%
5694     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5695     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5696     \HyField@UseFlag{Submit}{CanonicalFormat}%
5697   \or % PDF
5698     \HyField@SetFlag{Submit}{SubmitPDF}%
5699     \HyField@UseFlag{Submit}{GetMethod}%
5700   \fi
5701   \HyField@PrintFlags{Submit}{submit button field}%
5702   \bitsetIsEmpty{HyField@Submit}{%
5703     \let\Fld@submitflags\ltx@empty
5704   }{%
5705     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%

```

```

5706 }%
5707 }

```

20.1.3 Set annot flags in fields

`\HyField@FlagsAnnot`

```

5708 \def\HyField@FlagsAnnot#1{%
5709   \bitsetReset{HyField@F}%
5710   \HyField@UseFlag{F}{Invisible}%
5711   \HyField@UseFlag{F}{Hidden}%
5712   \HyField@UseFlag{F}{Print}%
5713   \HyField@UseFlag{F}{NoZoom}%
5714   \HyField@UseFlag{F}{NoRotate}%
5715   \HyField@UseFlag{F}{NoView}%
5716   \HyField@UseFlag{F}{Locked}%
5717   \HyField@UseFlag{F}{ToggleNoView}%
5718   \HyField@UseFlag{F}{LockedContents}%
5719   \HyField@PrintFlags{F}{#1}%
5720   \bitsetIsEmpty{HyField@F}{%
5721     \let\Fld@annotflags\ltx@empty
5722   }{%
5723     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5724   }%
5725 }

```

20.1.4 Pushbutton field

`\HyField@FlagsPushButton`

```

5726 \def\HyField@FlagsPushButton{%
5727   \HyField@FlagsAnnot{push button field}%
5728   \bitsetReset{HyField@Ff}%
5729   \HyField@UseFlag{Ff}{ReadOnly}%
5730   \HyField@UseFlag{Ff}{Required}%
5731   \HyField@UseFlag{Ff}{NoExport}%
5732   \HyField@SetFlag{Ff}{Pushbutton}%
5733   \HyField@PrintFlags{Ff}{push button field}%
5734   \bitsetIsEmpty{HyField@Ff}{%
5735     \let\Fld@flags\ltx@empty
5736   }{%
5737     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5738   }%
5739 }

```

20.1.5 Check box field

`\HyField@FlagsCheckBox`

```

5740 \def\HyField@FlagsCheckBox{%
5741   \HyField@FlagsAnnot{check box field}%
5742   \bitsetReset{HyField@Ff}%
5743   \HyField@UseFlag{Ff}{ReadOnly}%
5744   \HyField@UseFlag{Ff}{Required}%
5745   \HyField@UseFlag{Ff}{NoExport}%
5746   \HyField@PrintFlags{Ff}{check box field}%
5747   \bitsetIsEmpty{HyField@Ff}{%
5748     \let\Fld@flags\ltx@empty
5749   }{%
5750     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%

```

```

5751 }%
5752 }

```

20.1.6 Radio button field

`\HyField@FlagsRadioButton`

```

5753 \def\HyField@FlagsRadioButton{%
5754   \HyField@FlagsAnnot{radio button field}%
5755   \bitsetReset{HyField@Ff}%
5756   \HyField@UseFlag{Ff}{ReadOnly}%
5757   \HyField@UseFlag{Ff}{Required}%
5758   \HyField@UseFlag{Ff}{NoExport}%
5759   \HyField@UseFlag{Ff}{NoToggleToOff}%
5760   \HyField@SetFlag{Ff}{Radio}%
5761   \HyField@UseFlag{Ff}{RadiosInUnison}%
5762   \HyField@PrintFlags{Ff}{radio button field}%
5763   \bitsetIsEmpty{HyField@Ff}{%
5764     \let\Fld@flags\ltx@empty
5765   }{%
5766     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5767   }%
5768 }

```

20.1.7 Text fields

`\HyField@FlagsText`

```

5769 \def\HyField@FlagsText{%
5770   \HyField@FlagsAnnot{text field}%
5771   \bitsetReset{HyField@Ff}%
5772   \HyField@UseFlag{Ff}{ReadOnly}%
5773   \HyField@UseFlag{Ff}{Required}%
5774   \HyField@UseFlag{Ff}{NoExport}%
5775   \HyField@UseFlag{Ff}{Multiline}%
5776   \HyField@UseFlag{Ff}{Password}%
5777   \HyField@UseFlag{Ff}{FileSelect}%
5778   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5779   \HyField@UseFlag{Ff}{DoNotScroll}%
5780   \ifFld@comb
5781     \ifcase0\ifFld@multiline
5782       \else\ifFld@password
5783       \else\ifFld@fileselect
5784       \else 1\fi\fi\fi\relax
5785     \Hy@Error{%
5786       Field option ‘comb’ cannot used together with\MessageBreak
5787       ‘multiline’, ‘password’, or ‘fileselect’%
5788     }\@ehc
5789   \else
5790     \HyField@UseFlag{Ff}{Comb}%
5791   \fi
5792 \fi
5793 \HyField@UseFlag{Ff}{RichText}%
5794 \HyField@PrintFlags{Ff}{text field}%
5795 \bitsetIsEmpty{HyField@Ff}{%
5796   \let\Fld@flags\ltx@empty
5797 }{%
5798   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5799 }%

```


5800 }

20.1.8 Choice fields

\HyField@FlagsChoice

```
5801 \def\HyField@FlagsChoice{%
5802   \HyField@FlagsAnnot{choice field}%
5803   \bitsetReset{HyField@Ff}%
5804   \HyField@UseFlag{Ff}{ReadOnly}%
5805   \HyField@UseFlag{Ff}{Required}%
5806   \HyField@UseFlag{Ff}{NoExport}%
5807   \HyField@UseFlag{Ff}{Combo}%
5808   \ifFld@combo
5809     \HyField@UseFlag{Ff}{Edit}%
5810   \fi
5811   \HyField@UseFlag{Ff}{Sort}%
5812   \HyField@UseFlag{Ff}{MultiSelect}%
5813   \ifFld@combo
5814     \ifFld@edit
5815       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5816     \fi
5817   \fi
5818   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5819   \HyField@PrintFlags{Ff}{choice field}%
5820   \bitsetIsEmpty{HyField@Ff}{%
5821     \let\Fld@flags\ltx@empty
5822   }{%
5823     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5824   }%
5825 }
```

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.

```
5826 \def\HyField@PDFChoices#1{%
5827   \begingroup
5828   \global\let\Fld@choices\ltx@empty
5829   \let\HyTmp@optlist\ltx@empty
5830   \let\HyTmp@optitem\relax
5831   \count@=0 %
5832   \kv@parse{#1}{%
5833     \Hy@pdfstringdef\kv@key\kv@key
5834     \ifx\kv@value\relax
5835       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
5836         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
5837       \else
5838         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5839       \fi
5840     \else
5841       \Hy@pdfstringdef\kv@value\kv@value
5842       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
5843     \fi
5844   \edef\HyTmp@optlist{%
```

```

5845 \HyTmp@optlist
5846 \HyTmp@optitem{\the\count@}{\kv@key}0%
5847 }%
5848 \advance\count@ by 1 %
5849 \@gobbletwo
5850 }%
5851 \xdef\Fld@choices{/Opt{\Fld@choices}}%
5852 \ifFld@multiselect
5853 \HyField@@PDFChoices{DV}\Fld@default
5854 \HyField@@PDFChoices{V}\Fld@value
5855 \else
5856 \ifx\Fld@default\relax
5857 \else
5858 \pdfstringdef\Hy@gtemp\Fld@default
5859 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5860 \fi
5861 \ifx\Fld@value\relax
5862 \else
5863 \pdfstringdef\Hy@gtemp\Fld@value
5864 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5865 \fi
5866 \fi
5867 \endgroup
5868 }

```

\HyField@@PDFChoices

```

5869 \def\HyField@@PDFChoices#1#2{%
5870 \ifx#2\relax
5871 \else
5872 \count@=0 %
5873 \def\HyTmp@optitem##1##2##3{%
5874 \def\HyTmp@key{##2}%
5875 \ifx\HyTmp@key\Hy@gtemp
5876 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5877 \HyTmp@optlist
5878 \HyTmp@optitem{##1}{##2}1%
5879 }%
5880 \let\HyTmp@found=Y%
5881 \else
5882 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5883 \HyTmp@optlist
5884 \HyTmp@optitem{##1}{##2}##3%
5885 }%
5886 \fi
5887 }%
5888 \expandafter\comma@parse\expandafter{#2}{%
5889 \pdfstringdef\Hy@gtemp\comma@entry
5890 \let\HyTmp@found=N %
5891 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5892 \HyTmp@optlist
5893 \ifx\HyTmp@found Y%
5894 \advance\count@ by 1 %
5895 \else
5896 \@onelevel@sanitize\comma@entry
5897 \PackageWarning{hyperref}{%
5898 \string\ChoiceBox: Ignoring value '\comma@entry',%
5899 \MessageBreak
5900 it cannot be found in the choices%

```

```

5901     }%
5902   \fi
5903   \@gobble
5904 }%
5905 \def\HyTmp@optitem##1##2##3{%
5906   \ifnum##3=1 %
5907     (##2)%
5908   \fi
5909 }%
5910 \ifcase\count@
5911 \or
5912   \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5913 \else
5914   \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5915   \ifx#1V%
5916     \def\HyTmp@optitem##1##2##3{%
5917       \ifnum##3=1 %
5918         \@firstofone{ ##1}%
5919       \fi
5920     }%
5921   \edef\HyTmp@optlist{\HyTmp@optlist}%
5922   \xdef\Fld@choices{%
5923     \Fld@choices
5924     /I[\expandafter\@firstofone\HyTmp@optlist]%
5925   }%
5926   \fi
5927 \fi
5928 \fi
5929 }

```

20.3 Forms

\HyField@SetKeys

```

5930 \def\HyField@SetKeys{%
5931   \kvsetkeys{Field}%
5932 }

5933 \newif\ifFld@checked
5934 \newif\ifFld@disabled
5935 \Fld@checkedfalse
5936 \Fld@disabledfalse
5937 \newcount\Fld@menulength
5938 \newdimen\Field@Width
5939 \newdimen\Fld@charsize
5940 \Fld@charsize=10\p@
5941 \def\Fld@maxlen{0}
5942 \def\Fld@align{0}
5943 \def\Fld@color{0 0 0 rg}
5944 \def\Fld@bcolor{1 1 1}
5945 \def\Fld@bordercolor{1 0 0}
5946 \def\Fld@bordersep{1\p@}
5947 \def\Fld@borderwidth{1}
5948 \def\Fld@borderstyle{S}
5949 \def\Fld@cbsymbol{4}
5950 \def\Fld@radiosymbol{H}
5951 \def\Fld@rotation{0}
5952 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}

```

```

5953 \def\endForm{\@endForm}
5954 \newif\ifForm@html
5955 \Form@htmlfalse
5956 \def\Form@boolkey#1#2{%
5957   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5958 }
5959 \define@key{Form}{action}{%
5960   \hyper@normalise\Hy@DefFormAction{#1}%
5961 }
5962 \def\Hy@DefFormAction{\def\Form@action}
5963 \def\enc@@html{html}
5964 \define@key{Form}{encoding}{%
5965   \def\Hy@tempa{#1}%
5966   \ifx\Hy@tempa\enc@@html
5967     \Form@htmltrue
5968     \def\Fld@export{html}%
5969   \else
5970     \Hy@Warning{%
5971       Form 'encoding' key with \MessageBreak
5972       unknown value '#1'%
5973     }%
5974     \Form@htmlfalse
5975   \fi
5976 }
5977 \define@key{Form}{method}{%
5978   \lowercase{\def\Hy@temp{#1}}%
5979   \@ifundefined{Form@method@\Hy@temp}{%
5980     \@onelevel@sanitize\Hy@temp
5981     \Hy@Error{%
5982       Unknown method '\Hy@temp'.\MessageBreak
5983       Known values are 'post' and 'get'%
5984     }\@ehc
5985   }{%
5986     \let\Form@method\Hy@temp
5987     \ifcase\@nameuse{Form@method@\Hy@temp} %
5988       \Fld@getmethodfalse
5989     \else
5990       \Fld@getmethodtrue
5991     \fi
5992   }%
5993 }
5994 \def\Form@method{}
5995 \@namedef{Form@method@post}{0}
5996 \@namedef{Form@method@get}{1}
5997 \newif\ifHyField@NeedAppearances
5998 \def\HyField@NeedAppearancesfalse{%
5999   \global\let\ifHyField@NeedAppearances\iffalse
6000 }
6001 \def\HyField@NeedAppearancetrue{%
6002   \global\let\ifHyField@NeedAppearances\iftrue
6003 }
6004 \HyField@NeedAppearancetrue
6005 \define@key{Form}{NeedAppearances}[true]{%
6006   \edef\Hy@tempa{#1}%
6007   \ifx\Hy@tempa\Hy@true
6008     \HyField@NeedAppearancetrue
6009   \else

```

```

6010 \ifx\Hy@tempa\Hy@false
6011 \HyField@NeedAppearancesfalse
6012 \else
6013 \Hy@Error{%
6014 Unexpected value '\Hy@tempa'\MessageBreak
6015 of option 'NeedAppearances' instead of\MessageBreak
6016 'true' or 'false'%
6017 }\@ehc
6018 \fi
6019 \fi
6020 }
6021 \def\Field@boolkey#1#2{%
6022 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6023 }
6024 \ifHy@texht
6025 \newtoks\Field@toks
6026 \Field@toks={ }%
6027 \def\Field@addtoks#1#2{%
6028 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6029 \@processme
6030 }%
6031 \else
6032 \def\Hy@WarnHTMLFieldOption#1{%
6033 \Hy@Warning{%
6034 HTML field option '#1'\MessageBreak
6035 is ignored%
6036 }%
6037 }%
6038 \fi
6039 \def\Fld@checkequals#1=#2=#3\\{%
6040 \def\@currDisplay{#1}%
6041 \ifx\\#2\\%
6042 \def\@currValue{#1}%
6043 \else
6044 \def\@currValue{#2}%
6045 \fi
6046 }
6047 \define@key{Field}{loc}{%
6048 \def\Fld@loc{#1}%
6049 }
6050 \define@key{Field}{checked}[true]{%
6051 \lowercase{\Field@boolkey{#1}}{checked}%
6052 }
6053 \define@key{Field}{disabled}[true]{%
6054 \lowercase{\Field@boolkey{#1}}{disabled}%
6055 }
6056 \ifHy@texht
6057 \define@key{Field}{accesskey}{%
6058 \Field@addtoks{accesskey}{#1}%
6059 }%
6060 \define@key{Field}{tabkey}{%
6061 \Field@addtoks{tabkey}{#1}%
6062 }%
6063 \else
6064 \define@key{Field}{accesskey}{%
6065 \Hy@WarnHTMLFieldOption{accesskey}%
6066 }%

```

```

6067 \define@key{Field}{tabkey}{%
6068   \Hy@WarnHTMLFieldOption{tabkey}%
6069 }%
6070 \fi
6071 \define@key{Field}{name}{%
6072   \def\Fld@name{#1}%
6073 }
6074 \let\Fld@altname\relax
6075 \define@key{Field}{altname}{%
6076   \def\Fld@altname{#1}%
6077 }
6078 \let\Fld@mappingname\relax
6079 \define@key{Field}{mappingname}{%
6080   \def\Fld@mappingname{#1}%
6081 }
6082 \define@key{Field}{width}{%
6083   \def\Fld@width{#1}%
6084   \Field@Width#1\setbox0=\hbox{m}%
6085 }
6086 \define@key{Field}{maxlen}{%
6087   \def\Fld@maxlen{#1}%
6088 }
6089 \define@key{Field}{menulength}{%
6090   \Fld@menulength=#1\relax
6091 }
6092 \define@key{Field}{height}{%
6093   \def\Fld@height{#1}%
6094 }
6095 \define@key{Field}{charsize}{%
6096   \setlength{\Fld@charsize}{#1}%
6097 }
6098 \define@key{Field}{borderwidth}{%
6099   \Hy@defaultbp\Fld@borderwidth{#1}%
6100 }
6101 \def\Hy@defaultbp#1#2{%
6102   \begingroup
6103   \afterassignment\Hy@defaultbpAux
6104   \dimen@=#2bp\relax{#1}{#2}%
6105 }
6106 \begingroup\expandafter\expandafter\expandafter\endgroup
6107 \expandafter\ifx\csname dimexpr\endcsname\relax
6108   \def\Hy@defaultbpAux#1\relax#2#3{%
6109     \ifx!#1!%
6110       \endgroup
6111       \def#2{#3}%
6112     \else
6113       \dimen@=.99626\dimen@
6114       \edef\x{\endgroup
6115         \def\noexpand#2{%
6116           \strip@pt\dimen@
6117         }%
6118       }\x
6119     \fi
6120   }%
6121 \else
6122   \def\Hy@defaultbpAux#1\relax#2#3{%
6123     \ifx!#1!%

```

```

6124 \endgroup
6125 \def#2{#3}%
6126 \else
6127 \edef\x{\endgroup
6128 \def\noexpand#2{%
6129 \strip@pt\dimexpr\dimen@*800/803\relax
6130 }%
6131 }\x
6132 \fi
6133 }%
6134 \fi
6135 \define@key{Field}{borderstyle}{%
6136 \let\Hy@temp\Fld@borderstyle
6137 \def\Fld@borderstyle{#1}%
6138 \Hy@Match\Fld@borderstyle{%
6139 ~[SDBIU]$%
6140 }{ }{%
6141 \Hy@Warning{%
6142 Invalid value '\@pdfborderstyle'\MessageBreak
6143 for option 'pdfborderstyle'. Valid values:\MessageBreak
6144 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6145 \space\space I (Inset), U (Underline)\MessageBreak
6146 Option setting is ignored%
6147 }%
6148 \let\Fld@borderstyle\Hy@temp
6149 }%
6150 }
6151 \define@key{Field}{bordersep}{%
6152 \def\Fld@bordersep{#1}%
6153 }
6154 \define@key{Field}{default}{%
6155 \def\Fld@default{#1}%
6156 }
6157 \define@key{Field}{align}{%
6158 \def\Fld@align{#1}%
6159 }
6160 \define@key{Field}{value}{%
6161 \def\Fld@value{#1}%
6162 }
6163 \define@key{Field}{checkboxsymbol}{%
6164 \Fld@DingDef\Fld@cbsymbol{#1}%
6165 }
6166 \define@key{Field}{radiosymbol}{%
6167 \Fld@DingDef\Fld@radiosymbol{#1}%
6168 }
6169 \def\Fld@DingDef#1#2{%
6170 \let\Fld@temp\ltx@empty
6171 \Fld@@DingDef#2\ding{ }\@nil
6172 \let#1\Fld@temp
6173 }
6174 \def\Fld@@DingDef#1\ding#2#3\@nil{%
6175 \expandafter\def\expandafter\Fld@temp\expandafter{%
6176 \Fld@temp
6177 #1%
6178 }%
6179 \ifx\#3\\%
6180 \expandafter\@gobble

```

```

6181 \else
6182 \begingroup
6183 \lccode'0=#2\relax
6184 \lowercase{\endgroup
6185 \expandafter\def\expandafter\Fld@temp\expandafter{%
6186 \Fld@temp
6187 0%
6188 }%
6189 }%
6190 \expandafter\@firstofone
6191 \fi
6192 {%
6193 \Fld@@@DingDef#3\@nil
6194 }%
6195 }

6196 \define@key{Field}{rotation}{%
6197 \def\Fld@rotation{#1}%
6198 }

6199 \define@key{Field}{backgroundcolor}{%
6200 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6201 }
6202 \define@key{Field}{bordercolor}{%
6203 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6204 }
6205 \define@key{Field}{color}{%
6206 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6207 }

6208 \let\Fld@onclick@code\ltx@empty
6209 \let\Fld@format@code\ltx@empty
6210 \let\Fld@validate@code\ltx@empty
6211 \let\Fld@calculate@code\ltx@empty
6212 \let\Fld@keystroke@code\ltx@empty
6213 \let\Fld@onfocus@code\ltx@empty
6214 \let\Fld@onblur@code\ltx@empty
6215 \let\Fld@onmousedown@code\ltx@empty
6216 \let\Fld@onmouseup@code\ltx@empty
6217 \let\Fld@onenter@code\ltx@empty
6218 \let\Fld@onexit@code\ltx@empty
6219 \def\Hy@temp#1{%
6220 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6221 }
6222 \def\Hy@@temp#1#2{%
6223 \ifHy@pdfa
6224 \define@key{Field}{#2}{%
6225 \Hy@Error{%
6226 PDF/A: Additional action '#2' is prohibited%
6227 } \@ehc
6228 }%
6229 \else
6230 \define@key{Field}{#2}{%
6231 \def#1{##1}%
6232 }%
6233 \fi
6234 }
6235 \Hy@temp{keystroke}
6236 \Hy@temp{format}

```



```

6237 \Hy@temp{validate}
6238 \Hy@temp{calculate}
6239 \Hy@temp{onfocus}
6240 \Hy@temp{onblur}
6241 \Hy@temp{onenter}
6242 \Hy@temp{onexit}

6243 \let\Fld@calculate@sortkey\ltx@empty
6244 \define@key{Field}{calculatesortkey}[1]{%
6245   \def\Fld@calculate@sortkey{#1}%
6246 }

6247 \ifHy@texht
6248   \def\Hy@temp#1{%
6249     \define@key{Field}{#1}{%
6250       \Field@addtoks{#1}{##1}%
6251     }%
6252   }%
6253 \else
6254   \def\Hy@temp#1{%
6255     \define@key{Field}{#1}{%
6256       \Hy@WarnHTMLFieldOption{#1}%
6257     }%
6258   }%
6259 \fi
6260 \Hy@temp{ondblclick}
6261 \Hy@temp{onmousedown}
6262 \Hy@temp{onmouseup}
6263 \Hy@temp{onmouseover}
6264 \Hy@temp{onmousemove}
6265 \Hy@temp{onmouseout}
6266 \Hy@temp{onkeydown}
6267 \Hy@temp{onkeyup}
6268 \Hy@temp{onselect}
6269 \Hy@temp{onchange}
6270 \Hy@temp{onkeypress}
6271 \ifHy@texht
6272   \define@key{Field}{onclick}{%
6273     \Field@addtoks{onclick}{#1}%
6274   }%
6275 \else
6276   \ifHy@pdfa
6277     \define@key{Field}{onclick}{%
6278       \Hy@Error{%
6279         PDF/A: Action 'onclick' is prohibited%
6280       } \@ehc
6281     }%
6282   \else
6283     \define@key{Field}{onclick}{%
6284       \def\Fld@onclick@code{#1}%
6285     }%
6286   \fi
6287 \fi

6288 \DeclareRobustCommand\TextField{%
6289   \@ifnextchar[{\@TextField}{\@TextField[]}%
6290 }
6291 \DeclareRobustCommand\ChoiceMenu{%
6292   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%

```

```

6293 }
6294 \DeclareRobustCommand\CheckBox{%
6295   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6296 }
6297 \DeclareRobustCommand\PushButton{%
6298   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6299 }
6300 \DeclareRobustCommand\Gauge{%
6301   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6302 }
6303 \DeclareRobustCommand\Submit{%
6304   \@ifnextchar[{\@Submit}{\@Submit[]}%
6305 }
6306 \DeclareRobustCommand\Reset{%
6307   \@ifnextchar[{\@Reset}{\@Reset[]}%
6308 }
6309 \def\LayoutTextField#1#2{% label, field
6310   #1 #2%
6311 }
6312 \def\LayoutChoiceField#1#2{% label, field
6313   #1 #2%
6314 }
6315 \def\LayoutCheckField#1#2{% label, field
6316   #1 #2%
6317 }
6318 \def\LayoutPushButtonField#1{% button
6319   #1%
6320 }
6321 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6322 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6323 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6324 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6325 \def\MakeButtonField#1{%
6326   \sbox0{%
6327     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6328   }%
6329   \@tempdima\ht0 %
6330   \advance\@tempdima by \Fld@borderwidth bp %
6331   \advance\@tempdima by \Fld@borderwidth bp %
6332   \ht0\@tempdima
6333   \@tempdima\dp0 %
6334   \advance\@tempdima by \Fld@borderwidth bp %
6335   \advance\@tempdima by \Fld@borderwidth bp %
6336   \dp0\@tempdima
6337   \box0\relax
6338 }
6339 \def\DefaultHeightofSubmit{14pt}
6340 \def\DefaultWidthofSubmit{2cm}
6341 \def\DefaultHeightofReset{14pt}
6342 \def\DefaultWidthofReset{2cm}
6343 \def\DefaultHeightofCheckBox{\baselineskip}
6344 \def\DefaultWidthofCheckBox{\baselineskip}
6345 \def\DefaultHeightofChoiceMenu{\baselineskip}
6346 \def\DefaultWidthofChoiceMenu{\baselineskip}
6347 \def\DefaultHeightofText{\baselineskip}
6348 \def\DefaultHeightofTextMultiline{4\baselineskip}
6349 \def\DefaultWidthofText{3cm}

```

```

6350 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6351 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6352 \def\DefaultOptionsofPushButton{print}
6353 \def\DefaultOptionsofCheckBox{print}
6354 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6355 \def\DefaultOptionsofListBox{print}
6356 \def\DefaultOptionsofComboBox{print,edit,sort}
6357 \def\DefaultOptionsofPopdownBox{print}
6358 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6359 \ifHy@hyperfigures
6360 \Hy@Info{Hyper figures ON}%
6361 \else
6362 \Hy@Info{Hyper figures OFF}%
6363 \fi
6364 \ifHy@nesting
6365 \Hy@Info{Link nesting ON}%
6366 \else
6367 \Hy@Info{Link nesting OFF}%
6368 \fi
6369 \ifHy@hyperindex
6370 \Hy@Info{Hyper index ON}%
6371 \else
6372 \Hy@Info{Hyper index OFF}%
6373 \fi
6374 \ifHy@backref
6375 \Hy@Info{backreferencing ON}%
6376 \else
6377 \Hy@Info{backreferencing OFF}%
6378 \fi
6379 \ifHy@colorlinks
6380 \Hy@Info{Link coloring ON}%
6381 \else
6382 \Hy@Info{Link coloring OFF}%
6383 \fi
6384 \ifHy@ocgcolorlinks
6385 \Hy@Info{Link coloring with OCG ON}%
6386 \else
6387 \Hy@Info{Link coloring with OCG OFF}%
6388 \fi
6389 \ifHy@pdfa
6390 \Hy@Info{PDF/A mode ON}%
6391 \else
6392 \Hy@Info{PDF/A mode OFF}%
6393 \fi

```

22 Low-level utility macros

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

```

6394 \edef\hyper@hash{\string#}
6395 \edef\hyper@tilde{\string~}
6396 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```
6397 \def\@currentHref{Doc-Start}
6398 \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.

```
6399 \Hy@AtBeginDocument{%
6400   \Hy@pdfstringtrue
6401   \PDF@SetupDoc
6402   \let\PDF@SetupDoc\@empty
6403   \Hy@DisableOption{pdfpagescrop}%
6404   \Hy@DisableOption{pdfpagemode}%
6405   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6406   \Hy@DisableOption{pdfdirection}%
6407   \Hy@DisableOption{pdfviewarea}%
6408   \Hy@DisableOption{pdfviewclip}%
6409   \Hy@DisableOption{pdfprintarea}%
6410   \Hy@DisableOption{pdfprintclip}%
6411   \Hy@DisableOption{pdfprintscaling}%
6412   \Hy@DisableOption{pdfduplex}%
6413   \Hy@DisableOption{pdfpicktraybypdfsize}%
6414   \Hy@DisableOption{pdfprintpagerange}%
6415   \Hy@DisableOption{pdfnumcopies}%
6416   \Hy@DisableOption{pdfstartview}%
6417   \Hy@DisableOption{pdfstartpage}%
6418   \Hy@DisableOption{pdftoolbar}%
6419   \Hy@DisableOption{pdfmenubar}%
6420   \Hy@DisableOption{pdfwindowui}%
6421   \Hy@DisableOption{pdfwindow}%
6422   \Hy@DisableOption{pdfcenterwindow}%
6423   \Hy@DisableOption{pdfdisplaydoctitle}%
6424   \Hy@DisableOption{pdfpagelayout}%
6425   \Hy@DisableOption{pdflang}%
6426   \Hy@DisableOption{baseurl}%
6427   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6428   \Hy@pdfstringfalse
6429 }
```

Ignore star from referencing macros:

```
6430 \LetLtxMacro\NoHy@OrgRef\ref
6431 \DeclareRobustCommand*\ref{%
6432   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6433 }
6434 \LetLtxMacro\NoHy@OrgPageRef\pageref
6435 \DeclareRobustCommand*\pageref{%
6436   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6437 }
```

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.

```
6438 \def\NoHyper{%
6439   \def\hyper@link@[#1]##2##3##4{##4\Hy@xspace@end}%
6440 }
```

```

6440 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6441 \global\let\hyper@livelink\hyper@link
6442 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6443 \let\hyper@anchor\ltx@gobble
6444 \let\hyper@anchorstart\ltx@gobble
6445 \def\hyper@anchorend{\Hy@xspace@end}%
6446 \let\hyper@linkstart\ltx@gobbletwo
6447 \def\hyper@linkend{\Hy@xspace@end}%
6448 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6449 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6450 \let\Hy@backout\@gobble
6451 }
6452 \def\stop@hyper{%
6453 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6454 \let\Hy@backout\@gobble
6455 \let\hyper@@anchor\ltx@gobble
6456 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6457 \let\hyper@anchor\ltx@gobble
6458 \let\hyper@anchorstart\ltx@gobble
6459 \def\hyper@anchorend{\Hy@xspace@end}%
6460 \let\hyper@linkstart\ltx@gobbletwo
6461 \def\hyper@linkend{\Hy@xspace@end}%
6462 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6463 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6464 }
6465 \def\endNoHyper{%
6466 \global\let\hyper@link\hyper@livelink
6467 }
6468 \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:

```

6469 \*nohyperref
6470 \RequirePackage{letltxmacro}[2008/06/13]
6471 \let\hyper@@anchor\@gobble
6472 \def\hyper@link##1##2##3{##3}%
6473 \let\hyper@anchorstart\@gobble
6474 \let\hyper@anchorend\@empty
6475 \let\hyper@linkstart\@gobbletwo
6476 \let\hyper@linkend\@empty
6477 \def\hyper@linkurl##1##2{##1}%
6478 \def\hyper@linkfile##1##2##3{##1}%
6479 \def\hyper@link@[##1]##2##3{##3}%
6480 \let\PDF@SetupDoc\@empty
6481 \let\PDF@FinishDoc\@empty
6482 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6483 \def\Acrobatmenu#1##2{\leavevmode#2}
6484 \let\pdfstringdefDisableCommands\@gobbletwo

```

```

6485 \let\texorpdfstring\@firstoftwo
6486 \let\pdfbookmark\@undefined
6487 \newcommand\pdfbookmark[3][]{ }
6488 \let\phantomsection\@empty
6489 \let\hypersetup\@gobble
6490 \let\hyperbaseurl\@gobble
6491 \newcommand*{\href}[3][]{#3}
6492 \let\hyperdef\@gobbletwo
6493 \let\hyperlink\@gobble
6494 \let\hypertarget\@gobble
6495 \def\hyperref{%
6496   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6497 }
6498 \long\def\@gobbleopt[#1]{ }
6499 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6500 \LetLtxMacro\NoHy@OrgRef\ref
6501 \DeclareRobustCommand*{\ref}{%
6502   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6503 }
6504 \LetLtxMacro\NoHy@OrgPageRef\pageref
6505 \DeclareRobustCommand*{\pageref}{%
6506   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6507 }
6508 \</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}`

```

6509 \<{*package}>
6510 \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.

```

6511 \if@filesw
6512   \ifHy@typexml
6513     \immediate\closeout\@mainaux
6514     \immediate\openout\@mainaux\jobname.aux\relax
6515     \immediate\write\@auxout{<relaxxml>\relax}%
6516   \fi
6517   \immediate\write\@auxout{%
6518     \string\providecommand\string\HyperFirstAtBeginDocument{%
6519       \string\AtBeginDocument}^^J%
6520     \string\HyperFirstAtBeginDocument{%
6521       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6522       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6523       \string\gdef\string\contentsline%
6524         \string#1\string#2\string#3\string#4{%
6525         \string\oldcontentsline%
6526         {\string#1}{\string#2}{\string#3}}^^J%
6527       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6528       \string\gdef\string\newlabel\string#1\string#2{%
6529         \string\newlabelxx{\string#1}\string#2}^^J%

```

```

6530      \string\gdef\string\newlabelxx%
6531      \string#1\string#2\string#3\string#4\string#5\string#6{%
6532      \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.

```

6533      \string\AtEndDocument{%
6534      \string\ifx\string\hyper@anchor\string\@undefined~J%
6535      \string\let\string\contentsline\string\oldcontentsline~J%
6536      \string\let\string\newlabel\string\oldnewlabel~J%
6537      \string\fi%
6538      }~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.

```

6539      \string\fi%
6540      }~J%
6541      \string\global\string\let\string\hyper@last\relax~J%
6542      \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6543      }%
6544      \fi
6545      \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.

```

6546      \ifx\hyper@last\@undefined
6547      \def\@starttoc#1{%
6548      \begingroup
6549      \makeatletter
6550      \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6551      \IfFileExists{\jobname.#1}{%
6552      \Hy@WarningNoLine{%
6553      old #1 file detected, not used; run LaTeX again%
6554      }%
6555      }%}%
6556      \if@filesw
6557      \expandafter\newwrite\csname tf@#1\endcsname
6558      \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6559      \fi
6560      \@nobreakfalse
6561      \endgroup
6562      }%
6563      \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}}}%
6564      \fi
6565      }

```

26 Title strings

If options `pdftitle` and `pdfauthor` are not used, these informations for the pdf information dictionary can be extracted by the nd

```

6566 \ifHy@pdfusetitle
6567 \let\HyOrg@title\title
6568 \let\HyOrg@author\author
6569 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%

```

```

6570 \def\Hy@scanopttitle[#1]{%
6571   \gdef\Hy@title{#1}%
6572   \HyOrg@title{#1}%
6573 }%
6574 \def\Hy@scantitle#1{%
6575   \gdef\Hy@title{#1}%
6576   \HyOrg@title{#1}%
6577 }%
6578 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6579 \def\Hy@scanoptauthor[#1]{%
6580   \gdef\Hy@author{#1}%
6581   \HyOrg@author{#1}%
6582 }%
6583 \def\Hy@scanauthor#1{%
6584   \gdef\Hy@author{#1}%
6585   \HyOrg@author{#1}%
6586 }%

```

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.

```

6587 \begingroup
6588   \def\process@me#1\@nil#2{%
6589     \expandafter\let\expandafter\x\csname @#2\endcsname
6590     \edef\y{\expandafter\strip@prefix\meaning\x}%
6591     \def\c##1##2\@nil{%
6592       \ifx\\##1\\%
6593       \else
6594         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6595           \expandafter{\x}%
6596       \fi
6597     }%
6598     \expandafter\c\y\relax#1\@nil
6599   }%
6600   \expandafter\process@me\string\@latex@\@nil{title}%
6601   \expandafter\process@me\string\@latex@\@nil{author}%
6602 \endgroup
6603 \fi
6604 \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.

```

6605 \def\Hy@UseMaketitleString#1{%
6606   \ltx@ifundefined{Hy@#1}{}%
6607   \begingroup
6608     \let\Hy@saved@hook\pdfstringdefPreHook
6609     \pdfstringdefDisableCommands{%
6610       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6611       \let\newline\\%
6612     }%

```



```

6613 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6614 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6615 \csname Hy@#1\endcsname\@empty
6616 }%
6617 \fi
6618 \global\let\pdfstringdefPreHook\Hy@saved@hook
6619 \endgroup
6620 }%
6621 }
6622 \def\Hy@newline@title#1{ #1}
6623 \def\Hy@newline@author#1{, #1}
6624 \def\Hy@UseMaketitleInfos{%
6625 \Hy@UseMaketitleString{title}%
6626 \Hy@UseMaketitleString{author}%
6627 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6628 \RequirePackage{atbegshi}[2007/09/09]
6629 \let\Hy@EveryPageHook\ltx@empty
6630 \let\Hy@EveryPageBoxHook\ltx@empty
6631 \let\Hy@FirstPageHook\ltx@empty
6632 \AtBeginShipout{%
6633 \Hy@EveryPageHook
6634 \ifx\Hy@EveryPageBoxHook\ltx@empty
6635 \else
6636 \setbox\AtBeginShipoutBox=\vbox{%
6637 \offinterlineskip
6638 \Hy@EveryPageBoxHook
6639 \box\AtBeginShipoutBox
6640 }%
6641 \fi
6642 }
6643 \ltx@iffileloaded{hpdf.tex.def}{%
6644 \AtBeginShipout{%
6645 \Hy@FirstPageHook
6646 \global\let\Hy@FirstPageHook\ltx@empty
6647 }%
6648 }{%
6649 \AtBeginShipoutFirst{%
6650 \Hy@FirstPageHook
6651 }%
6652 }
6653 \g@addto@macro\Hy@FirstPageHook{%
6654 \PDF@FinishDoc
6655 \global\let\PDF@FinishDoc\ltx@empty
6656 }

```

28.1 PDF /PageLabels

Internal macros of this module are marked with \HyPL@.

```

6657 \ifHy@pdfpagelabels

```

```

6658 \begingroup\expandafter\expandafter\expandafter\endgroup
6659 \expandafter\ifx\csname thepage\endcsname\relax
6660 \Hy@pdfpagelabelsfalse
6661 \Hy@WarningNoLine{%
6662   Option 'pdfpagelabels' is turned off\MessageBreak
6663   because \string\thepage\space is undefined%
6664 }%
6665 \csname fi\endcsname
6666 \csname iffalse\expandafter\endcsname
6667 \fi

```

`\thispdfpagelabel` The command `\thispdfpagelabel` allows to label a special page without the re-definition of `\thepage` for the page.

```

6668 \def\thispdfpagelabel#1{%
6669   \gdef\HyPL@thisLabel{#1}%
6670 }%
6671 \global\let\HyPL@thisLabel\relax

```

`\HyPL@Labels` The page labels are collected in `\HyPL@Labels` and set at the end of the document.

```

6672 \let\HyPL@Labels\ltx@empty

```

`\Hy@abspage` We have to know the the absolute page number and introduce a new counter for that.

```

6673 \newcount\Hy@abspage
6674 \Hy@abspage=0 %

```

For comparisons with the values of the previous page, some variables are needed:

```

6675 \def\HyPL@LastType{init}%
6676 \def\HyPL@LastNumber{0}%
6677 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the L^AT_EX pendants.

```

6678 \def\HyPL@arabic{D}%
6679 \def\HyPL@Roman{R}%
6680 \def\HyPL@roman{r}%
6681 \def\HyPL@Alph{A}%
6682 \def\HyPL@alph{a}%

6683 \let\HyPL@SlidesSetPage\ltx@empty
6684 \ltx@ifclassloaded{slides}{%
6685   \def\HyPL@SlidesSetPage{%
6686     \advance\c@page\ltx@one
6687     \ifnum\value{page}>\ltx@one
6688       \protected@edef\HyPL@SlidesOptionalPage{%
6689         \Hy@SlidesFormatOptionalPage{\thepage}%
6690       }%
6691     \else
6692       \let\HyPL@SlidesOptionalPage\ltx@empty
6693     \fi
6694     \advance\c@page-\ltx@one
6695     \def\HyPL@page{%
6696       \csname the\Hy@SlidesPage\endcsname
6697       \HyPL@SlidesOptionalPage
6698     }%
6699   }%
6700 }{}%

```

`\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.

```

6701 \def\HyPL@EveryPage{%
6702   \begingroup
6703   \ifx\HyPL@thisLabel\relax
6704     \let\HyPL@page\thepage
6705     \HyPL@SlidesSetPage
6706   \else
6707     \let\HyPL@page\HyPL@thisLabel
6708     \global\let\HyPL@thisLabel\relax
6709   \fi
6710   \let\HyPL@Type\relax
6711   \ifnum\c@page>0 %
6712     \ifx\HyPL@SlidesSetPage\ltx@empty
6713       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6714     \fi
6715   \fi
6716   \let\Hy@temp Y%
6717   \ifx\HyPL@Type\HyPL@LastType
6718   \else
6719     \let\Hy@temp N%
6720   \fi
6721   \ifx\HyPL@Type\relax
6722     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6723   \else
6724     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6725   \fi
6726   \ifx\HyPL@Prefix\HyPL@LastPrefix
6727   \else
6728     \let\Hy@temp N%
6729   \fi
6730   \if Y\Hy@temp
6731     \advance\c@page by -1 %
6732     \ifnum\HyPL@LastNumber=\the\c@page\relax
6733   \else
6734     \let\Hy@temp N%
6735   \fi
6736   \Hy@StepCount\c@page
6737 \fi
6738 \if N\Hy@temp
6739   \ifx\HyPL@Type\relax
6740     \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6741   \else
6742     \HyPL@StorePageLabel{%
6743       \ifx\HyPL@Prefix\@empty
6744       \else
6745         /P(\HyPL@Prefix)%
6746       \fi
6747       /S/\csname HyPL\HyPL@Type\endcsname
6748       \ifnum\the\c@page=1 %
6749       \else
6750         \space/St \the\c@page
6751       \fi
6752     }%
6753   \fi
6754 \fi
6755 \xdef\HyPL@LastNumber{\the\c@page}%

```

```

6756 \global\let\HyPL@LastType\HyPL@Type
6757 \global\let\HyPL@LastPrefix\HyPL@Prefix
6758 \endgroup
6759 \Hy@GlobalStepCount\Hy@abspage
6760 }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

6761 \def\HyPL@CheckThePage#1\@nil{%
6762   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6763 }%

```

`\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 implemenation 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`.

```

6764 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6765   \def\Hy@tempa{#4}%
6766   \def\Hy@tempb{\csname\endcsname\c@page}%
6767   \ifx\Hy@tempa\Hy@tempb
6768     \expandafter\ifx\csname HyPL#3\endcsname\relax
6769     \else
6770       \def\HyPL@Type{#3}%
6771       \def\HyPL@Prefix{#2}%
6772       \fi
6773     \else
6774       \begingroup
6775       \let\Hy@next\endgroup
6776       \let\HyPL@found\@undefined
6777       \def\arabic{\HyPL@Format{arabic}}%
6778       \def\Roman{\HyPL@Format{Roman}}%
6779       \def\roman{\HyPL@Format{roman}}%
6780       \def\Alph{\HyPL@Format{Alph}}%
6781       \def\alph{\HyPL@Format{alph}}%
6782       \protected@edef\Hy@temp{#1}%
6783       \ifx\HyPL@found\relax
6784         \toks@\expandafter{\Hy@temp}%
6785         \edef\Hy@next{\endgroup
6786           \noexpand\HyPL@@@CheckThePage\the\toks@
6787           \noexpand\HyPL@found\relax\noexpand\@nil
6788         }%
6789       \fi
6790       \Hy@next
6791     \fi
6792 }%

```

`\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`.

```

6793 \def\HyPL@Format#1#2{%
6794   \ifx\HyPL@found\@undefined
6795     \expandafter\ifx\csname c@#2\endcsname\c@page
6796     \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6797   \else
6798     \expandafter\noexpand\csname#1\endcsname{#2}%
6799   \fi
6800   \else

```

```

6801 \expandafter\noexpand\csname#1\endcsname{#2}%
6802 \fi
6803 }%

```

`\HyPL@@@CheckThePage` If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```

6804 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6805   \def\Hy@tempa{#3}%
6806   \def\Hy@tempb{\HyPL@found\relax}%
6807   \ifx\Hy@tempa\Hy@tempb
6808     \def\HyPL@Type{#2}%
6809     \def\HyPL@Prefix{#1}%
6810   \fi
6811 }%

```

`\HyPL@StorePageLabel` Dummy for drivers that does not support `/PageLabel`.

```

6812 \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`.

```

6813 \def\HyPL@Useless{0<</S/D>>}%
6814 \@onelevel@sanitize\HyPL@Useless

```

`\HyPL@SetPageLabels` The page labels are written to the PDF cataloge. The command `\Hy@PutCatalog` is defined in the driver files.

```

6815 \def\HyPL@SetPageLabels{%
6816   \@onelevel@sanitize\HyPL@Labels
6817   \ifx\HyPL@Labels\@empty
6818   \else
6819     \ifx\HyPL@Labels\HyPL@Useless
6820     \else
6821       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6822     \fi
6823   \fi
6824 }%

6825 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6826 \fi

```

Option ‘pdfpagelabels’ has been used and is now disabled.

```

6827 \Hy@DisableOption{pdfpagelabels}
6828 </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`

```

6829 <*pdfTeX>
6830 \pdf@ifdraftmode{%
6831   \let\Hy@PutCatalog\ltx@gobble
6832 }{%
6833   \let\Hy@PutCatalog\pdfcatalog
6834 }
6835 </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.

```

6836 <*vtex>
6837 \providecommand*\XR@ext}{pdf}
6838 \edef\Hy@VTeXversion{%
6839   \ifx\VTeXversion\@undefined
6840     \z@
6841   \else
6842     \ifx\VTeXversion\relax
6843       \z@
6844     \else
6845       \VTeXversion
6846     \fi
6847   \fi
6848 }
6849 \begingroup
6850   \ifnum\Hy@VTeXversion<660 %
6851     \gdef\Hy@PutCatalog#1{%
6852       \Hy@WarningNoLine{%
6853         VTeX 6.59g or above required for pdfpagelabels%
6854       }%
6855     }%
6856   \else
6857     \gdef\Hy@PutCatalog#1{%
6858       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6859     }%
6860     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6861       \ifx\#2\%
6862         \else
6863           \immediate\special{!pdfpagelabels #2}%
6864         \fi
6865       }%
6866     \fi
6867 \endgroup
6868 </vtex>

6869 <*pdftex|vtex>

```

\HyPL@StorePageLabel This macro adds the entry #1 to \HyPL@Labels.

```

6870 \ifHy@pdfpagelabels
6871   \def\HyPL@StorePageLabel#1{%
6872     \toks@{\expandafter{\HyPL@Labels}}%
6873     \xdef\HyPL@Labels{%
6874       \the\toks@
6875       \the\Hy@abspace<<#1>>%
6876     }%
6877   }%

```

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.

```

6878 \RequirePackage{atveryend}[2009/12/07]%
6879 \AtVeryEndDocument{%
6880   \HyPL@SetPageLabels

```

```

6881 }%
6882 \fi
6883 </pdfTeX | vTeX>

```

28.1.2 xetex

```

6884 <*xetex>
6885 \HyPsd@LoadUnicode
6886 \Hy@unicodetrue
6887 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6888 \else
6889 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6890 \fi
6891 \HyPsd@LoadStringEncoding
6892 \define@key{Hyp}{unicode}[true]{%
6893 \Hy@boolkey{unicode}{#1}%
6894 \ifHy@unicode
6895 \else
6896 \Hy@Warning{%
6897 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
6898 option setting 'unicode=false'%
6899 }%
6900 \Hy@unicodetrue
6901 \fi
6902 }
6903 \define@key{Hyp}{pdfencoding}{%
6904 \edef\HyPsd@temp{#1}%
6905 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6906 \let\HyPsd@pdfencoding\HyPsd@temp
6907 \else
6908 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6909 \let\HyPsd@pdfencoding\HyPsd@temp
6910 \else
6911 \Hy@Warning{%
6912 XeTeX driver only supports\MessageBreak
6913 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6914 setting 'pdfencoding=\HyPsd@temp'%
6915 }%
6916 \fi
6917 \fi
6918 }
6919 \let\HyXeTeX@CheckUnicode\relax
6920 </xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

6921 <*pdfmarkbase>
6922 \begingroup
6923 \@ifundefined{headerps@out}{-}{%
6924 \toks@\expandafter{\Hy@FirstPageHook}%
6925 \xdef\Hy@FirstPageHook{%
6926 \noexpand\headerps@out{%
6927 systemdict /pdfmark known%
6928 {%
6929 userdict /?pdfmark systemdict /exec get put%
6930 }{%
6931 userdict /?pdfmark systemdict /pop get put %
6932 userdict /pdfmark systemdict /cleartomark get put%

```

```

6933     }%
6934     ifelse%
6935     }%
6936     \the\toks@
6937   }%
6938 }%
6939 \endgroup
6940 \pdfmarkbase>

```

\Hy@PutCatalog

```

6941 \dvi\pdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
6942 \pdfmarkbase>
6943 \def\Hy@PutCatalog#1{%
6944   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6945 }
6946 \pdfmarkbase>

6947 \pdfmarkbase | dvi\pdfm | xetex>
6948 \ifHy@pdfpagelabels

```

\HyPL@StorePageLabel This macro writes a string to the .aux file.

```

6949 \def\HyPL@StorePageLabel#1{%
6950   \if@filesw
6951     \begingroup
6952     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6953     \immediate\write\@mainaux{%
6954       \string\HyPL@Entry{\Hy@tempa}%
6955     }%
6956   \endgroup
6957   \fi
6958 }%

```

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.

```

6959 \Hy@AtBeginDocument{%
6960   \if@filesw
6961     \immediate\write\@mainaux{%
6962       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6963     }%
6964   \fi
6965   \ifx\HyPL@Labels\@empty
6966     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6967   \else
6968     \HyPL@SetPageLabels
6969   \fi
6970   \let\HyPL@Entry\@gobble
6971 }%

```

\HyPL@Entry

```

6972 \def\HyPL@Entry#1{%
6973   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6974     \HyPL@Labels
6975     #1%
6976   }%
6977 }%

```



```

6978 \fi
6979 </pdfmarkbase | dvipdfm | xetex>
6980 (*package)
6981 \ifx\MaybeStopEarly\relax
6982 \else
6983 \Hy@stoppedearlytrue
6984 \expandafter\MaybeStopEarly
6985 \fi
6986 \Hy@stoppedearlyfalse

```

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

```

6987 \def\Hy@CounterExists#1{%
6988 \begingroup\expandafter\expandafter\expandafter\endgroup
6989 \expandafter\ifx\csname c@#1\endcsname\relax
6990 \expandafter\@gobble
6991 \else
6992 \begingroup\expandafter\expandafter\expandafter\endgroup
6993 \expandafter\ifx\csname the#1\endcsname\relax
6994 \expandafter\expandafter\expandafter\@gobble
6995 \else
6996 \expandafter\expandafter\expandafter\@firstofone
6997 \fi
6998 \fi
6999 }
7000 \Hy@CounterExists{section}{%
7001 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7002 }
7003 \Hy@CounterExists{part}{%
7004 \providecommand\theHpart{\arabic{part}}}%
7005 }
7006 \ltx@ifundefined{thechapter}{%
7007 \providecommand\theHsection {\arabic{section}}}%
7008 \providecommand\theHfigure {\arabic{figure}}}%
7009 \providecommand\theHtable {\arabic{table}}}%
7010 }{%

```

```

7011 \providecommand\theHchapter {\arabic{chapter}}%
7012 \providecommand\theHfigure {\theHchapter.\arabic{figure}}%
7013 \providecommand\theHtable {\theHchapter.\arabic{table}}%
7014 \providecommand\theHsection {\theHchapter.\arabic{section}}%
7015 }
7016 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7017 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7018 \providecommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
7019 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7020 \providecommand\theHtheorem {\theHsection.\arabic{theorem}}
7021 \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.

```

7022 \let\H@item\item
7023 \newcounter{Item}
7024 \def\theHItem{\arabic{Item}}
7025 \def\item{%
7026   \@hyper@itemfalse
7027   \if@nmbrlist\@hyper@itemtrue\fi
7028   \H@item
7029 }
7030 \providecommand\theHenumi {\theHItem}
7031 \providecommand\theHenumii {\theHItem}
7032 \providecommand\theHenumiii {\theHItem}
7033 \providecommand\theHenumiv {\theHItem}
7034 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7035 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7036 \@ifundefined{theHHmpfootnote}{%
7037   \let\theHHmpfootnote\theHHfootnote
7038 }{}

```

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.

```

7039 \let\H@refstepcounter\refstepcounter
7040 \edef\name@of@eq{equation}%
7041 \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.

```

7042 \newif\if@hyper@item
7043 \newif\if@skiphyperref
7044 \@hyper@itemfalse
7045 \@skiphyperreffalse
7046 \def\refstepcounter#1{%
7047   \ifHy@pdfstring
7048   \else
7049     \H@refstepcounter{#1}%
7050     \edef\This@name{#1}%
7051     \ifx\This@name\name@of@slide
7052     \else
7053       \if@skiphyperref
7054       \else
7055         \if@hyper@item
7056           \stepcounter{Item}%

```

```

7057     \hyper@refstepcounter{Item}%
7058     \@hyper@itemfalse
7059   \else
7060     \hyper@refstepcounter{#1}%
7061   \fi
7062 \fi
7063 \fi
7064 \fi
7065 }
7066 \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.

```

7067 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7068 \def\hyper@refstepcounter#1{%
7069   \edef\This@name{#1}%
7070   \ifx\This@name\name@of@eq
7071     \@ifundefined{theHequation}{%
7072       \make@stripped@name{\theequation}%
7073       \let\theHequation\newname
7074     }{}%
7075   \fi
7076   \HyCnt@ProvideTheHCounter{#1}%
7077   \hyper@makecurrent{#1}%
7078   \ifmeasuring@
7079   \else
7080     \Hy@raisedlink{%
7081       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7082     }%
7083   \fi
7084 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@ckpt`, the clear counter list of the artificial counter `@ckpt`, \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.

```

7085 \def\HyCnt@ProvideTheHCounter#1{%
7086   \@ifundefined{theH#1}{%
7087     \expandafter\def\csname theH#1\endcsname{}%
7088     \def\Hy@temp{\@elt{#1}}%
7089     \ltx@onelevel@sanitize\Hy@temp
7090     \let\HyOrg@elt\@elt
7091     \edef\@elt{%
7092       \noexpand\HyCnt@LookForParentCounter
7093       \expandafter\noexpand\csname theH#1\endcsname
7094     }%
7095     \cl@ckpt
7096     \let\@elt\HyOrg@elt
7097     \expandafter
7098     \ltx@LocalAppendToMacro\csname theH#1\endcsname\expandafter\endcsname
7099     \expandafter{%

```

```

7100 \expandafter\@arabic\csname c@#1\endcsname
7101 }%
7102 }{}%
7103 }

```

\Hy@LookForParentCounter

```

7104 \def\HyCnt@LookForParentCounter#1#2{%
7105 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7106 \ltx@ifundefined{cl@#2}{%
7107 }{%
7108 \ltx@onelevel@sanitize\Hy@temp@A
7109 \edef\Hy@temp@A{%
7110 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7111 }\Hy@temp@A
7112 \ifin@
7113 \ltx@ifundefined{theH#2}{%
7114 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7115 \expandafter{%
7116 \expandafter\@arabic\csname c@#2\endcsname.%
7117 }%
7118 }{%
7119 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7120 \expandafter{%
7121 \csname theH#2\endcsname.%
7122 }%
7123 }%
7124 \fi
7125 }%
7126 }

```

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.

```

7127 \begingroup\expandafter\expandafter\expandafter\endgroup
7128 \expandafter\ifx\csname chapter\endcsname\relax
7129 \def\Hy@chapterstring{section}%
7130 \else
7131 \def\Hy@chapterstring{chapter}%
7132 \fi
7133 \def\Hy@appendixstring{appendix}
7134 \def\Hy@chapapp{\Hy@chapterstring}
7135 \ltx@ifundefined{appendix}{%
7136 }{%
7137 \let\HyOrg@appendix\appendix
7138 \def\Hy@AlphNoErr#1{%
7139 \ifnum\value{#1}>26 %
7140 Alph\number\value{#1}%
7141 \else
7142 \ifnum\value{#1}<1 %
7143 Alph\number\value{#1}%
7144 \else
7145 \Alph{#1}%
7146 \fi
7147 \fi

```

```

7148 }%
7149 \def\appendix{%
7150   \ltx@ifundefined{chapter}{%
7151     \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7152   }{%
7153     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7154   }%
7155   \xdef\Hy@chapapp{\Hy@appendixstring}%
7156   \HyOrg@appendix
7157 }%
7158 }

```

\Hy@Test@alph

```

7159 \def\Hy@Test@alph#1{%
7160   \ifcase#1\or
7161     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7162     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7163     u\or v\or w\or x\or y\or z%
7164   \else
7165     \@ctrerr
7166   \fi
7167 }

```

\Hy@Test@Alph

```

7168 \def\Hy@Test@Alph#1{%
7169   \ifcase#1\or
7170     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7171     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7172     U\or V\or W\or X\or Y\or Z%
7173   \else
7174     \@ctrerr
7175   \fi
7176 }

```

\hyper@makecurrent Because of Babel mucking around, nullify \textlatin when making names. And \@number because of babel's lrbabel.def.

```

7177 \def\hyper@makecurrent#1{%
7178   \begingroup
7179   \Hy@safe@activestruer
7180   \edef\Hy@param{#1}%
7181   \ifx\Hy@param\Hy@chapterstring
7182     \let\Hy@param\Hy@chapapp
7183   \fi
7184   \ifHy@hypertextnames
7185     \let\@number\@firstofone
7186     \def\@fnsymbol##1{fnsymbol\number##1}%
7187     \def\@arabic##1{\number##1}%
7188     \ifx\@alph\Hy@Test@alph
7189       \else
7190         \def\@alph{alph\number}%
7191       \fi
7192     \ifx\@Alph\Hy@Test@Alph
7193       \else
7194         \def\@Alph{Alph\number}%
7195       \fi
7196     \ifHy@naturalnames
7197       \let\textlatin\@firstofone

```

```

7198     \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7199 \else
7200     \xdef\HyperGlobalCurrentHref{%
7201         \csname
7202             the%
7203             \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7204             #1%
7205         \endcsname
7206     }%
7207 \fi
7208 \xdef\HyperGlobalCurrentHref{%
7209     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7210 }%
7211 \else
7212     \Hy@GlobalStepCount\Hy@linkcounter
7213     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7214 \fi
7215 \endgroup
7216 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7217 \ifHy@localanchorname
7218     \let\@currentHref\HyperLocalCurrentHref
7219 \else
7220     \global\let\@currentHref\HyperGlobalCurrentHref
7221 \fi
7222 }

```

\Hy@MakeCurrentHref

```

7223 \def\Hy@MakeCurrentHref#1{%
7224     \edef\HyperLocalCurrentHref{#1}%
7225     \@onelevel@sanitize\HyperLocalCurrentHref
7226     \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7227     \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7228     \ifHy@localanchorname
7229         \let\@currentHref\HyperLocalCurrentHref
7230     \else
7231         \global\let\@currentHref\HyperGlobalCurrentHref
7232     \fi
7233 }

```

\Hy@MakeCurrentHrefAuto

```

7234 \def\Hy@MakeCurrentHrefAuto#1{%
7235     \Hy@GlobalStepCount\Hy@linkcounter
7236     \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7237 }

```

\@currentHlabel \@currentHlabel is only defined for compatibility with package ‘hypdvips’.

```

7238 \def\@currentHlabel{\@currentHref}

7239 \@ifpackageloaded{fancyvrb}{%
7240     \@ifpackagelater{fancyvrb}{1998/05/20}{%
7241         \def\FV@StepLineNo{%
7242             \FV@SetLineNo
7243             \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7244             \FV@SetLineNo
7245         }%
7246     }%
7247 }{}

```

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`

```

7248 \Hy@AtBeginDocument{%
7249   \ifclassloaded{revtex4}{%
7250     \@namedef{ver@lastpage.sty}{1994/06/25}%
7251   }{%
7252     \ifpackageloaded{lastpage}{%
7253       \ifHy@pageanchor
7254       \else
7255         \Hy@WarningNoLine{%
7256           The \string\pageref{LastPage} link doesn't work\MessageBreak
7257           with disabled option 'pageanchor'%
7258         }%
7259       \fi
7260       \def\lastpage@putlabel{%
7261         \addtocounter{page}{-1}%
7262         \if@files
7263           \begingroup
7264             \let\@number\@firstofone
7265             \ifHy@pageanchor
7266               \ifHy@hypertextnames
7267                 \ifHy@plainpages
7268                   \def\Hy@temp{\arabic{page}}%
7269                 \else
7270                   \Hy@unicodedefalse
7271                   \pdfstringdef\Hy@temp{\thepage}%
7272                 \fi
7273             \else
7274               \def\Hy@temp{\the\Hy@pagecounter}%
7275             \fi
7276           \fi
7277           \immediate\write\@auxout{%
7278             \string\newlabel
7279             {LastPage}{{}\the\thepage}{}{}%
7280             \ifHy@pageanchor page.\Hy@temp\fi}{}%
7281           }%
7282         \endgroup
7283       \fi
7284       \addtocounter{page}{1}%
7285     }%
7286     \@ifclassloaded{revtex4}{%
7287       \begingroup
7288         \toks@\expandafter{\lastpage@putlabel}%
7289         \edef\x{\endgroup
7290           \def\noexpand\lastpage@putlabel{%
7291             \noexpand\stepcounter{page}%
7292             \the\toks@
7293             \noexpand\addtocounter{page}\noexpand\m@ne

```

```

7294     }%
7295     }%
7296     \x
7297     }{}%
7298     }{}%
7299 }
7300 \</package>
7301 \<*check>
7302 \checkpackage{lastpage}[1994/06/25]
7303 \checkcommand\def\lastpage@putlabel{%
7304   \addtocounter{page}{-1}%
7305   \immediate\write\@auxout{%
7306     \string\newlabel{LastPage}{\the\thepage}}%
7307   }%
7308   \addtocounter{page}{1}%
7309 }
7310 \</check>
7311 \<*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.

```

7312 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
7313 \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:

```

7314 \@ifpackageloaded{titlesec}{%
7315   \def\ttl@Hy@steplink#1{%
7316     \Hy@MakeCurrentHrefAuto{#1*}%
7317     \edef\ttl@Hy@saveanchor{%
7318       \noexpand\Hy@raisedlink{%
7319         \noexpand\hyper@anchorstart{\@currentHref}%
7320         \noexpand\hyper@anchorend
7321       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7322       \noexpand\ttl@Hy@PatchSaveWrite
7323     }%
7324   }%
7325 }%
7326 \def\ttl@Hy@PatchSaveWrite{%
7327   \begingroup
7328   \toks@{\expandafter\ttl@savewrite}%
7329   \edef\x{\endgroup
7330     \def\noexpand\ttl@savewrite{%
7331       \let\noexpand\@currentHref
7332       \noexpand\ttl@Hy@SavedCurrentHref
7333     \the\toks@
7334     }%
7335   }%
7336   \x
7337 }%

```



```

7338 \def\ttl@Hy@refstepcounter#1{%
7339   \let\ttl@b\Hy@raisedlink
7340   \def\Hy@raisedlink##1{%
7341     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7342   }%
7343   \refstepcounter{#1}%
7344   \let\Hy@raisedlink\ttl@b
7345 }%
7346 }{}

Package titletoc support:
7347 \@ifpackageloaded{titletoc}{%
7348   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7349 }{}

```

33 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```

7350 \def\Hy@varioref@undefined{??}{??}{-}{-}{-}
7351 \@ifpackageloaded{varioref}{%
7352   \def\vref@pagenum#1#2{%
7353     \@ifundefined{r@#2}{%
7354       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7355     }{}%
7356     \edef#1{\getpagerefnumber{#2}}%
7357   }%
7358 }{}

```

Package varioref redefines `\refstepcounter`, thus it needs fixing, if the package is loaded *after* `hyperref`.

```

7359 \def\Hy@varioref@refstepcounter#1{%
7360   \stepcounter{#1}%
7361   \protected@edef\@currentlabel{%
7362     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7363   }%
7364 }
7365 \AtBeginDocument{%
7366   \ifx\refstepcounter\Hy@varioref@refstepcounter
7367     \let\H@refstepcounter\refstepcounter
7368     \let\refstepcounter\Hy@saved@refstepcounter
7369   \fi
7370 }

```

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

```

7371 \@ifpackageloaded{longtable}{%
7372   \begingroup
7373   \def\y{\LT@array}%
7374   \@ifundefined{scr@LT@array}{%

```

```

7375 \ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7376 }\def\y{\scr@LT@array}}%
7377 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7378 \expandafter\endgroup
7379 \expandafter\def\y[##1]##2{%
7380 \H@refstepcounter{#1}%
7381 \hyper@makecurrent{table}%
7382 \let\Hy@LT@currentHref\@currentHref
7383 #2\@sharp###4%
7384 }%
7385 }%
7386 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

Patch of \LT@start: add anchor before first line after \vskip\LTpre

```

7387 \begingroup
7388 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7389 \endgroup
7390 \def\LT@start{%
7391 #1%
7392 \ifvoid\LT@foot#2\fi
7393 \let\@currentHref\Hy@LT@currentHref
7394 \Hy@raisedlink{%
7395 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7396 }%
7397 #3%
7398 }%
7399 }%
7400 \expandafter\x\LT@start\@nil
7401 }{}

```

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.

```

7402 \let\new@refstepcounter\refstepcounter
7403 \let\H@equation\equation
7404 \let\H@endequation\endequation
7405 \ifpackageloaded{amsmath}{%
7406 \long\def\Hy@temp{%
7407 \incr@eqnum
7408 \mathdisplay@push
7409 \st@rredfalse \global\@eqnswtrue
7410 \mathdisplay{equation}%
7411 }%
7412 \ifx\Hy@temp\equation
7413 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7414 \csname iftrue\endcsname
7415 \else
7416 \long\def\equation{%
7417 \mathdisplay@push
7418 \st@rredfalse \global\@eqnswtrue
7419 \mathdisplay{equation}%
7420 \incr@eqnum

```

```

7421 }%
7422 \fi
7423 \fi
7424 }{%
7425 \def\equation{%
7426 \let\refstepcounter\H@refstepcounter
7427 \H@equation
7428 \@ifundefined{theHequation}{%
7429 \make@stripped@name{\theequation}%
7430 \let\theHequation\newname
7431 }{}%
7432 \hyper@makecurrent{equation}%

```

`\mathopen` is needed in case the equation starts with an unary minus, for example.

```

7433 \mathopen{%
7434 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7435 }%
7436 \let\refstepcounter\new@refstepcounter
7437 }%
7438 \def\endequation{%
7439 \ifx\Hy@raisedlink\ltx@empty
7440 \hyper@anchorend
7441 \else
7442 \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7443 \fi
7444 \H@endequation
7445 }%
7446 }

```

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.

```

7447 \newif\if@eqnstar
7448 \@eqnstarfalse
7449 \let\H@eqnarray\eqnarray
7450 \let\H@endeqnarray\endeqnarray
7451 \def\eqnarray{%
7452 \let\Hy@reserved@a\relax
7453 \def\@currentHref{}%
7454 \H@eqnarray
7455 \if@eqnstar
7456 \else
7457 \ifx\\\@currentHref\\%
7458 \else
7459 \@ifundefined{theHequation}{%
7460 \make@stripped@name{\theequation}%
7461 \let\theHequation\newname
7462 }{}%
7463 \hyper@makecurrent{equation}%
7464 \mathopen{%
7465 \Hy@raisedlink{%
7466 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7467 }%
7468 }%
7469 \fi
7470 \fi

```

```

7471 }
7472 \def\endeqnarray{%
7473   \H@endeqnarray
7474 }

```

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.

```

7475 \@namedef{eqnarray*}{%
7476   \def\@eqncr{\nonumber\@seqncr}\@eqnstarttrue\eqnarray
7477 }
7478 \@namedef{endeqnarray*}{%
7479   \nonumber\endeqnarray\@eqnstarfalse
7480 }

```

Then again, we have the `subeqnarray` package. Tanmoy provided some code for this:

```

7481 \ltx@ifundefined{subeqnarray}{}{%
7482   \let\H@subeqnarray\subeqnarray
7483   \let\H@endsubeqnarray\endsubeqnarray
7484   \def\subeqnarray{%
7485     \let\Hy@reserved@a\relax
7486     \H@subeqnarray
7487     \@ifundefined{theHequation}{%
7488       \make@stripped@name{\theequation}%
7489       \let\theHequation\newname
7490     }{}%
7491     \hyper@makecurrent{equation}%
7492     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7493   }%
7494   \def\endsubeqnarray{%
7495     \H@endsubeqnarray
7496   }%
7497   \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7498 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.

```

7499 \def\make@stripped@name#1{%
7500   \begingroup
7501     \escapechar\m@ne
7502     \global\let\newname\@empty
7503     \protected@edef\Hy@tempa{#1}%
7504     \edef\@tempb{%
7505       \noexpand\@tfor\noexpand\Hy@tempa:=%
7506       \expandafter\strip@prefix\meaning\Hy@tempa
7507     }%
7508     \@tempb\do{%
7509       \if\Hy@tempa\else
7510         \if\Hy@tempa\else
7511           \xdef\newname{\newname\Hy@tempa}%
7512         \fi
7513       \fi
7514     }%
7515   \endgroup
7516 }

```

Support for `amsmath`'s subequations:

```

7517 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

7518 \expandafter\ifx\csname subequations\endcsname\relax
7519 \else
7520 \let\HyOrg@subequations\subequations
7521 \def\subequations{%
7522   \stepcounter{equation}%
7523   \protected@edef\theHparentequation{%
7524     \@ifundefined{theHequation}\theequation\theHequation
7525   }%
7526   \addtocounter{equation}{-1}%
7527   \HyOrg@subequations
7528   \def\theHequation{\theHparentequation\alph{equation}}%
7529   \ignorespaces
7530 }%
7531 \fi

```

Support for package `amsthm` (Daniel Müllner):

```

7532 \@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

7533 \def\Hy@temp#1#2#3{%
7534   \ifhmode\unskip\unskip\par\fi
7535   \normalfont
7536   \trivlist
7537   \let\thmheadnl\relax
7538   \let\thm@swap\@gobble
7539   \let\thm@indent\indent % indent
7540   \thm@headfont{\scshape}% heading font small caps
7541   \thm@notefont{\fontseries\mddefault\upshape}%
7542   \thm@headpunct{.}% add period after heading
7543   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7544   \thm@space@setup
7545   #1% style overrides
7546   \@topsep \thm@preskip % used by thm head
7547   \@topsepadd \thm@postskip % used by \@endparenv
7548   \def\@tempa{#2}\ifx\@empty\@tempa
7549     \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7550   \else
7551     \refstepcounter{#2}%
7552     \def\@tempa{%
7553       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7554     }%
7555   \fi
7556   \@tempa
7557 }%
7558 \ifx\Hy@temp\@thm
7559 \def\@thm#1#2#3{%
7560   \ifhmode
7561     \unskip\unskip\par
7562   \fi
7563   \normalfont
7564   \trivlist
7565   \let\thmheadnl\relax
7566   \let\thm@swap\@gobble
7567   \let\thm@indent\indent % indent

```

```

7568 \thm@headfont{\scshape}% heading font small caps
7569 \thm@notefont{\fontseries\mddefault\upshape}%
7570 \thm@headpunct{.}% add period after heading
7571 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7572 \thm@space@setup
7573 #1% style overrides
7574 \@topsep \thm@preskip % used by thm head
7575 \@topsepadd \thm@postskip % used by \@endparenv
7576 \def\dth@counter{#2}%
7577 \ifx\@empty\dth@counter
7578 \def\@tempa{%
7579 \@oparg{\@begintheorem{#3}{}}[]%
7580 }%
7581 \else
7582 \H@refstepcounter{#2}%
7583 \hyper@makecurrent{#2}%
7584 \let\Hy@dth@currentHref\@currentHref
7585 \def\@tempa{%
7586 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7587 }%
7588 \fi
7589 \@tempa
7590 }%
7591 \else
7592 \def\@thm#1#2#3{%
7593 \ifhmode
7594 \unskip\unskip\par
7595 \fi
7596 \normalfont
7597 \trivlist
7598 \let\thmheadnl\relax
7599 \let\thm@swap\@gobble
7600 \thm@notefont{\fontseries\mddefault\upshape}%
7601 \thm@headpunct{.}% add period after heading
7602 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7603 \thm@space@setup
7604 #1% style overrides
7605 \@topsep \thm@preskip % used by thm head
7606 \@topsepadd \thm@postskip % used by \@endparenv
7607 \def\dth@counter{#2}%
7608 \ifx\@empty\dth@counter
7609 \def\@tempa{%
7610 \@oparg{\@begintheorem{#3}{}}[]%
7611 }%
7612 \else
7613 \H@refstepcounter{#2}%
7614 \hyper@makecurrent{#2}%
7615 \let\Hy@dth@currentHref\@currentHref
7616 \def\@tempa{%
7617 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7618 }%
7619 \fi
7620 \@tempa
7621 }%
7622 \fi
7623 \dth@everypar={%
7624 \@minipagefalse

```

```

7625 \global\@newlistfalse
7626 \@noparitemfalse
7627 \if@inlabel
7628 \global\@inlabelfalse
7629 \begingroup
7630 \setbox\z@\lastbox
7631 \ifvoid\z@
7632 \kern-\itemindent
7633 \fi
7634 \endgroup
7635 \ifx\@empty\dth@counter
7636 \else
7637 \Hy@raisedlink{%
7638 \hyper@anchorstart{%
7639 \itx@ifundefined{Hy@dth@currentHref}%
7640 \@currentHref\Hy@dth@currentHref
7641 }\hyper@anchorend
7642 }%
7643 \fi
7644 \unhbox\@labels
7645 \fi
7646 \if@nobreak
7647 \@nobreakfalse \clubpenalty\@M
7648 \else
7649 \clubpenalty\@clubpenalty \everypar{}%
7650 \fi
7651 }%
7652 }{}

```

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.

```

7653 \ifHy@hyperfootnotes
7654 \newcounter{Hfootnote}%
7655 \let\H@@footnotetext\@footnotetext
7656 \let\H@@footnotemark\@footnotemark
7657 \def\@xfootnotenext[#1]{%
7658 \begingroup
7659 \csname c@\@mpfn\endcsname #1\relax
7660 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7661 \endgroup
7662 \ifx\@footnotetext\@mpfootnotetext
7663 \expandafter\H@@mpfootnotetext
7664 \else
7665 \expandafter\H@@footnotetext
7666 \fi
7667 }%
7668 \def\@xfootnotemark[#1]{%
7669 \begingroup
7670 \c@footnote #1\relax
7671 \unrestored@protected@xdef\@thefnmark{\thefnmark}%
7672 \endgroup

```

```

7673 \H@@footnotemark
7674 }%
7675 \let\H@@mpfootnotetext\@mpfootnotetext
7676 \long\def\@mpfootnotetext#1{%
7677 \H@@mpfootnotetext{%
7678 \ifHy@nesting
7679 \expandafter\ltx@firstoftwo
7680 \else
7681 \expandafter\ltx@secondoftwo
7682 \fi
7683 {%
7684 \expandafter\hyper@@anchor\expandafter{%
7685 \Hy@footnote@currentHref
7686 }{#1}%
7687 }{%
7688 \Hy@raisedlink{%
7689 \expandafter\hyper@@anchor\expandafter{%
7690 \Hy@footnote@currentHref
7691 }{\relax}%
7692 }#1%
7693 }%
7694 }%
7695 }%
7696 \long\def\@footnotetext#1{%
7697 \H@@footnotetext{%
7698 \ifHy@nesting
7699 \expandafter\ltx@firstoftwo
7700 \else
7701 \expandafter\ltx@secondoftwo
7702 \fi
7703 {%
7704 \expandafter\hyper@@anchor\expandafter{%
7705 \Hy@footnote@currentHref
7706 }{#1}%
7707 }{%
7708 \Hy@raisedlink{%
7709 \expandafter\hyper@@anchor\expandafter{%
7710 \Hy@footnote@currentHref
7711 }{\relax}%
7712 }%
7713 \let\@currentHref\Hy@footnote@currentHref
7714 \let\@currentlabelname\@empty
7715 #1%
7716 }%
7717 }%
7718 }%

```

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.

```

7719 \def\@footnotemark{%
7720 \leavevmode
7721 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
7722 \stepcounter{Hfootnote}%
7723 \global\let\Hy@saved@currentHref\@currentHref

```



```

7724 \hyper@makecurrent{Hfootnote}%
7725 \global\let\Hy@footnote@currentHref\@currentHref
7726 \global\let\@currentHref\Hy@saved@currentHref
7727 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7728 \@makefnmark
7729 \hyper@linkend
7730 \ifhmode\spacefactor\@x@sf\fi
7731 \relax
7732 }%

```

Tabularx causes footnote problems, disable the linking if that is loaded. Since v6.82i footnotes are only disabled inside the environment ‘tabularx’.

```

7733 \@ifpackageloaded{tabularx}{%
7734 \let\HyOrg@TX@endtabularx\TX@endtabularx
7735 \def\Hy@tabularx@hook{%
7736 \let\@footnotetext\H@@footnotetext
7737 \let\@footnotemark\H@@footnotemark
7738 \let\@mpfootnotetext\H@@mpfootnotetext
7739 }%
7740 \begingroup
7741 \toks@\expandafter{\TX@endtabularx}%
7742 \xdef\Hy@gtemp{%
7743 \noexpand\Hy@tabularx@hook
7744 \the\toks@
7745 }%
7746 \endgroup
7747 \let\TX@endtabularx\Hy@gtemp
7748 }{}%

```

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

```

7749 \@ifpackageloaded{longtable}{%
7750 \CheckCommand*{\LT@p@ftntext}[1]{%
7751 \edef\@tempa{%
7752 \the\LT@p@ftn
7753 \noexpand\footnotetext[\the\c@footnote]%
7754 }%
7755 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7756 }%
7757 \long\def\LT@p@ftntext#1{%
7758 \edef\@tempa{%
7759 \the\LT@p@ftn
7760 \begingroup
7761 \noexpand\c@footnote=\the\c@footnote\relax
7762 \noexpand\protected\xdef\noexpand\@thefnmark{%
7763 \noexpand\thempfn
7764 }%
7765 \noexpand\Hy@LT@footnotetext{%
7766 \Hy@footnote@currentHref
7767 }%
7768 }%
7769 \global\LT@p@ftn\expandafter{%
7770 \@tempa{#1}%
7771 \endgroup
7772 }%
7773 }%

```

```

7774 \long\def\Hy@LT@footnotetext#1#2{%
7775   \H@@footnotetext{%
7776     \ifHy@nesting
7777       \hyper@@anchor{#1}{#2}%
7778     \else
7779       \Hy@raisedlink{%
7780         \hyper@@anchor{#1}{\relax}%
7781       }%
7782     \def\@currentHref{#1}%
7783     \let\@currentlabelname\@empty
7784     #2%
7785   \fi
7786 }%
7787 }%
7788 }{}%

```

Footnotes for fancyvrb (Fix by Manuel Pégourié-Gonnard).

```

7789 \@ifpackageloaded{fancyvrb}{%
7790   \def\V@@footnotetext{%
7791     \insert\footins\bgroup
7792     \csname reset@font\endcsname
7793     \footnotesize
7794     \interlinepenalty\interfootnotelinepenalty
7795     \splittopskip\footnotesep
7796     \splitmaxdepth\dp\strutbox
7797     \floatingpenalty \@MM
7798     \hsize\columnwidth
7799     \@parboxrestore
7800     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7801     \@makefntext{}%
7802     \rule{\z@}{\footnotesep}%
7803     \bgroup
7804     \aftergroup\V@@@footnotetext
7805     \Hy@raisedlink{%
7806       \expandafter\hyper@@anchor\expandafter{%
7807         \Hy@footnote@currentHref
7808       }\relax}%
7809     }%
7810     \let\@currentHref\Hy@footnote@currentHref
7811     \let\@currentlabelname\@empty
7812     \ignorespaces
7813   }%
7814 }{}%

```

KOMA-Script defines `\footref` that uses both `\ref` and `\@footnotemark` resulting in two links, one of them wrong.

```

7815 \def\Hy@temp#1{%
7816   \begingroup
7817   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7818   \endgroup
7819   \@footnotemark
7820 }%
7821 \ifx\Hy@temp\footref
7822   \def\footref#1{%
7823     \begingroup
7824     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7825     \endgroup
7826     \H@@@footnotemark

```

```

7827 }%
7828 \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.

```

7829 \let\HyOrg@maketitle\maketitle
7830 \def\maketitle{%
7831   \let\Hy@saved@footnotemark\@footnotemark
7832   \let\Hy@saved@footnotetext\@footnotetext
7833   \let\@footnotemark\H@@footnotemark
7834   \let\@footnotetext\H@@footnotetext
7835   \@ifnextchar[\Hy@maketitle@optarg{% ]
7836     \HyOrg@maketitle
7837     \Hy@maketitle@end
7838   }%
7839 }%
7840 \def\Hy@maketitle@optarg[#1]{%
7841   \HyOrg@maketitle[#1]}%
7842   \Hy@maketitle@end
7843 }%
7844 \def\Hy@maketitle@end{%
7845   \ifx\@footnotemark\H@@footnotemark
7846     \let\@footnotemark\Hy@saved@footnotemark
7847   \fi
7848   \ifx\@footnotetext\H@@footnotetext
7849     \let\@footnotetext\Hy@saved@footnotetext
7850   \fi
7851 }%

```

`\realfootnote` Does anyone remember the function and purpose of `\realfootnote`?

```

7852 \def\realfootnote{%
7853   \@ifnextchar[\@xfootnote{%
7854     \stepcounter{\@mpfn}%
7855     \protected@xdef\@thefnmark{\thempfn}%
7856     \H@@@footnotemark\H@@@footnotetext
7857   }%
7858 }%

7859 \fi
7860 \Hy@DisableOption{hyperfootnotes}

7861 \</package>
7862 \<?check>
7863 \checklatex
7864 \checkcommand\def\@xfootnotenext[#1]{%
7865   \begingroup
7866     \csname c@\@mpfn\endcsname #1\relax
7867     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7868   \endgroup
7869   \@footnotetext
7870 }
7871 \checkcommand\def\@xfootnotemark[#1]{%
7872   \begingroup
7873     \c@footnote #1\relax
7874     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7875   \endgroup
7876   \@footnotemark

```

```

7877 }
7878 \checkcommand\def\@footnotemark{%
7879 \leavevmode
7880 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7881 \@makefnmark
7882 \ifhmode\spacefactor\@x@sf\fi
7883 \relax
7884 }
7885 \</check>
7886 \*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.

```

7887 \def\caption{%
7888 \ifx\@captype\@undefined
7889 \@latex@error{\noexpand\caption outside float}\@ehd
7890 \expandafter\@gobble
7891 \else
7892 \H@refstepcounter\@captype
7893 \let\Hy@tempa\@caption
7894 \@ifundefined{float@caption}{%
7895 }{%
7896 \expandafter\ifx\csname @float@c@\@captype\endcsname
7897 \float@caption
7898 \let\Hy@tempa\Hy@float@caption
7899 \fi
7900 }%
7901 \expandafter\@firstofone
7902 \fi
7903 {\@dblarg{\Hy@tempa\@captype}}%
7904 }
7905 \long\def\@caption#1[#2]#3{%
7906 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7907 \csname iftrue\endcsname
7908 \global\let\@currentHref\hc@currentHref
7909 \else
7910 \hyper@makecurrent{\@captype}%
7911 \fi
7912 \@ifundefined{NR@getttitle}{%
7913 \def\@currentlabelname{#2}%
7914 }{%
7915 \NR@getttitle{#2}%
7916 }%
7917 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7918 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7919 }%
7920 \begingroup
7921 \@parboxrestore
7922 \if@minipage
7923 \@setminipage
7924 \fi
7925 \normalsize
7926 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7927 \csname iftrue\endcsname

```

```

7928 \global\@capstartfalse
7929 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7930 \else
7931 \@makecaption{\csname fnum@#1\endcsname}{%
7932 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7933 \ifHy@nesting
7934 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7935 \else
7936 \Hy@raisedlink{%
7937 \expandafter\hyper@@anchor\expandafter{%
7938 \@currentHref
7939 }{\relax}%
7940 }%
7941 #3%
7942 \fi
7943 }%
7944 \fi
7945 \par
7946 \endgroup
7947 }

```

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’.

```

7948 \let\Hy@float@caption\@caption
7949 \newcommand{\HyNew@float@makebox}[1]{%
7950 \HyOrg@float@makebox{%
7951 #1\relax
7952 \ifx\Hy@float@currentHref\@undefined
7953 \else
7954 \expandafter\hyper@@anchor\expandafter{%
7955 \Hy@float@currentHref
7956 }{\relax}%
7957 \global\let\Hy@float@currentHref\@undefined
7958 \fi
7959 }%
7960 }%
7961 \ifpackageloaded{float}{%
7962 \def\Hy@float@caption{%
7963 \ifx\Hy@float@currentHref\@undefined
7964 \hyper@makecurrent{\@cuptype}%
7965 \global\let\Hy@float@currentHref\@currentHref
7966 \else
7967 \let\@currentHref\Hy@float@currentHref
7968 \fi
7969 \float@caption
7970 }%
7971 \let\HyOrg@float@makebox\float@makebox
7972 \let\float@makebox\HyNew@float@makebox
7973 }{}
7974 \</package>
7975 \< *check>
7976 \checklatex[1999/06/01 - 2000/06/01]
7977 \checkcommand\def\caption{%

```

```

7978 \ifx\@captive\@undefined
7979 \latexerror{\noexpand\caption outside float}\@ehd
7980 \expandafter\@gobble
7981 \else
7982 \refstepcounter\@captive
7983 \expandafter\@firstofone
7984 \fi
7985 {\@dblarg{\@caption\@captive}}}%
7986 }
7987 \checkcommand\long\def\@caption#1[#2]#3{%
7988 \par
7989 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7990 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7991 }%
7992 \begingroup
7993 \@parboxrestore
7994 \if@minipage
7995 \@setminipage
7996 \fi
7997 \normalsize
7998 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7999 \endgroup
8000 }
8001 \</check>
8002 \< *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 `\bibtex`; 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.

```

8003 \def\hyper@natlinkstart#1{%
8004 \Hy@backout{#1}%
8005 \hyper@linkstart{cite}{cite.#1}%
8006 \def\hyper@nat@current{#1}%
8007 }
8008 \def\hyper@natlinkend{%
8009 \hyper@linkend
8010 }
8011 \def\hyper@natlinkbreak#1#2{%
8012 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8013 }
8014 \def\hyper@natanchorstart#1{%
8015 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8016 }
8017 \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.

```

8018 \ltx@ifundefined{NAT@parse}{%
8019   \providecommand*\@extra@binfo{}%
8020   \providecommand*\@extra@b@citeb{}%
8021   \def\bibcite#1#2{%
8022     \@newl@bel{b}{#1\@extra@binfo}{%
8023       \hyper@link[cite]{#1\@extra@b@citeb}{#2}%
8024     }%
8025   }%
8026   \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.”.

```

8027 \let\Hy@bibcite\bibcite
8028 \begingroup
8029   \@ifundefined{bbl@cite@choice}{%
8030     \g@addto@macro\bbl@cite@choice{%
8031       \let\bibcite\Hy@bibcite
8032     }%
8033   }%
8034 \endgroup

```

`\@BIBLABEL` is working around a ‘feature’ of Rev_{TEX}.

```

8035 \providecommand*\@BIBLABEL{\@biblabel}%
8036 \def\@bibitem[#1]#2{%
8037   \@skiphyperrtrue
8038   \H@item{%
8039     \ifx\Hy@raisedlink\@empty
8040       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8041       \@BIBLABEL{#1}%
8042       \hyper@anchorend
8043     \else
8044       \Hy@raisedlink{%
8045         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8046       }%
8047       \@BIBLABEL{#1}%
8048     \fi
8049     \hfill
8050   }%
8051   \@skiphyperrfalse
8052   \if@files
8053     \begingroup
8054       \let\protect\noexpand
8055       \immediate\write\@auxout{%
8056         \string\bibcite{#2}{#1}%
8057       }%
8058     \endgroup
8059   \fi
8060   \ignorespaces
8061 }%

```

Since `\bibitem` is doing its own labelling, call the raw version of `\item`, to avoid extra spurious labels

```

8062 \def\@bibitem#1{%
8063   \@skiphyperrtrue\H@item\@skiphyperrfalse
8064   \Hy@raisedlink{%
8065     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8066   }%
8067   \if@files
8068     \begingroup

```

```

8069     \let\protect\noexpand
8070     \immediate\write\@auxout{%
8071       \string\bibcite{#1}{\the\value{\@listctr}}}%
8072     }%
8073   \endgroup
8074   \fi
8075   \ignorespaces
8076 }%
8077 }{}

8078 \</package>
8079 \<{*check>
8080 \checklatex
8081 \checkcommand\def\@bibitem[#1]#2{%
8082   \item[\@biblabel{#1}]{\hfill}%
8083   \if@filesw
8084     {%
8085       \let\protect\noexpand
8086       \immediate\write\@auxout{%
8087         \string\bibcite{#2}{#1}%
8088       }%
8089     }%
8090   \fi
8091   \ignorespaces
8092 }
8093 \checkcommand\def\@bibitem#1{%
8094   \item
8095   \if@filesw
8096     \immediate\write\@auxout{%
8097       \string\bibcite{#1}{\the\value{\@listctr}}}%
8098   }%
8099   \fi
8100   \ignorespaces
8101 }
8102 \</check>
8103 \<{*package>

```

RevTeX (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.

```

8104 \ifclassloaded{revtex}{%
8105   \Hy@Info{*** compatibility with revtex **** }%
8106   \def\revtex@checking#1#2{%
8107     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8108     \expandafter\def\csname b@#1\endcsname{#2}%
8109     \@SetMaxRnhefLabel{#1}%
8110     \expandafter\let\csname b@#1\endcsname\T@temp
8111   }%

```

Tanmoy provided this replacement for CITE_X. Lord knows what it does. For chapterbib added: `extra@b@citeb`

```

8112 \ifundefined{@CITE}{\def\@CITE{\@cite}}{}%
8113 \providecommand*{\@extra@b@citeb}{}%
8114 \def\@CITE[#1]#2{%
8115   \let\@citea\@empty
8116   \leavevmode
8117   \unskip
8118   $\{

```



```

8119 \scriptstyle
8120 \@CITE{%
8121   \@for\@citeb:=#2\do{%
8122     \@citea
8123     \def\@citea{,\penalty\@m\ }%
8124     \edef\@citeb{\expandafter\@firstofone\@citeb}%
8125     \if@filesw
8126       \immediate\write\@auxout{\string\citation{\@citeb}}%
8127     \fi
8128     \@ifundefined{b@\@citeb\extra@b@citeb}{%
8129       \mbox{\reset@font\bfseries ?}%
8130       \G@refundefinedtrue
8131       \@latex@warning{%
8132         Citation '\@citeb' on page \thepage \space undefined%
8133       }%
8134     }{%
8135       {\csname b@\@citeb\extra@b@citeb\endcsname}%
8136     }%
8137   }%
8138 }{#1}%
8139 }$%
8140 }%

```

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.

```

8141 \def\@citex[#1]#2{%
8142   \let\@citea\@empty
8143   \@cite{%
8144     \@for\@citeb:=#2\do{%
8145       \@citea
8146       \def\@citea{,\penalty\@m\ }%
8147       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8148       \if@filesw
8149         \immediate\write\@auxout{\string\citation{\@citeb}}%
8150       \fi
8151       \@ifundefined{b@\@citeb\extra@b@citeb}{%
8152         \mbox{\reset@font\bfseries ?}%
8153         \G@refundefinedtrue
8154         \@latex@warning{%
8155           Citation '\@citeb' on page \thepage \space undefined%
8156         }%
8157       }{%
8158         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
8159       }%
8160     }%
8161   }{#1}%
8162 }%
8163 }{}

```

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 pdf \TeX , then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes

error messages.

```

8164 \@ifpackageloaded{harvard}{%
8165   \Hy@AtBeginDocument{%
8166     \Hy@Info{*** compatibility with harvard **** }%
8167     \Hy@raiselinksfalse
8168     \def\harvardcite#1#2#3#4{%
8169       \global\@namedef{HAR@fn@#1}{\hyper@@link[cite]{}{cite.#1}{#2}}%
8170       \global\@namedef{HAR@an@#1}{\hyper@@link[cite]{}{cite.#1}{#3}}%
8171       \global\@namedef{HAR@yr@#1}{\hyper@@link[cite]{}{cite.#1}{#4}}%
8172       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8173     }%
8174     \def\HAR@citetoaux#1{%
8175       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8176       \ifHy@backref
8177         \ifx\@empty\@currentlabel
8178           \else
8179             \@bsphack
8180             \if@filesw
8181               \protected@write\@auxout{}{%
8182                 \string\@writefile{brf}{%
8183                   \string\backcite{#1}{%
8184                     {\thepage}{\@currentlabel}{\@currentHref}%
8185                   }%
8186                 }%
8187               }%
8188             \fi
8189             \@esphack
8190           \fi
8191         \fi
8192       }%
8193       \def\harvarditem{%
8194         \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8195       }%
8196       \def\@harvarditem[#1]#2#3#4#5\par{%
8197         \item[]%
8198         \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8199         \if@filesw
8200           \begingroup
8201             \def\protect##1{\string ##1\space}%
8202             \ifthenelse{\equal{#1}{\null}}{%
8203               {\def\next{{#4}{#2}{#2}{#3}}}%
8204               {\def\next{{#4}{#2}{#1}{#3}}}%
8205             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8206           \endgroup
8207         \fi
8208         \protect\hspace*{-\labelwidth}%
8209         \protect\hspace*{-\labelsep}%
8210         \ignorespaces
8211         #5%
8212         \ifHy@backref
8213           \newblock
8214           \backref{\csname br@#4\endcsname}%
8215         \fi
8216         \par
8217       }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkci-

tations will fail every time and always will appear the “Changed labels” warning. So we have to redefine `\Har@checkcitations`:

```

8218 \long\def\HAR@checkcitations#1#2#3#4{%
8219 \def\HAR@tempa{\hyper@link[cite]{#1}{#2}}%
8220 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8221 \def\HAR@tempa{\hyper@link[cite]{#1}{#3}}%
8222 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8223 \def\HAR@tempa{\hyper@link[cite]{#1}{#4}}%
8224 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8225 \else
8226 \@tempswatrue
8227 \fi
8228 \else
8229 \@tempswatrue
8230 \fi
8231 \else
8232 \@tempswatrue
8233 \fi
8234 }%
8235 }%
8236 }{}

```

38.2 Package chicago

The links by `\citeN` and `\shortciteN` should include the closing parentheses.

```

8237 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

8238 \def\citeN{%
8239 \def\@citesep{-1000}%
8240 \def\@cite##1##2{##1}%
8241 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8242 \@citedata@opt
8243 }%

```

`\shortciteN`

```

8244 \def\shortciteN{%
8245 \def\@citesep{-1000}%
8246 \def\@cite##1##2{##1}%
8247 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8248 \@citedata@opt
8249 }%

```

`\@citedata@opt`

```

8250 \def\@citedata@opt{%
8251 \let\@cite@opt\@empty
8252 \@ifnextchar [{%
8253 \@tempswatrue
8254 \@citedatax@opt
8255 }{%
8256 \@tempswafalse
8257 \@citedatax[]%
8258 }%
8259 }%

```

\@citedatax@opt

```
8260 \def\@citedatax@opt[#1]{%  
8261 \def\@cite@opt{, #1}%  
8262 \@citedatax[{#1}]%  
8263 }%  
  
8264 }{}
```

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.

```
8265 \ltx@ifclassloaded{slides}{%  
8266 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%  
8267 \def\Hy@PageAnchorSlidesPlain{%  
8268 \advance\c@page\ltx@one  
8269 \edef\Hy@TempPageAnchor{%  
8270 \noexpand\hyper@@anchor{%  
8271 page.\the\c@slide.\the\c@overlay.\the\c@note%  
8272 \ifnum\c@page=\ltx@one  
8273 \else  
8274 .\the\c@page  
8275 \fi  
8276 }%  
8277 }%  
8278 \advance\c@page-\ltx@one  
8279 }%  
8280 \def\Hy@PageAnchorSlide{%  
8281 \advance\c@page\ltx@one  
8282 \ifnum\c@page>\ltx@one  
8283 \ltx@ifundefined{theHpage}{%  
8284 \protected@edef\Hy@TheSlideOptionalPage{%  
8285 \Hy@SlidesFormatOptionalPage{thepage}%  
8286 }%  
8287 }{%  
8288 \protected@edef\Hy@TheSlideOptionalPage{%  
8289 \Hy@SlidesFormatOptionalPage{theHpage}%  
8290 }%  
8291 }%  
8292 \else  
8293 \def\Hy@TheSlideOptionalPage{}%  
8294 \fi  
8295 \advance\c@page-\ltx@one  
8296 \pdfstringdef\@the@H@page{%  
8297 \csname  
8298 the%  
8299 \ltx@ifundefined{theH\Hy@SlidesPage}{H}%  
8300 \Hy@SlidesPage  
8301 \endcsname  
8302 \Hy@TheSlideOptionalPage  
8303 }%  
8304 \ltx@gobblethree
```

```

8305 }%
8306 \def\Hy@SlidesPage{slide}%
8307 \g@addto@macro\slide{%
8308   \def\Hy@SlidesPage{slide}%
8309 }%
8310 \g@addto@macro\overlay{%
8311   \def\Hy@SlidesPage{overlay}%
8312 }%
8313 \g@addto@macro\note{%
8314   \def\Hy@SlidesPage{note}%
8315 }%
8316 }{%
8317   \def\Hy@PageAnchorSlidesPlain{}}%
8318   \def\Hy@PageAnchorSlide{}}%
8319 }
8320 \def\Hy@EveryPageAnchor{%
8321   \Hy@DistillerDestFix
8322   \ifHy@pageanchor
8323     \ifHy@hypertextnames
8324       \ifHy@plainpages
8325         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8326         \Hy@PageAnchorSlidesPlain
8327       \else
8328         \begingroup
8329           \let\@number\@firstofone
8330           \Hy@unicodedefalse
8331           \Hy@PageAnchorSlide
8332           \pdfstringdef\@the@H@page{\thepage}%
8333         \endgroup
8334         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8335         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8336       \fi
8337     \else
8338       \Hy@GlobalStepCount\Hy@pagecounter
8339       \def\Hy@TempPageAnchor{%
8340         \hyper@@anchor{page.\the\Hy@pagecounter}%
8341       }%
8342     \fi
8343   \vbox to 0pt{%
8344     \kern\voffset
8345     \kern\topmargin
8346     \kern-1bp\relax
8347     \hbox to 0pt{%
8348       \kern\hoffset
8349       \kern@ifodd\value{page}%
8350         \oddsidemargin
8351       \else
8352         \evensidemargin
8353       \fi
8354       \kern-1bp\relax
8355       \Hy@TempPageAnchor\relax
8356     \hss
8357   }%
8358   \vss
8359 }%
8360 \fi
8361 }

```

```

8362 \g@addto@macro\Hy@EveryPageBoxHook{%
8363   \Hy@EveryPageAnchor
8364 }

```

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.

```

8365 \def\addcontentsline#1#2#3{% toc extension, type, tag
8366   \begingroup
8367   \let\label\@gobble
8368   \ifx\@currentHref\@empty
8369     \Hy@Warning{%
8370       No destination for bookmark of \string\addcontentsline,%
8371       \MessageBreak destination is added%
8372     }%
8373     \phantomsection
8374   \fi
8375   \expandafter\ifx\csname toclevel@#2\endcsname\relax
8376     \begingroup
8377     \def\Hy@tempa{#1}%
8378     \ifx\Hy@tempa\Hy@bookmarkstype
8379       \Hy@WarningNoLine{%
8380         bookmark level for unknown #2 defaults to 0%
8381       }%
8382     \else
8383       \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8384     \fi
8385   \endgroup
8386   \expandafter\gdef\csname toclevel@#2\endcsname{0}%
8387   \fi
8388   \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
8389   \Hy@writebookmark{\csname the#2\endcsname}%
8390     {#3}%
8391     {\@currentHref}%
8392     {\Hy@toclevel}%
8393     {#1}%
8394   \ifHy@verbose
8395     \begingroup
8396     \def\Hy@tempa{#3}%
8397     \@onelevel@sanitize\Hy@tempa
8398     \let\temp@online\on@line
8399     \let\on@line\@empty
8400     \Hy@Info{%
8401       bookmark\temp@online:\MessageBreak
8402       thecounter {\csname the#2\endcsname}\MessageBreak
8403       text {\Hy@tempa}\MessageBreak
8404       reference {\@currentHref}\MessageBreak
8405       toclevel {\Hy@toclevel}\MessageBreak
8406       type {#1}%
8407     }%
8408   \endgroup
8409   \fi
8410   \addtocontents{#1}{%
8411     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%

```

```

8412 }%
8413 \endgroup
8414 }

```

\contentsline The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

```

8415 \def\contentsline#1#2#3#4{%
8416   \begingroup
8417   \Hy@safe@activetrue
8418   \edef\x{\endgroup
8419     \def\noexpand\Hy@tocdestname{#4}%
8420   }\x
8421   \ifx\Hy@tocdestname\ltx@empty
8422     \csname l@#1\endcsname{#2}{#3}%
8423   \else
8424     \ifcase\Hy@linktoc % none
8425       \csname l@#1\endcsname{#2}{#3}%
8426     \or % section
8427       \csname l@#1\endcsname{%
8428         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8429       }{#3}%
8430     \or % page
8431       \def\Hy@temp{#3}%
8432       \ifx\Hy@temp\ltx@empty
8433         \csname l@#1\endcsname{#2}{#3}%
8434       \else
8435         \csname l@#1\endcsname{{#2}}{%
8436           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8437         }%
8438       \fi
8439     \else % all
8440       \def\Hy@temp{#3}%
8441       \ifx\Hy@temp\ltx@empty
8442         \csname l@#1\endcsname{%
8443           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8444         }{}%
8445       \else
8446         \csname l@#1\endcsname{%
8447           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8448         }{%
8449           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8450         }%
8451       \fi
8452     \fi
8453   \fi
8454 }

8455 \</package>
8456 \<*check>
8457 \checklatex
8458 \checkcommand\def\addcontentsline#1#2#3{%
8459   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8460 }
8461 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8462 \</check>
8463 \<*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.

```
8464 \let\H@definecounter\@definecounter
8465 \def\@definecounter#1{%
8466   \H@definecounter{#1}%
8467   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8468 }
```

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.

```
8469 \let\H@newctr\@newctr
8470 \def\@newctr#1[#2]{%
8471   \H@newctr#1[{#2}]%
8472   \expandafter\gdef\csname theH#1\endcsname{%
8473     \csname the\@ifundefined{theH#2}{-}{H}#2\endcsname.\arabic{#1}%
8474   }%
8475 }
```

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.

```
8476 \@ifpackageloaded{amsmath}{%
8477   \def\Hy@make@anchor{%
8478     \Hy@MakeCurrentHrefAuto{AMS}%
8479     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8480   }%
8481   \def\Hy@make@df@tag@@#1{%
8482     \gdef\df@tag{%
8483       \maketag@@@{\Hy@make@anchor#1}%
8484       \def\@currentlabel{#1}%
8485     }%
8486   }%
8487   \def\Hy@make@df@tag@@@#1{%
8488     \gdef\df@tag{%
8489       \tagform@{\Hy@make@anchor#1}%
8490       \toks@{\xp{p@equation{#1}}}%
8491       \edef\@currentlabel{\the\toks@}%
8492     }%
8493   }%
8494   \let\HyOrg@make@df@tag@@\make@df@tag@@
8495   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8496   \let\make@df@tag@@\Hy@make@df@tag@@
8497   \let\make@df@tag@@@\Hy@make@df@tag@@@
8498 }
```

Only play with `\seteqlebal` if we are using pdf \TeX . Other drivers cause problems; requested by Michael Downes (AMS).

```
8499 \@ifpackagewith{hyperref}{pdf $\TeX$ }{%
8500   \let\H@seteqlabel\@seteqlabel
```



```

8501 \def\@seteqlabel#1{%
8502   \H@seteqlabel{#1}%
8503   \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8504   \Hy@raisedlink{%
8505     \hyper@anchorstart{\@currentHref}\hyper@anchorend
8506   }%
8507 }%
8508 }{}

```

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.

```

8509 \let\HyOrg@addtoreset\@addtoreset
8510 \def\@addtoreset#1#2{%
8511   \HyOrg@addtoreset{#1}{#2}%
8512   \expandafter\xdef\csname theH#1\endcsname{%
8513     \expandafter\noexpand
8514       \csname the\@ifundefined{theH#2}{}H#2\endcsname
8515     .\noexpand\the\noexpand\value{#1}%
8516   }%
8517 }

```

\numberwithin A appropriate definition of hyperref's companion counter (\theH...) is added for correct link names.

```

8518 \</package>
8519 \<{*check>
8520 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8521 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8522   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8523     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8524       \@addtoreset{#2}{#3}%
8525       \@xp\xdef\csname the#2\endcsname{%
8526         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8527       }%
8528     }%
8529   }%
8530 }%
8531 \</check>
8532 \<{*package>
8533 \@ifpackageloaded{amsmath}{%
8534   \@ifpackagelater{amsmath}{1999/12/14}{%
8535     \renewcommand*\numberwithin[3][\arabic]{%
8536       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8537         \@ifundefined{c@#3}{\@nocnterr{#3}}{%

```

```

8538      \HyOrg@addtoreset{#2}{#3}%
8539      \@xp\xdef\csname the#2\endcsname{%
8540        \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8541      }%
8542      \@xp\xdef\csname theH#2\endcsname{%
8543        \@xp\@nx
8544        \csname the\@ifundefined{theH#3}{H#3\endcsname
8545        .\@nx#1{#2}%
8546      }%
8547    }%
8548  }%
8549 }%
8550 }{%
8551   \Hy@WarningNoLine{%
8552     \string\numberwithin\space of package ‘amsmath’ %
8553     only fixed\MessageBreak
8554     for version 2000/06/06 v2.12 or newer%
8555   }%
8556 }%
8557 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8558 \ifHy@hyperfigures
8559   \let\Hy@Gin@setfile\Gin@setfile
8560   \def\Gin@setfile#1#2#3{%
8561     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8562   }%
8563 \fi
8564 \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.

```

8565 \ifHy@hyperindex
8566   \def\HyInd@ParenLeft{({}%
8567   \def\HyInd@ParenRight{)}}%
8568   \def\hyperindexformat#1#2{%
8569     \let\HyOrg@hyperpage\hyperpage
8570     \let\hyperpage\@firstofone
8571     #1{\HyOrg@hyperpage{#2}}%
8572     \let\hyperpage\HyOrg@hyperpage
8573   }%
8574   \Hy@nextfalse
8575   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%

```

```

8576 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8577 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8578 \begingroup
8579 \lccode'\l=\expandafter'\HyInd@EncapChar\relax
8580 \lccode'\l/'=\l\relax
8581 \lowercase{\endgroup
8582 \ifHy@next
8583 \let\HyInd@org@wrindex\@wrindex
8584 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
8585 \def\HyInd@@wrindex#1#2|#3|#4\{\%
8586 \ifx\|#3\}%
8587 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8588 \else
8589 \HyInd@@@wrindex{#1}{#2}#3\}%
8590 \fi
8591 }%
8592 \def\HyInd@@@wrindex#1#2#3#4\{\%
8593 \def\Hy@temp@A{#3}%
8594 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8595 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8596 \relax
8597 \HyInd@org@wrindex{#1}{%
8598 #2|hyperindexformat{/#3#4}%
8599 }%
8600 \else
8601 \ifx\|#4\}%
8602 \ifx\Hy@temp@A\HyInd@ParenRight
8603 \HyInd@org@wrindex{#1}{#2|#3}%
8604 \else
8605 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8606 \fi
8607 \else
8608 \HyInd@org@wrindex{#1}{%
8609 #2|#3hyperindexformat{/#4}%
8610 }%
8611 \fi
8612 \fi
8613 }%
8614 \else
8615 \def\@wrindex#1{\@wrindex#1||\}%
8616 \def\@wrindex#1|#2|#3\{\%
8617 \if@filesw
8618 \ifx\|#2\}%
8619 \protected@write\@indexfile{\%
8620 \string\indexentry{#1|hyperpage}{\thepage}%
8621 }%
8622 \else
8623 \HyInd@@@wrindex{#1}#2\}%
8624 \fi
8625 \fi
8626 \endgroup
8627 \@esphack
8628 }%
8629 \def\HyInd@@@wrindex#1#2#3\{\%
8630 \def\Hy@temp@A{#2}%
8631 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8632 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi

```

```

8633         \relax
8634         \protected@write\@indexfile{}\{%
8635         \string\indexentry{%
8636         #1|hyperindexformat{/#2#3}%
8637         }\the page}%
8638     }%
8639 \else
8640     \ifx\#3\%
8641         \ifx\Hy@temp@A\HyInd@ParenRight
8642             \protected@write\@indexfile{}\{%
8643             \string\indexentry{#1|#2}\the page}%
8644         }%
8645     \else
8646         \protected@write\@indexfile{}\{%
8647         \string\indexentry{#1|#2hyperpage}\the page}%
8648     }%
8649 \fi
8650 \else
8651     \protected@write\@indexfile{}\{%
8652     \string\indexentry{%
8653     #1|#2hyperindexformat{/#3}%
8654     }\the page}%
8655 }%
8656 \fi
8657 \fi
8658 }%
8659 \fi
8660 }%
8661 \fi
8662 \Hy@DisableOption{hyperindex}
8663 \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.

```
8664 \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.

```

8665 \def\hyperpage#1{%
8666     \HyInd@hyperpage#1\nohyperpage{}\@nil
8667 }
8668 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8669     \HyInd@@hyperpage{#1}%
8670     #2%
8671     \def\Hy@temp{#3}%
8672     \ifx\Hy@temp\@empty
8673     \else
8674         \ltx@ReturnAfterFi{%
8675         \HyInd@hyperpage#3\@nil
8676         }%
8677     \fi
8678 }
8679 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8680 \def\@hyperpage#1--#2--#3\{%
8681     \ifx\#2\%
8682         \@commahyperpage{#1}%
8683     \else

```

```

8684 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8685 \fi
8686 }
8687 \def\@commahyperpage#1{\@commahyperpage#1, \\\}
8688 \def\@commahyperpage#1, #2,#3\\\{%
8689 \ifx\\#2\\%
8690 \HyInd@pagelink{#1}%
8691 \else
8692 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8693 \fi
8694 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

8695 \def\HyInd@pagelink#1{%
8696 \begingroup
8697 \toks@={}%
8698 \HyInd@removespaces#1 \@nil
8699 \endgroup
8700 }
8701 \def\HyInd@removespaces#1 #2\@nil{%
8702 \toks@=\expandafter{\the\toks@#1}%
8703 \ifx\\#2\\%
8704 \edef\x{\the\toks@}%
8705 \ifx\x\@empty
8706 \else
8707 \hyperlink{page.\the\toks@}{\the\toks@}%
8708 \fi
8709 \else
8710 \ltx@ReturnAfterFi{%
8711 \HyInd@removespaces#2\@nil
8712 }%
8713 \fi
8714 }

```

45 Compatibility with foiltex

```

8715 \@ifclassloaded{foils}{%
8716 \providecommand*\ext@table{lot}%
8717 \providecommand*\ext@figure{lof}%
8718 }{}

```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

8719 \@ifclassloaded{seminar}{%
8720 \Hy@seminarslides true
8721 \providecommand\theHslide{\arabic{slide}}%
8722 }{%
8723 \Hy@seminarslides false
8724 }
8725 \@ifpackageloaded{slidesec}{%
8726 \providecommand\theHslide section {\arabic{slide section}}%
8727 \providecommand\theHslidesubsection{%
8728 \theHslide section.\arabic{slide subsection}}%

```

```

8729 }%
8730 \def\slide@heading[#1]#2{%
8731   \H@refstepcounter{slidesection}%
8732   \@addtoreset{slidesubsection}{slidesection}%
8733   \addtocontents{los}{%
8734     \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8735     {\@SCTR}{slideheading.\theslidesection}%
8736   }%
8737   \def\Hy@tempa{#2}%
8738   \ifx\Hy@tempa\@empty
8739   \else
8740     {%
8741       \edef\@currentlabel{%
8742         \csname p@slidesection\endcsname\theslidesection
8743       }%
8744       \makeslideheading{#2}%
8745     }%
8746   \fi
8747   \gdef\theslideheading{#1}%
8748   \gdef\theslidesubheading{}%
8749   \ifHy@bookmarksnumbered
8750     \def\Hy@slidetitle{\theslidesection\space #1}%
8751   \else
8752     \def\Hy@slidetitle{#1}%
8753   \fi
8754   \ifHy@hypertextnames
8755     \ifHy@naturalnames
8756       \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8757       \Hy@writebookmark
8758         {\theslidesection}%
8759         {\Hy@slidetitle}%
8760         {slideheading.\theslidesection}%
8761         {1}%
8762         {toc}%
8763     \else
8764       \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8765       \Hy@writebookmark
8766         {\theslidesection}%
8767         {\Hy@slidetitle}%
8768         {slideheading.\theHslidesection}%
8769         {1}%
8770         {toc}%
8771     \fi
8772   \else
8773     \Hy@GlobalStepCount\Hy@linkcounter
8774     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8775     \Hy@writebookmark
8776       {\theslidesection}%
8777       {\Hy@slidetitle}%
8778       {slideheading.\the\Hy@linkcounter}%
8779       {1}%
8780       {toc}%
8781   \fi
8782 }%
8783 \def\slide@subheading[#1]#2{%
8784   \H@refstepcounter{slidesubsection}%
8785   \addtocontents{los}{%

```

```

8786 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8787 {\@SCTR}{slideheading.\theslidesubsection}%
8788 }%
8789 \def\Hy@tempa{#2}%
8790 \ifx\Hy@tempa\@empty
8791 \else
8792 {%
8793 \edef\@currentlabel{%
8794 \csname p@slidesubsection\endcsname\theslidesubsection
8795 }%
8796 \makeslidesubheading{#2}%
8797 }%
8798 \fi
8799 \gdef\theslidesubheading{#1}%
8800 \ifHy@bookmarksnumbered
8801 \def\Hy@slidetitle{\theslidesubsection\space #1}%
8802 \else
8803 \def\Hy@slidetitle{#1}%
8804 \fi
8805 \ifHy@hypertexnames
8806 \ifHy@naturalnames
8807 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8808 \Hy@writebookmark
8809 {\theslidesubsection}%
8810 {\Hy@slidetitle}%
8811 {slideheading.\theslidesubsection}%
8812 {2}%
8813 {toc}%
8814 \else
8815 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8816 \Hy@writebookmark
8817 {\theslidesubsection}%
8818 {\Hy@slidetitle}%
8819 {slideheading.\theHslidesubsection}%
8820 {2}%
8821 {toc}%
8822 \fi
8823 \else
8824 \Hy@GlobalStepCount\Hy@linkcounter
8825 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8826 \Hy@writebookmark
8827 {\theslidesubsection}%
8828 {\Hy@slidetitle}%
8829 {slideheading.\the\Hy@linkcounter}%
8830 {1}%
8831 {toc}%
8832 \fi
8833 }%
8834 \providecommand*\listslidenamelist{List of Slides}%
8835 \def\listofslides{%
8836 \section*{%
8837 \listslidenamelist
8838 \@mkboth{%
8839 \expandafter\MakeUppercase\listslidenamelist
8840 }{%
8841 \expandafter\MakeUppercase\listslidenamelist
8842 }%

```

```

8843 }%
8844 \def\l@slide###1##2##3##4{%
8845   \slide@undottedcline{%
8846     \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8847   }%
8848 }%
8849 \let\l@subslide\l@slide
8850 \@startlos
8851 }%
8852 \def\slide@contents{%
8853   \def\l@slide###1##2##3##4{%
8854     \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8855   }%
8856   \let\l@subslide\@gobblefour
8857   \@startlos
8858 }%
8859 \def\Slide@contents{%
8860   \def\l@slide###1##2##3##4{%
8861     \ifcase\lslide@flag
8862       \message{##1 ** \the\c@slidesection}%
8863       \ifnum##1>\c@slidesection
8864         \def\lslide@flag{1}%
8865         {%
8866           \large
8867           \slide@ccline{%
8868             \slidenumberline{$\Rightarrow\bullet$}%
8869             {\hyperlink{##4}{##2}}%
8870           }{##3}%
8871         }%
8872       \else
8873       {%
8874         \large
8875         \slide@ccline{%
8876           \slidenumberline{$\surd\;\bullet$}%
8877           {\hyperlink{##4}{##2}}%
8878         }{##3}%
8879       }%
8880     \fi
8881   \or
8882   \def\lslide@flag{2}%
8883   {%
8884     \large
8885     \slide@ccline{%
8886       \slidenumberline{$\bullet$}%
8887       {\hyperlink{##4}{##2}}%
8888     }{##3}%
8889   }%
8890   \or
8891   {%
8892     \large
8893     \slide@ccline{%
8894       \slidenumberline{$\bullet$}%
8895       {\hyperlink{##4}{##2}}%
8896     }{##3}%
8897   }%
8898   \fi
8899 }%

```



```

8900 \def\l@subslide##1##2##3##4{%
8901 \ifnum\lslide@flag=1 %
8902 \@undottedtoctline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
8903 \fi
8904 }%
8905 \def\lslide@flag{0}%
8906 \@startlos
8907 }%
8908 }{}

```

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.)

```

8909 \ifHy@texht
8910 \expandafter\endinput
8911 \fi
8912 \let\real@setref\@setref
8913 \def\@setref#1#2#3{% csname, extract group, refname
8914 \ifx#1\relax
8915 \protect\G@refundefinedtrue
8916 \nfss@text{\reset@font\bfseries ??}%
8917 \@latex@warning{%
8918 Reference ‘#3’ on page \thepage \space undefined%
8919 }%
8920 \else
8921 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8922 \fi
8923 }

```

`\Hy@setref@link` extracts the reference information entries, because `\hyper@@link` does not expand arguments for the automatic link type detection.

```

8924 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8925 \begingroup
8926 \toks0={\hyper@@link{#5}{#4}}%
8927 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8928 \edef\x{\endgroup
8929 \the\toks0 {\the\toks1 }%
8930 }%
8931 \x
8932 }
8933 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8934 \ifx#1\relax
8935 \protect\G@refundefinedtrue
8936 \nfss@text{\reset@font\bfseries ??}%
8937 \@latex@warning{%
8938 Reference ‘#3’ on page \thepage \space undefined%
8939 }%
8940 \else
8941 \protect\hyper@@link
8942 {\expandafter\@fifthoffive#1}%
8943 {page.\expandafter\@secondoffive#1}%
8944 {\expandafter\@secondoffive#1}%
8945 \fi
8946 }
8947 \</package>
8948 \< *check>
8949 \checklatex
8950 \checkcommand\def\@setref#1#2#3{%

```

```

8951 \ifx#1\relax
8952   \protect\G@refundefinedtrue
8953   \nfss@text{\reset@font\bfseries ??}%
8954   \@latex@warning{%
8955     Reference ‘#3’ on page \thepage\space undefined%
8956   }%
8957 \else
8958   \expandafter#2#1\null
8959 \fi
8960 }
8961 </check>
8962 <*package>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

8963 \def\HyRef@StarSetRef#1{%
8964   \begingroup
8965   \Hy@safe@activestrue
8966   \edef\x{#1}%
8967   \@onelevel@sanitize\x
8968   \edef\x{\endgroup
8969     \noexpand\HyRef@@StarSetRef
8970     \expandafter\noexpand\csname r@\x\endcsname{\x}%
8971   }%
8972   \x
8973 }
8974 \def\HyRef@@StarSetRef#1#2#3{%
8975   \ifx#1\@undefined
8976     \let#1\relax
8977   \fi
8978   \real@setref#1#3{#2}%
8979 }
8980 \def\@refstar#1{%
8981   \HyRef@StarSetRef{#1}\@firstoffive
8982 }
8983 \def\@pagerefstar#1{%
8984   \HyRef@StarSetRef{#1}\@secondoffive
8985 }
8986 \def\@namerefstar#1{%
8987   \HyRef@StarSetRef{#1}\@thirdoffive
8988 }
8989 \Hy@AtBeginDocument{%
8990   \@ifpackageloaded{varioref}{%
8991     \def\@Refstar#1{%
8992       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8993     }%
8994     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8995       \MakeUppercase#1%
8996     }%
8997     \DeclareRobustCommand*\Ref}{%
8998       \@ifstar\@Refstar\HyRef@Ref
8999     }%
9000     \def\HyRef@Ref#1{%
9001       \hyperref[#{1}]{\Ref*{#1}}%
9002     }%
9003     \def\Vr@f#1{%
9004       \leavevmode\unskip\vref@space
9005       \hyperref[#{1}]{%

```

```

9006 \Ref*{#1}%
9007 \let\vref@space\nobreakspace
9008 \@vpageref[\unskip]{#1}%
9009 }%
9010 }%
9011 \def\vr@f#1{%
9012 \leavevmode\unskip\vref@space
9013 \begingroup
9014 \let\T@pageref\@pagerefstar
9015 \hyperref[{#1}]{%
9016 \ref*{#1}%
9017 \vpageref[\unskip]{#1}%
9018 }%
9019 \endgroup
9020 }%
9021 }{}%
9022 }
9023 \DeclareRobustCommand*\autopageref{%
9024 \ifstar{%
9025 \HyRef@autopagerefname\pageref*%
9026 }\HyRef@autopageref
9027 }
9028 \def\HyRef@autopageref#1{%
9029 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9030 }
9031 \def\HyRef@autopagerefname{%
9032 \ltx@ifundefined{pageautorefname}{%
9033 \ltx@ifundefined{pagename}{%
9034 \Hy@Warning{No autoref name for 'page'}%
9035 }{%
9036 \pagename\nobreakspace
9037 }%
9038 }{%
9039 \pageautorefname\nobreakspace
9040 }%
9041 }

```

\leavevmode is added to make package wrapfigure happy, if \autoref starts a paragraph.

```

9042 \DeclareRobustCommand*\autoref{%
9043 \leavevmode
9044 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9045 }
9046 \def\HyRef@autoref#1#2{%
9047 \begingroup
9048 \Hy@safe@activetrue
9049 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9050 \endgroup
9051 }
9052 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9053 \HyRef@ShowKeysRef{#2}%
9054 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9055 \edef\HyRef@thisref{%
9056 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9057 }%
9058 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9059 \Hy@safe@activetrue
9060 #3}%

```

```

9061 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9062 }{%
9063 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9064 }{%
9065 \HyRef@currentHtag
9066 \expandafter\@firstoffive#1\@empty\@empty\@empty
9067 \null
9068 }%
9069 \else
9070 \protect\G@refundefinedtrue
9071 \nfss@text{\reset@font\bfseries ??}%
9072 \@latex@warning{%
9073 Reference '#2' on page \thepage\space undefined%
9074 }%
9075 \fi
9076 }
9077 \def\HyRef@testreftype#1.#2\{\%
9078 \ltx@ifundefined{#1autorefname}{%
9079 \ltx@ifundefined{#1name}{%
9080 \HyRef@StripStar#1\*\@nil{#1}%
9081 \ltx@ifundefined{\HyRef@name autorefname}{%
9082 \ltx@ifundefined{\HyRef@name name}{%
9083 \def\HyRef@currentHtag{%
9084 \Hy@Warning{No autoref name for '#1'}%
9085 }{%
9086 \edef\HyRef@currentHtag{%
9087 \expandafter\noexpand\csname\HyRef@name name\endcsname
9088 \noexpand~%
9089 }%
9090 }%
9091 }{%
9092 \edef\HyRef@currentHtag{%
9093 \expandafter\noexpand
9094 \csname\HyRef@name autorefname\endcsname
9095 \noexpand~%
9096 }%
9097 }%
9098 }{%
9099 \edef\HyRef@currentHtag{%
9100 \expandafter\noexpand\csname#1name\endcsname
9101 \noexpand~%
9102 }%
9103 }%
9104 }{%
9105 \edef\HyRef@currentHtag{%
9106 \expandafter\noexpand\csname#1autorefname\endcsname
9107 \noexpand~%
9108 }%
9109 }%
9110 }
9111 \def\HyRef@StripStar#1*\@nil#3{%
9112 \def\HyRef@name{#2}%
9113 \ifx\HyRef@name\HyRef@CaseStar
9114 \def\HyRef@name{#1}%
9115 \else
9116 \def\HyRef@name{#3}%
9117 \fi

```

```

9118 }
9119 \def\HyRef@CaseStar{*\\}
9120 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@showkeysRef

```

9121 \let\HyRef@showkeysRef\@gobble
9122 \def\HyRef@showkeysInit{%
9123   \begingroup\expandafter\expandafter\expandafter\endgroup
9124   \expandafter\ifx\csname SK@@label\endcsname\relax
9125   \else
9126     \ifx\SK@ref\@empty
9127     \else
9128       \def\HyRef@showkeysRef{%
9129         \SK@\SK@@ref
9130       }%
9131     \fi
9132   \fi
9133 }
9134 \@ifpackageloaded{showkeys}{%
9135   \HyRef@showkeysInit
9136 }{%
9137   \Hy@AtBeginDocument{%
9138     \@ifpackageloaded{showkeys}{%
9139       \HyRef@showkeysInit
9140     }{}%
9141   }%
9142 }

```

Defaults for the names that \autoref uses.

```

9143 \providecommand*\AMSautorefname{\equationautorefname}
9144 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9145 \providecommand*\Itemautorefname{\itemautorefname}
9146 \providecommand*\itemautorefname{item}
9147 \providecommand*\equationautorefname{Equation}
9148 \providecommand*\footnoteautorefname{footnote}
9149 \providecommand*\itemautorefname{item}
9150 \providecommand*\figureautorefname{Figure}
9151 \providecommand*\tableautorefname{Table}
9152 \providecommand*\partautorefname{Part}
9153 \providecommand*\appendixautorefname{Appendix}
9154 \providecommand*\chapterautorefname{chapter}
9155 \providecommand*\sectionautorefname{section}
9156 \providecommand*\subsectionautorefname{subsection}
9157 \providecommand*\subsubsectionautorefname{subsubsection}
9158 \providecommand*\paragraphautorefname{paragraph}
9159 \providecommand*\subparagraphautorefname{subparagraph}
9160 \providecommand*\FancyVerbLineautorefname{line}
9161 \providecommand*\theoremautorefname{Theorem}
9162 \providecommand*\pageautorefname{page}
9163 \end{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 pdf_T_EX offers `\pdfescapestring`.

```
9164 <*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9165 \begingroup\expandafter\expandafter\expandafter\endgroup
9166 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9167 \begingroup
9168 \catcode'\=0 %
9169 \@makeother\%
9170 |@firstofone{|endgroup
9171 |def|Hy@pstringdef#1#2{%
9172 |begingroup
9173 |edef~{|string~}%
9174 |xdef|Hy@gtemp{#2}%
9175 |endgroup
9176 |let#1|Hy@gtemp
9177 |@onelevel@sanitize#1%
9178 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9179 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9180 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9181 }%
9182 |def|Hy@ExchangeBackslash#1|#2|@nil{%
9183 #1%
9184 |ifx|\#2|\%
9185 |else
9186 \\\%
9187 |ltx@ReturnAfterFi{%
9188 |Hy@ExchangeBackslash#2|@nil
9189 }%
9190 |fi
9191 }%
9192 }%
9193 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9194 #1%
9195 \ifx\#2\%
9196 \else
9197 \@backslashchar(%
9198 \ltx@ReturnAfterFi{%
9199 \Hy@ExchangeLeftParenthesis#2\@nil
9200 }%
9201 \fi
9202 }%
9203 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9204 #1%
9205 \ifx\#2\%
9206 \else
9207 \@backslashchar)%
9208 \ltx@ReturnAfterFi{%
9209 \Hy@ExchangeRightParenthesis#2\@nil
```

```

9210 }%
9211 \fi
9212 }%
9213 \else
9214 \def\Hy@pstringdef#1#2{%
9215 \begingroup
9216 \edef~{\string~}%
9217 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9218 \endgroup
9219 \let#1\Hy@gtemp
9220 }%
9221 \fi
9222 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9223 <*pdfTeX>
9224 \providecommand*\XR@ext}{pdf}
9225 \Hy@setbreaklinks{true}
9226 \def\HyPat@ObjRef{%
9227 [0-9]*[1-9][0-9]* 0 R%
9228 }

```

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

```

9229 \let\Hy@pdfminorversion\relax
9230 \begingroup\expandafter\expandafter\expandafter\endgroup
9231 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9232 \begingroup\expandafter\expandafter\expandafter\endgroup
9233 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9234 \else
9235 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9236 \fi
9237 \else
9238 \def\Hy@pdfminorversion{\pdfminorversion}%
9239 \fi
9240 \@ifundefined{Hy@pdfminorversion}{%
9241 \PackageInfo{hyperref}{%
9242 PDF version is not set, because pdfTeX is too old (<1.10a)%
9243 }%
9244 }{%
9245 \ifHy@ocgcolorlinks
9246 \ifnum\Hy@pdfminorversion<5 %
9247 \kvsetkeys{Hyp}{pdfversion=1.5}%
9248 \fi
9249 \fi
9250 \ifHy@setpdfversion
9251 \ifnum\Hy@pdfversion<5 %
9252 \ltx@ifundefined{pdfobjcompresslevel}{%
9253 }{%
9254 \ifHy@verbose
9255 \Hy@InfoNoLine{%

```

```

9256         PDF object streams are disabled, because they are%
9257         \MessageBreak
9258         not supported in requested PDF version %
9259         1.\Hy@pdfversion
9260     }%
9261 \fi
9262 \pdfobjcompresslevel=\ltx@zero
9263 }%
9264 \fi
9265 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9266 \else
9267     \let\Hy@temp\ltx@empty
9268     \def\Hy@temp@A#1#2{%
9269         \ifnum#1>\ltx@zero
9270             \edef\Hy@temp{%
9271                 \Hy@temp
9272                 \space\space
9273                 \the#1\space #2%
9274                 \ifnum#1=\ltx@one\else s\fi
9275                 \MessageBreak
9276             }%
9277         \fi
9278     }%
9279     \Hy@temp@A\pdflastobj{PDF object}%
9280     \Hy@temp@A\pdflastxform{form XObject}%
9281     \Hy@temp@A\pdflastximage{image XObject}%
9282     \Hy@temp@A\pdflastannot{annotation}%
9283     \ltx@ifundefined{pdflastlink}{%
9284     }{%
9285         \Hy@temp@A\pdflastlink{link}%
9286     }%
9287     \ifx\Hy@temp\ltx@empty
9288         \Hy@pdfminorversion=\Hy@pdfversion\relax
9289     \else
9290         \let\Hy@temp@A\ltx@empty
9291         \ifnum\Hy@pdfversion=4 %
9292             \IfFileExists{pdf14.sty}{%
9293                 \def\Hy@temp@A{%
9294                     \MessageBreak
9295                     Or \string\RequirePackage{pdf14} can be used%
9296                     \MessageBreak
9297                     before \string\documentclass\space as shortcut%
9298                 }%
9299             }{}%
9300         \fi
9301         \Hy@WarningNoLine{%
9302             The PDF version number could not be set,\MessageBreak
9303             because some PDF objects are already written:%
9304             \MessageBreak
9305             \Hy@temp
9306             The version should be set as early as possible:%
9307             \MessageBreak
9308             \space\space
9309             \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9310             \string\relax
9311             \ifnum\Hy@pdfversion<5 %
9312                 \ltx@ifundefined{pdfobjcompresslevel}{%

```



```

9313     }{%
9314     \MessageBreak
9315     \space\space
9316     \string\pdfobjcompresslevel=0\string\relax
9317     }%
9318     \fi
9319     \Hy@temp@A
9320     }%
9321     \fi
9322     \fi
9323     \PackageInfo{hyperref}{%
9324     \expandafter\string\Hy@pdfminorversion
9325     :=\number\Hy@pdfversion\space
9326     }%
9327     \fi
9328     \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9329 }
9330 \Hy@DisableOption{pdfversion}%

9331 \ifHy@ocgcolorlinks
9332 \pdf@ifdraftmode{}{%
9333 \immediate\pdfobj{%
9334 <<%
9335 /Type/OCG%
9336 /Name(View)%
9337 /Usage<<%
9338 /Print<<%
9339 /PrintState/OFF%
9340 >>%
9341 /View<<%
9342 /ViewState/ON%
9343 >>%
9344 >>%
9345 >>%
9346 }%
9347 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
9348 \immediate\pdfobj{%
9349 <<%
9350 /Type/OCG%
9351 /Name(Print)%
9352 /Usage<<%
9353 /Print<<%
9354 /PrintState/ON%
9355 >>%
9356 /View<<%
9357 /ViewState/OFF%
9358 >>%
9359 >>%
9360 >>%
9361 }%
9362 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
9363 \immediate\pdfobj{%
9364 [%
9365 \OBJ@OCG@view\space\OBJ@OCG@print
9366 ]%
9367 }%
9368 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
9369 \pdfcatalog{%

```

```

9370 /OCProperties<<%
9371 /OCGs \OBJ@OCGs
9372 /D<<%
9373 /OFF[\OBJ@OCG@print]%
9374 /AS[%
9375 <<%
9376 /Event/View%
9377 /OCGs \OBJ@OCGs
9378 /Category[/View]%
9379 >>%
9380 <<%
9381 /Event/Print%
9382 /OCGs \OBJ@OCGs
9383 /Category[/Print]%
9384 >>%
9385 <<%
9386 /Event/Export%
9387 /OCGs \OBJ@OCGs
9388 /Category[/Print]%
9389 >>%
9390 ]%
9391 >>%
9392 >>%
9393 }%
9394 \begingroup
9395 \edef\x{\endgroup
9396 \pdfpageresources{%
9397 \the\pdfpageresources
9398 /Properties<<%
9399 /OCView \OBJ@OCG@view
9400 /OCPrint \OBJ@OCG@print
9401 >>%
9402 }%
9403 }%
9404 \x
9405 }%
9406 \Hy@AtBeginDocument{%
9407 \def\Hy@colorlink#1{%
9408 \begingroup
9409 \ifHy@ocgcolorlinks
9410 \def\Hy@ocgcolor{#1}%
9411 \setbox0=\hbox\bgroup\color@begingroup
9412 \else
9413 \HyColor@UseColor#1%
9414 \fi
9415 }%
9416 \def\Hy@endcolorlink{%
9417 \ifHy@ocgcolorlinks
9418 \color@endgroup\egroup
9419 \mbox{%
9420 \pdfliteral page{/OC/OCPrint BDC}%
9421 \rlap{\copy0}%
9422 \pdfliteral page{EMC/OC/OCView BDC}%
9423 \begingroup
9424 \expandafter\HyColor@UseColor\Hy@ocgcolor
9425 \box0 %
9426 \endgroup

```

```

9427     \pdfliteral page{EMC}%
9428     }%
9429     \fi
9430     \endgroup
9431     }%
9432     }%
9433 \else
9434 \Hy@DisableOption{ocgcolorlinks}%
9435 \fi

```

First, allow for some changes and additions to pdftex syntax:

```

9436 \def\setpdfinkmargin#1{%
9437   \begingroup
9438     \setlength{\dimen@}{#1}%
9439   \expandafter\endgroup
9440   \expandafter\pdfinkmargin\the\dimen@\relax
9441 }
9442 \ifx\pdfstartlink\@undefined% less than version 14
9443   \let\pdfstartlink\pdfannotlink
9444   \let\pdfinkmargin\@tempdima
9445   \let\pdfxform\pdfform
9446   \let\pdfastxform\pdfastform
9447   \let\pdfrefxform\pdfrefform
9448 \else
9449   \pdfinkmargin1pt %
9450 \fi

```

First set up the default linking

```

9451 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9452 \Hy@WrapperDef\new@pdfink#1{%
9453   \ifhmode
9454     \@savsf\spacefactor
9455   \fi
9456   \Hy@SaveLastskip
9457   \Hy@VerboseAnchor{#1}%
9458   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9459   \Hy@DestName\Hy@pstringDest\@pdfview
9460   \Hy@RestoreLastskip
9461   \ifhmode
9462     \spacefactor\@savsf
9463   \fi
9464 }
9465 \let\pdf@endanchor\@empty

```

`\Hy@DestName` Wrap the call of `\pdfdest name` in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```

9466 \def\Hy@DestName#1#2{%
9467   \pdfdest name{#1}#2\relax
9468 }

```

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.

```

9469 \providecommand*\@pdfborder{0 0 1}
9470 \providecommand*\@pdfborderstyle{}

```

```

9471 \def\Hy@undefinedname{UNDEFINED}
9472 \def\find@pdfink#1#2{%
9473   \leavevmode
9474   \protected@edef\Hy@testname{#2}%
9475   \ifx\Hy@testname\@empty
9476     \Hy@Warning{%
9477       Empty destination name,\MessageBreak
9478       using '\Hy@undefinedname'%
9479     }%
9480     \let\Hy@testname\Hy@undefinedname
9481   \else
9482     \Hy@pstringdef\Hy@testname{%
9483       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9484     }%
9485   \fi
9486   \Hy@StartlinkName{%
9487     \ifHy@pdfa /F 4\fi
9488     \Hy@setpdfborder
9489     \ifx\@pdfhighlight\@empty
9490       \else
9491         /H\@pdfhighlight
9492       \fi
9493       \ifx\CurrentBorderColor\relax
9494       \else
9495         /C[\CurrentBorderColor]%
9496       \fi
9497     }\Hy@testname
9498     \expandafter\Hy@colorlink\csname @#1color\endcsname
9499   }
9500 \def\Hy@StartlinkName#1#2{%
9501   \pdfstartlink attr{#1}goto name{#2}\relax
9502 }
9503 \def\close@pdfink{%
9504   \Hy@endcolorlink
9505   \Hy@VerboseLinkStop
9506   \pdfendlink
9507 }
9508 \def\hyper@anchor#1{%
9509   \new@pdfink{#1}\anchor@spot\pdf@endanchor
9510 }
9511 \def\hyper@anchorstart#1{%
9512   \new@pdfink{#1}%
9513   \Hy@activeanchortrue
9514 }
9515 \def\hyper@anchorend{%
9516   \pdf@endanchor
9517   \Hy@activeanchorfalse
9518 }
9519 \def\hyper@linkstart#1#2{%
9520   \Hy@VerboseLinkStart{#1}{#2}%
9521   \ltx@ifundefined{#1bordercolor}{%
9522     \let\CurrentBorderColor\relax
9523   }{%
9524     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9525   }%
9526   \find@pdfink{#1}{#2}%
9527 }

```

```

9528 \def\hyper@linkend{\close@pdfink}
9529 \def\hyper@link#1#2#3{%
9530   \Hy@VerboseLinkStart{#1}{#2}%
9531   \ltx@ifundefined{#@1bordercolor}{%
9532     \let\CurrentBorderColor\relax
9533   }{%
9534     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9535   }%
9536   \find@pdfink{#1}{#2}#3\Hy@xspace@end
9537   \close@pdfink
9538 }
9539 \let\CurrentBorderColor\@linkbordercolor
9540 \def\hyper@linkurl#1#2{%
9541   \begingroup
9542     \Hy@pstringdef\Hy@pstringURI{#2}%
9543     \hyper@chars
9544     \leavevmode
9545     \pdfstartlink
9546     attr{%
9547       \Hy@setpdfborder
9548       \ifx\@pdfhighlight\@empty
9549         \else
9550           /H\@pdfhighlight
9551         \fi
9552       \ifx\@urlbordercolor\relax
9553         \else
9554           /C[\@urlbordercolor]%
9555         \fi
9556     }%
9557     user{%
9558       /Subtype/Link%
9559       \ifHy@pdfa /F 4\fi
9560       /A<<%
9561         /Type/Action%
9562         /S/URI%
9563         /URI(\Hy@pstringURI)%
9564         \ifHy@href@ismap
9565           /IsMap true%
9566         \fi
9567         \Hy@href@nextactionraw
9568       >>%
9569     }%
9570     \relax
9571     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9572     \close@pdfink
9573   \endgroup
9574 }
9575 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9576   \begingroup
9577     \def\Hy@pstringF{#2}%
9578     \Hy@CleanupFile\Hy@pstringF
9579     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9580     \Hy@pstringdef\Hy@pstringD{#3}%
9581     \Hy@MakeRemoteAction
9582     \leavevmode
9583     \pdfstartlink
9584     attr{%

```

```

9585 \Hy@setpdfborder
9586 \ifx\@pdfhighlight\@empty
9587 \else
9588 /H\@pdfhighlight
9589 \fi
9590 \ifx\@filebordercolor\relax
9591 \else
9592 /C[\@filebordercolor]%
9593 \fi
9594 }%
9595 user {%
9596 /Subtype/Link%
9597 \ifHy@pdfa /F 4\fi
9598 /A<<%
9599 /F(\Hy@pstringF)%
9600 /S/GoToR%
9601 \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}

```

```

9602 \ifx\#3\%
9603 /D[\Hy@href@page\@pdfremotestartview]%
9604 \else
9605 /D(\Hy@pstringD)%
9606 \fi
9607 \Hy@href@nextactionraw
9608 >>%
9609 }%
9610 \relax
9611 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9612 \close@pdflink
9613 \endgroup
9614 }
9615 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9616 \begingroup
9617 \Hy@pstringdef\Hy@pstringF{#1}%
9618 \Hy@pstringdef\Hy@pstringP{#3}%
9619 \leavevmode
9620 \pdfstartlink
9621 attr{%
9622 \Hy@setpdfborder
9623 \ifx\@pdfhighlight\@empty
9624 \else
9625 /H\@pdfhighlight
9626 \fi
9627 \ifx\@runbordercolor\relax
9628 \else
9629 /C[\@runbordercolor]%

```

```

9630     \fi
9631   }%
9632   user {%
9633     /Subtype/Link%
9634     \ifHy@pdfa /F 4\fi
9635     /A<<%
9636     /F(\Hy@pstringF)%
9637     /S/Launch%
9638     \Hy@SetNewWindow
9639     \ifx\#3\%
9640     \else
9641       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9642     \fi
9643     \Hy@href@nextactionraw
9644     >>%
9645   }%
9646   \relax
9647   \Hy@colorlink\@runcolor#2\Hy@xspace@end
9648   \close@pdflink
9649 \endgroup
9650 }

```

\@pdfproducer

```

9651 \ifx\@pdfproducer\relax
9652 \begingroup\expandafter\expandafter\expandafter\endgroup
9653 \expandafter\ifx\cname luatexversion\endcsname\relax
9654 \def\@pdfproducer{pdfTeX}%
9655 \ifx\eTeXversion\@undefined
9656 \else
9657   \ifx\eTeXversion\relax
9658   \else
9659     \ifnum\eTeXversion>0 %
9660       \def\@pdfproducer{pdfTeX}%
9661     \fi
9662   \fi
9663 \fi
9664 \ifx\pdfTeXversion\@undefined
9665 \else
9666   \ifnum\pdfTeXversion<100 %
9667     \edef\@pdfproducer{%
9668       \@pdfproducer
9669       \the\pdfTeXversion.\pdfTeXrevision
9670     }%
9671   \else
9672     \ifnum\pdfTeXversion<130 %
9673       \edef\@pdfproducer{%
9674         \@pdfproducer-%
9675         \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9676         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
9677         \pdfTeXrevision
9678       }%
9679     \else
9680       \ifnum\pdfTeXversion<140 %
9681       \else
9682         \def\@pdfproducer{pdfTeX}%
9683       \fi
9684       \edef\@pdfproducer{%

```

```

9685         \pdfproducer-%
9686         \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9687         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9688         \pdfTeXrevision
9689     }%
9690 \fi
9691 \fi
9692 \fi
9693 \else
9694 \begingroup
9695 \count@=\luatexversion
9696 \divide\count@ by 100 %
9697 \edef\x{\the\count@}%
9698 \count@=-\x\relax
9699 \multiply\count@ by 100 %
9700 \advance\count@ by \luatexversion
9701 \edef\x{\endgroup
9702 \def\noexpand\pdfproducer{%
9703     LuaTeX-\x.\the\count@.\luatexrevision
9704 }%
9705 }%
9706 \x
9707 \fi
9708 \fi

```

\PDF@SetupDox

```

9709 \def\PDF@SetupDoc{%
9710 \ifx\pdfpagescrop\@empty
9711 \else
9712 \edef\process@me{%
9713 \pdfpagesattr=%
9714 /CropBox[\pdfpagescrop]%
9715 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9716 \else
9717 ^^J\the\pdfpagesattr
9718 \fi
9719 }%
9720 }%
9721 \process@me
9722 \fi
9723 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9724 \pdfcatalog{%
9725 /PageMode/\pdfpagemode
9726 \ifx\@baseurl\@empty
9727 \else
9728 /URI<</Base(\Hy@pstringB)>>%
9729 \fi
9730 }%
9731 \ifx\pdfstartpage\@empty
9732 \else
9733 \ifx\pdfstartview\@empty
9734 \else
9735 openaction goto page\pdfstartpage{\pdfstartview}%
9736 \fi
9737 \fi
9738 \edef\Hy@temp{%
9739 \ifHy@pdftoolbar\else /HideToolbar true\fi
9740 \ifHy@pdfmenubar\else /HideMenubar true\fi

```



```

9741 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9742 \ifHy@pdfwindow /FitWindow true\fi
9743 \ifHy@pdfcenterwindow /CenterWindow true\fi
9744 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9745 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9746 \Hy@UseNameKey{Direction}\@pdfdirection
9747 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9748 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9749 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9750 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9751 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9752 \Hy@UseNameKey{Duplex}\@pdfduplex
9753 \ifx\@pdfpicktraybypdfsize\@empty
9754 \else
9755 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9756 \fi
9757 \ifx\@pdfprintpagerange\@empty
9758 \else
9759 /PrintPageRange[\@pdfprintpagerange]%
9760 \fi
9761 \ifx\@pdfnumcopies\@empty
9762 \else
9763 /NumCopies \@pdfnumcopies
9764 \fi
9765 }%
9766 \pdfcatalog{%
9767 \ifx\Hy@temp\@empty
9768 \else
9769 /ViewerPreferences<<\Hy@temp>>%
9770 \fi
9771 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9772 \ifx\@pdflang\@empty
9773 \else
9774 /Lang(\@pdflang)%
9775 \fi
9776 }%
9777 }

```

\PDF@FinishDoc

```

9778 \def\PDF@FinishDoc{%
9779 \pdf@ifdraftmode{}{%
9780 \Hy@UseMaketitleInfos
9781 \HyInfo@GenerateAddons
9782 \pdfinfo{%
9783 /Author(\@pdfauthor)%
9784 /Title(\@pdftitle)%
9785 /Subject(\@pdfsubject)%
9786 /Creator(\@pdfcreator)%
9787 \ifx\@pdfcreationdate\@empty
9788 \else
9789 /CreationDate(\@pdfcreationdate)%
9790 \fi
9791 \ifx\@pdfmoddate\@empty
9792 \else
9793 /ModDate(\@pdfmoddate)%
9794 \fi
9795 \ifx\@pdfproducer\relax
9796 \else

```

```

9797     /Producer(\@pdfproducer)%
9798     \fi
9799     /Keywords(\@pdfkeywords)%
9800     \ifx\@pdftrapped\@empty
9801     \else
9802     /Trapped/\@pdftrapped
9803     \fi
9804     \HyInfo@Addons
9805   }%
9806 }%
9807 \Hy@DisableOption{pdfauthor}%
9808 \Hy@DisableOption{pdftitle}%
9809 \Hy@DisableOption{pdfsubject}%
9810 \Hy@DisableOption{pdfcreator}%
9811 \Hy@DisableOption{pdfcreationdate}%
9812 \Hy@DisableOption{pdfmoddate}%
9813 \Hy@DisableOption{pdfproducer}%
9814 \Hy@DisableOption{pdfkeywords}%
9815 \Hy@DisableOption{pdftrapped}%
9816 \Hy@DisableOption{pdfinfo}%
9817 }

```

`\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`.

```

9818 \def\hyper@pagetransition{%
9819   \ifx\@pdfpagetransition\relax
9820   \else
9821     \expandafter\Hy@RemoveTransPageAttr
9822     \the\pdfpageattr^^J/Trans{>>\END
9823     \ifx\@pdfpagetransition\@empty
9824     \else
9825       \edef\@processme{%
9826         \global\pdfpageattr{%
9827           \the\pdfpageattr
9828             ^^J/Trans << /S /\@pdfpagetransition\space >>%
9829         }%
9830       }%
9831       \@processme
9832     \fi
9833   \fi
9834 }

```

`\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.

```

9835 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9836   \ifx\#2\%
9837     \global\pdfpageattr{#1}%
9838   \else
9839     \Hy@RemoveTransPageAttr#1#4\END
9840   \fi
9841 }

```

`\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.

```

9842 \def\hyper@pageduration{%
9843   \ifx\@pdfpageduration\relax
9844   \else
9845     \expandafter
9846     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9847   \ifx\@pdfpageduration\@empty
9848   \else
9849     \edef\@processme{%
9850       \global\pdfpageattr{%
9851         \the\pdfpageattr
9852         ^^J/Dur \@pdfpageduration\space
9853       }%
9854     }%
9855     \@processme
9856   \fi
9857 \fi
9858 }

```

\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.

```

9859 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9860   \ifx\#2\%
9861     \global\pdfpageattr{#1}%
9862   \else
9863     \Hy@RemoveDurPageAttr#1#4\END
9864   \fi
9865 }

```

\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).

```

9866 \def\hyper@pagehidden{%
9867   \ifHy@useHidKey
9868   \expandafter
9869   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
9870   \ifHy@pdfpagehidden
9871     \edef\@processme{%
9872       \global\pdfpageattr{%
9873         \the\pdfpageattr
9874         ^^J/Hid true % SPACE
9875       }%
9876     }%
9877     \@processme
9878   \fi
9879 \fi
9880 }

```

\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.

```

9881 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%

```

```

9882 \ifx\|#2\|%
9883 \global\pdfpageattr{#1}%
9884 \else
9885 \Hy@RemoveHidPageAttr#1#4\END
9886 \fi
9887 }

9888 \pdf@ifdraftmode{}{%
9889 \g@addto@macro\Hy@EveryPageHook{%
9890 \hyper@pagetransition
9891 \hyper@pageduration
9892 \hyper@pagehidden
9893 }%
9894 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

9895 </pdfTeX>
9896 <*pdfTeX | xetex>
9897 \Hy@AtBeginDocument{%
9898 \ifHy@setpagesize
9899 \expandafter\@firstofone
9900 \else
9901 \expandafter\@gobble
9902 \fi
9903 {%
9904 \@ifclassloaded{seminar}{%
9905 <*pdfTeX>
9906 \setlength{\pdfhorigin}{1truein}%
9907 \setlength{\pdfvorigin}{1truein}%
9908 </pdfTeX>
9909 \ifportrait
9910 \ifdim\paperwidth=\z@
9911 \else
9912 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9913 \fi
9914 \ifdim\paperheight=\z@
9915 \else
9916 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9917 \fi
9918 \else
9919 \ifdim\paperheight=\z@
9920 \else
9921 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9922 \fi
9923 \ifdim\paperwidth=\z@
9924 \else
9925 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9926 \fi
9927 \fi
9928 }{%
9929 \ltx@ifundefined{stockwidth}{%
9930 \ifdim\paperwidth>\z@
9931 \setlength{\pdfpagewidth}{\paperwidth}%
9932 \fi
9933 \ifdim\paperheight>\z@
9934 \setlength{\pdfpageheight}{\paperheight}%
9935 \fi

```

```

9936   }{%
9937     \ifdim\stockwidth>\z@
9938       \setlength{\pdfpagewidth}{\stockwidth}%
9939     \fi
9940     \ifdim\stockheight>\z@
9941       \setlength{\pdfpageheight}{\stockheight}%
9942     \fi
9943   }%
9944 }%
9945 }%
9946 \Hy@DisableOption{setpagesize}%
9947 }
9948 </pdfTeX | xetex>
9949 <*pdfTeX>
9950 \def\Acrobatmenu#1#2{%
9951   \Hy@Acrobatmenu{#1}{#2}{%
9952     \leavevmode
9953     \EdefEscapeName\Hy@temp@menu{#1}%
9954     \pdfstartlink
9955     attr{%
9956       \Hy@setpdfborder
9957       \ifx\@pdfhighlight\@empty
9958       \else
9959         /H\@pdfhighlight
9960       \fi
9961       \ifx\@menubordercolor\relax
9962       \else
9963         /C[\@menubordercolor]%
9964       \fi
9965     }%
9966     user{%
9967       /Subtype/Link%
9968       \ifHy@pdfa /F 4\fi
9969       /A<<%
9970       /S/Named%
9971       /N\Hy@temp@menu
9972       \Hy@href@nextactionraw
9973     >>%
9974   }%
9975   \relax
9976   \Hy@colorlink\@menucolor#2%
9977   \close@pdflink
9978 }%
9979 }

```

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.

```

9980 \def\Hy@FixNotFirstPage{%
9981   \gdef\Hy@FixNotFirstPage{%
9982     \setbox\AtBeginShipoutBox=\hbox{%
9983       \copy\AtBeginShipoutBox
9984     }%
9985   }%
9986 }
9987 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
9988 }{%
9989   \AtBeginShipout{\Hy@FixNotFirstPage}%
9990 }
9991 \</pdfTeX>

```

47.3 hypertex

The Hyper \TeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of \backslash special commands:

href: $\text{html:}\langle \text{a href} = \text{"href_string"} \rangle$

name: $\text{html:}\langle \text{a name} = \text{"name_string"} \rangle$

end: $\text{html:}\langle \text{/a} \rangle$

image: $\text{html:}\langle \text{img src} = \text{"href_string"} \rangle$

base_name: $\text{html:}\langle \text{base href} = \text{"href_string"} \rangle$

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 $\text{href}=\text{"\#name_string"}$ with the *name_string* identical to the one in the name command) or as part of a URL (of the form $\text{URL}\#\text{name_string}$). 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 (\backslash), and if it looks like a URL name it may cause problems.

```

9992 \<*\hypertex>
9993 \providecommand*\XR@ext{\dvi}
9994 \let\PDF@FinishDoc\ltx@empty
9995 \def\PDF@SetupDoc{%
9996   \ifx\@baseurl\@empty
9997   \else
9998     \special{html:<base href="\@baseurl">}%
9999   \fi
10000 }

```

```

10001 \Hy@WrapperDef\hyper@anchor#1{%
10002   \Hy@SaveLastskip
10003   \Hy@VerboseAnchor{#1}%
10004   \begingroup
10005     \let\protect=\string
10006     \hyper@chars
10007     \special{html:<a name=%
10008       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10009   \endgroup
10010   \Hy@activeanchortrue
10011   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10012   \special{html:</a>}%
10013   \Hy@activeanchorfalse
10014   \Hy@RestoreLastskip
10015 }
10016 \Hy@WrapperDef\hyper@anchorstart#1{%
10017   \Hy@SaveLastskip
10018   \Hy@VerboseAnchor{#1}%
10019   \begingroup
10020     \hyper@chars
10021     \special{html:<a name=%
10022       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10023   \endgroup
10024   \Hy@activeanchortrue
10025 }
10026 \def\hyper@anchorend{%
10027   \special{html:</a>}%
10028   \Hy@activeanchorfalse
10029   \Hy@RestoreLastskip
10030 }
10031 \def\@urltype{url}
10032 \def\hyper@linkstart#1#2{%
10033   \Hy@VerboseLinkStart{#1}{#2}%
10034   \expandafter\Hy@colorlink\csname @#1color\endcsname
10035   \def\Hy@tempa{#1}%
10036   \ifx\Hy@tempa\@urltype
10037     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10038   \else
10039     \begingroup
10040       \hyper@chars
10041       \special{html:<a href=%
10042         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10043     \endgroup
10044   \fi
10045 }
10046 \def\hyper@linkend{%
10047   \special{html:</a>}%
10048   \Hy@endcolorlink
10049 }
10050 \def\hyper@linkfile#1#2#3{%
10051   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10052 }
10053 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why L^AT_EX constructs make this totally foul up, and make us revert to basic T_EX. I do not know.

```

10054   \leavevmode

```

```

10055 \ifHy@raiselinks
10056 \Hy@SaveSpaceFactor
10057 \Hy@SaveSavedSpaceFactor
10058 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10059 \Hy@RestoreSavedSpaceFactor
10060 \@linkdim\dp\@tempboxa
10061 \lower\@linkdim\hbox{%
10062   \hyper@chars
10063   \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10064 }%
10065 \Hy@colorlink\@urlcolor
10066 \Hy@RestoreSpaceFactor
10067 #1%
10068 \Hy@SaveSpaceFactor
10069 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvilhs 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).

```

10070 \advance\@linkdim by -6.5\p@
10071 \raise\@linkdim\hbox{\special{html:</a>}}%
10072 \Hy@endcolorlink
10073 \Hy@RestoreSpaceFactor
10074 \else
10075 \begingroup
10076 \hyper@chars
10077 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10078 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10079 \special{html:</a>}}%
10080 \Hy@endcolorlink
10081 \endgroup
10082 \fi
10083 }

```

Very poor implementation of `\hyper@link` without considering `#1`.

```

10084 \def\hyper@link#1#2#3{%
10085 \Hy@VerboseLinkStart{#1}{#2}%
10086 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}}%
10087 }

10088 \def\hyper@image#1#2{%
10089 \begingroup
10090 \hyper@chars
10091 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
10092 \endgroup
10093 }
10094 </hypertex>
10095 <*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 hypertext cfg. For dviwindo, L^AT_EX 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.

```

10096 \providecommand*\XR@ext}{dvi}
10097 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10098 \Hy@WrapperDef\hyper@anchor#1{%
10099   \Hy@SaveLastskip
10100   \Hy@VerboseAnchor{#1}%
10101   \begingroup
10102     \let\protect=\string
10103     \special{mark: #1}%
10104   \endgroup
10105   \Hy@activeanchortrue
10106   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10107   \Hy@activeanchorfalse
10108   \Hy@RestoreLastskip
10109 }
10110 \Hy@WrapperDef\hyper@anchorstart#1{%
10111   \Hy@SaveLastskip
10112   \Hy@VerboseAnchor{#1}%
10113   \special{mark: #1}%
10114   \Hy@activeanchortrue
10115 }
10116 \def\hyper@anchorend{%
10117   \Hy@activeanchorfalse
10118   \Hy@RestoreLastskip
10119 }
10120 \def\hyper@linkstart#1#2{%
10121   \Hy@VerboseLinkStart{#1}{#2}%
10122   \expandafter\Hy@colorlink\csname @#1color\endcsname
10123   \special{button: %
10124     10000000 %
10125     \number\baselineskip\space
10126     #2%
10127   }%
10128 }
10129 \def\hyper@linkend{%
10130   \Hy@endcolorlink
10131 }
10132 \def\hyper@link#1#2#3{%
10133   \Hy@VerboseLinkStart{#1}{#2}%
10134   \leavevmode
10135   \ifHy@raiselinks
10136     \Hy@SaveSpaceFactor
10137     \Hy@SaveSavedSpaceFactor
10138     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10139     \Hy@RestoreSavedSpaceFactor
10140     \@linkdim\dp\@tempboxa
10141     \lower\@linkdim\hbox{%
10142       \special{button: %
10143         \number\wd\@tempboxa\space
10144         \number\ht\@tempboxa\space
10145         #2%
10146       }%
10147     \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

10148 \Hy@RestoreSpaceFactor
10149 #3\Hy@xspace@end
10150 \Hy@SaveSpaceFactor
10151 \Hy@endcolorlink
10152 }%
10153 \@linkdim\ht\@tempboxa
10154 \advance\@linkdim by -6.5\p@
10155 \raise\@linkdim\hbox{}%
10156 \Hy@RestoreSpaceFactor
10157 \else
10158 \special{button: %
10159 \number\wd\@tempboxa\space
10160 \number\ht\@tempboxa\space
10161 #2%
10162 }%
10163 \expandafter\Hy@colorlink\csname @#1color\endcsname
10164 #3\Hy@xspace@end
10165 \Hy@endcolorlink
10166 \fi
10167 }
10168 \def\hyper@linkurl#1#2{%
10169 \begingroup
10170 \hyper@chars
10171 \leavevmode
10172 \ifHy@raiselinks
10173 \Hy@SaveSpaceFactor
10174 \Hy@SaveSavedSpaceFactor
10175 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10176 \Hy@RestoreSavedSpaceFactor
10177 \@linkdim\dp\@tempboxa
10178 \lower\@linkdim\hbox{%
10179 \special{button: %
10180 \number\wd\@tempboxa\space
10181 \number\ht\@tempboxa\space
10182 launch: \wwwbrowser\space
10183 #2%
10184 }%
10185 \Hy@colorlink\@urlcolor
10186 \Hy@RestoreSpaceFactor
10187 #1\Hy@xspace@end
10188 \Hy@SaveSpaceFactor
10189 \Hy@endcolorlink
10190 }%
10191 \@linkdim\ht\@tempboxa
10192 \advance\@linkdim by -6.5\p@
10193 \raise\@linkdim\hbox{}%
10194 \Hy@RestoreSpaceFactor
10195 \else
10196 \special{button: %
10197 \number\wd\@tempboxa\space
10198 \number\ht\@tempboxa\space
10199 launch: \wwwbrowser\space
10200 #2%
10201 }%
10202 \Hy@colorlink\@urlcolor
10203 #1\Hy@xspace@end
10204 \Hy@endcolorlink

```

```

10205 \fi
10206 \endgroup
10207 }
10208 \def\hyper@linkfile#1#2#3{%
10209 \begingroup
10210 \hyper@chars
10211 \leavevmode
10212 \ifHy@raiselinks
10213 \Hy@SaveSpaceFactor
10214 \Hy@SaveSavedSpaceFactor
10215 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10216 \Hy@RestoreSavedSpaceFactor
10217 \@linkdim\dp\@tempboxa
10218 \lower\@linkdim\hbox{%
10219 \special{button: %
10220 \number\wd\@tempboxa\space
10221 \number\ht\@tempboxa\space
10222 #3,%
10223 file: #2%
10224 }%
10225 \Hy@colorlink\@filecolor
10226 \Hy@RestoreSpaceFactor
10227 #1\Hy@xspace@end
10228 \Hy@SaveSpaceFactor
10229 \Hy@endcolorlink
10230 }%
10231 \@linkdim\ht\@tempboxa
10232 \advance\@linkdim by -6.5\p@
10233 \raise\@linkdim\hbox{}%
10234 \Hy@RestoreSpaceFactor
10235 \else
10236 \special{button: %
10237 \number\wd\@tempboxa\space
10238 \number\ht\@tempboxa\space
10239 #3,%
10240 file: #2%
10241 }%
10242 \Hy@colorlink\@filecolor
10243 #1\Hy@xspace@end
10244 \Hy@endcolorlink
10245 \fi
10246 \endgroup
10247 }
10248 \ifx\@pdfproducer\relax
10249 \def\@pdfproducer{dviwindo + Distiller}%
10250 \fi
10251 \HyInfo@AddonUnsupportedtrue
10252 \def\PDF@FinishDoc{%
10253 \Hy@UseMaketitleInfos
10254 \HyInfo@TrappedUnsupported
10255 \special{PDF: Keywords \@pdfkeywords}%
10256 \special{PDF: Title \@pdftitle}%
10257 \special{PDF: Creator \@pdfcreator}%
10258 \ifx\@pdfcreationdate\@empty
10259 \else
10260 \special{PDF: CreationDate \@pdfcreationdate}%
10261 \fi

```

```

10262 \ifx\@pdfmoddate\@empty
10263 \else
10264   \special{PDF: ModDate \@pdfmoddate}%
10265 \fi
10266 \special{PDF: Author \@pdfauthor}%
10267 \ifx\@pdfproducer\relax
10268 \else
10269   \special{PDF: Producer \@pdfproducer}%
10270 \fi
10271 \special{PDF: Subject \@pdfsubject}%
10272 \Hy@DisableOption{pdfauthor}%
10273 \Hy@DisableOption{pdftitle}%
10274 \Hy@DisableOption{pdfsubject}%
10275 \Hy@DisableOption{pdfcreator}%
10276 \Hy@DisableOption{pdfcreationdate}%
10277 \Hy@DisableOption{pdfmoddate}%
10278 \Hy@DisableOption{pdfproducer}%
10279 \Hy@DisableOption{pdfkeywords}%
10280 \Hy@DisableOption{pdftrapped}%
10281 \Hy@DisableOption{pdfinfo}%
10282 }
10283 \def\PDF@SetupDoc{%
10284   \ifx\@baseurl\@empty
10285   \else
10286     \special{PDF: Base \@baseurl}%
10287   \fi
10288   \ifx\@pdfpagescrop\@empty\else
10289     \special{PDF: BBox \@pdfpagescrop}%
10290   \fi
10291   \def\Hy@temp{}%
10292   \ifx\@pdfstartpage\@empty
10293   \else
10294     \ifx\@pdfstartview\@empty
10295     \else
10296       \edef\Hy@temp{%
10297         ,Page=\@pdfstartpage
10298         ,View=\@pdfstartview
10299       }%
10300     \fi
10301   \fi
10302   \edef\Hy@temp{%
10303     \noexpand\pdfmark{%
10304       pdfmark=/DOCVIEW,%
10305       PageMode=/\@pdfpagemode
10306       \Hy@temp
10307     }%
10308   }%
10309   \Hy@temp
10310   \ifx\@pdfpagescrop\@empty
10311   \else
10312     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10313   \fi
10314   \edef\Hy@temp{%
10315     \ifHy@pdftoolbar\else /HideToolbar true\fi
10316     \ifHy@pdfmenubar\else /HideMenubar true\fi
10317     \ifHy@pdfwindowui\else /HideWindowUI true\fi
10318     \ifHy@pdffitwindow /FitWindow true\fi

```

```

10319 \ifHy@pdfcenterwindow /CenterWindow true\fi
10320 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10321 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10322 \Hy@UseNameKey{Direction}\@pdfdirection
10323 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10324 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10325 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10326 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10327 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10328 \Hy@UseNameKey{Duplex}\@pdfduplex
10329 \ifx\@pdfpicktraybypdfsize\@empty
10330 \else
10331 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10332 \fi
10333 \ifx\@pdfprintpagerange\@empty
10334 \else
10335 /PrintPageRange[\@pdfprintpagerange]%
10336 \fi
10337 \ifx\@pdfnumcopies\@empty
10338 \else
10339 /NumCopies \@pdfnumcopies
10340 \fi
10341 }%
10342 \pdfmark{pdfmark=/PUT,%
10343 Raw={%
10344 \string{Catalog}\string}<<%
10345 \ifx\Hy@temp\@empty
10346 \else
10347 /ViewerPreferences<<\Hy@temp>>%
10348 \fi
10349 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10350 \ifx\@pdflang\@empty
10351 \else
10352 /Lang(\@pdflang)%
10353 \fi
10354 >>%
10355 }%
10356 }%
10357 }
10358 </dviwindo>
10359 <*\dvipdfm|xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10360 \providecommand*\XR@ext}{pdf}
10361 \Hy@setbreaklinks{true}
10362 \def\HyPat@ObjRef{%
10363   @[^ ]+}%
10364 }
10365 \newsavebox{\pdfm@box}
10366 \def\@pdfm@mark#1{\special{pdf:#1}}
10367 \Hy@WrapperDef\@pdfm@dest#1{%
10368   \Hy@SaveLastskip
10369   \Hy@VerboseAnchor{#1}%
10370   \begingroup
10371   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%

```

```

10372 \def\x{XYZ}%
10373 \ifx\x\@pdfview
10374 \def\x{XYZ @xpos @ypos null}%
10375 \else
10376 \def\x{FitH}%
10377 \ifx\x\@pdfview
10378 \def\x{FitH @ypos}%
10379 \else
10380 \def\x{FitBH}%
10381 \ifx\x\@pdfview
10382 \def\x{FitBH @ypos}%
10383 \else
10384 \def\x{FitV}%
10385 \ifx\x\@pdfview
10386 \def\x{FitV @xpos}%
10387 \else
10388 \def\x{FitBV}%
10389 \ifx\x\@pdfview
10390 \def\x{FitBV @xpos}%
10391 \else
10392 \def\x{Fit}%
10393 \ifx\x\@pdfview
10394 \let\x\@pdfview
10395 \else
10396 \def\x{FitB}%
10397 \ifx\x\@pdfview
10398 \let\x\@pdfview
10399 \else
10400 \def\x{FitR}%
10401 \ifx\x\@pdfview
10402 \Hy@Warning{'pdfview=FitR' is not supported}%
10403 \def\x{XYZ @xpos @ypos null}%
10404 \else
10405 \@onelevel@sanitize\@pdfview
10406 \Hy@Warning{%
10407   Unknown value '\@pdfview' for pdfview%
10408 }%
10409 \def\x{XYZ @xpos @ypos null}%
10410 \fi
10411 \fi
10412 \fi
10413 \fi
10414 \fi
10415 \fi
10416 \fi
10417 \fi
10418 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10419 \endgroup
10420 \Hy@RestoreLastskip
10421 }
10422 \providecommand*\@pdfview{XYZ}
10423 \providecommand*\@pdfborder{0 0 1}
10424 \providecommand*\@pdfborderstyle{}
10425 \def\hyper@anchor#1{%
10426 \@pdfm@dest{#1}%
10427 }
10428 \def\hyper@anchorstart#1{%

```

```

10429 \Hy@activeanchortrue
10430 \@pdfm@dest{#1}%
10431 }
10432 \def\hyper@anchorend{%
10433 \Hy@activeanchorfalse
10434 }

10435 \newcounter{Hy@AnnotLevel}

10436 \ifHy@ocgcolorlinks
10437 \def\OBJ@OCG@view{@OCG@view}%
10438 \@pdfm@mark{%
10439   obj \OBJ@OCG@view <<%
10440     /Type/OCG%
10441     /Name(View)%
10442     /Usage<<%
10443     /Print<<%
10444     /PrintState/OFF%
10445     >>%
10446     /View<<%
10447     /ViewState/ON%
10448     >>%
10449     >>%
10450     >>%
10451   }%
10452 \@pdfm@mark{close \OBJ@OCG@view}%
10453 \def\OBJ@OCG@print{@OCG@print}%
10454 \@pdfm@mark{%
10455   obj \OBJ@OCG@print <<%
10456     /Type/OCG%
10457     /Name(Print)%
10458     /Usage<<%
10459     /Print<<%
10460     /PrintState/ON%
10461     >>%
10462     /View<<%
10463     /ViewState/OFF%
10464     >>%
10465     >>%
10466     >>%
10467   }%
10468 \@pdfm@mark{close \OBJ@OCG@print}%
10469 \def\OBJ@OCGs{@OCGs}%
10470 \@pdfm@mark{%
10471   obj \OBJ@OCGs [%
10472     \OBJ@OCG@view\space\OBJ@OCG@print
10473   ]%
10474 }%
10475 \@pdfm@mark{close \OBJ@OCGs}%
10476 \@pdfm@mark{%
10477   put @catalog <<%
10478     /OCProperties<<%
10479     /OCGs \OBJ@OCGs
10480     /D<<%
10481     /OFF[\OBJ@OCG@print]%
10482     /AS[%
10483       <<%
10484         /Event/View%
10485         /OCGs \OBJ@OCGs

```

```

10486         /Category[/View]%
10487     >>%
10488     <<%
10489         /Event/Print%
10490         /OCGs \OBJ@OCGs
10491         /Category[/Print]%
10492     >>%
10493     <<%
10494         /Event/Export%
10495         /OCGs \OBJ@OCGs
10496         /Category[/Print]%
10497     >>%
10498     ]%
10499     >>%
10500     >>%
10501     >>%
10502 }%
10503 \AtBeginShipout{%
10504     \setbox\AtBeginShipoutBox=\hbox{%
10505         \copy\AtBeginShipoutBox
10506         \@pdfm@mark{%
10507             put @resources <<%
10508                 /Properties<<%
10509                 /OCView \OBJ@OCG@view
10510                 /OCPrint \OBJ@OCG@print
10511             >>%
10512             >>%
10513         }%
10514     }%
10515 }%
10516 \Hy@AtBeginDocument{%
10517     \def\Hy@colorlink#1{%
10518         \begingroup
10519         \ifHy@ocgcolorlinks
10520             \def\Hy@ocgcolor{#1}%
10521             \setbox0=\hbox\bgroup\color@begingroup
10522         \else
10523             \HyColor@UseColor#1%
10524         \fi
10525     }%
10526     \def\Hy@endcolorlink{%
10527         \ifHy@ocgcolorlinks
10528             \color@endgroup\egroup
10529             \mbox{%
10530                 \@pdfm@mark{content /OC/OCPrint BDC}%
10531                 \rlap{\copy0}%
10532                 \@pdfm@mark{content EMC/OC/OCView BDC}%
10533             \begingroup
10534                 \expandafter\HyColor@UseColor\Hy@ocgcolor
10535                 \box0 %
10536             \endgroup
10537             \@pdfm@mark{content EMC}%
10538         }%
10539     \fi
10540     \endgroup
10541 }%
10542 }%

```



```

10543 \else
10544   \Hy@DisableOption{ocgcolorlinks}%
10545 \fi

10546 \def\Hy@BeginAnnot#1{%
10547   \stepcounter{Hy@AnnotLevel}%
10548   \ifnum\value{Hy@AnnotLevel}=\@ne
10549     #1%
10550   \fi
10551 }
10552 \def\Hy@endAnnot{%
10553   \ifnum\value{Hy@AnnotLevel}=\@ne
10554     \Hy@endcolorlink
10555     \@pdfm@mark{eann}%
10556   \fi
10557   \addtocounter{Hy@AnnotLevel}\m@ne
10558 }

10559 \def\Hy@undefinedname{UNDEFINED}
10560 \def\hyper@linkstart#1#2{%
10561   \Hy@VerboseLinkStart{#1}{#2}%
10562   \leavevmode
10563   \Hy@BeginAnnot{%
10564     \protected@edef\Hy@testname{#2}%
10565     \ifx\Hy@testname\@empty
10566       \Hy@Warning{%
10567         Empty destination name,\MessageBreak
10568         using '\Hy@undefinedname'%
10569       }%
10570     \let\Hy@testname\Hy@undefinedname
10571   \else
10572     \Hy@pstringdef\Hy@testname{%
10573       \expandafter\HyperDestNameFilter\expandafter{%
10574         \Hy@testname
10575       }%
10576     }%
10577   \fi
10578   \@pdfm@mark{%
10579     bann<<%
10580     /Type/Annot%
10581     /Subtype/Link%
10582     \ifHy@pdfa /F 4\fi
10583     \Hy@setpdfborder
10584     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10585     \else
10586       /C[\csname @#1bordercolor\endcsname]%
10587     \fi
10588     /A<<%
10589     /S/GoTo%
10590     /D(\Hy@testname)%
10591     \Hy@href@nextactionraw
10592     >>%
10593     >>%
10594   }%
10595   \expandafter\Hy@colorlink\csname @#1color\endcsname
10596 }%
10597 }
10598 \def\hyper@linkend{\Hy@endAnnot}%
10599 \def\hyper@link#1#2#3{%

```

```

10600 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10601 }
10602 \def\hyper@linkfile#1#2#3{%
10603 \leavevmode
10604 \Hy@BeginAnnot{%
10605 \def\Hy@pstringF{#2}%
10606 \Hy@CleanupFile\Hy@pstringF
10607 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10608 \Hy@pstringdef\Hy@pstringD{#3}%
10609 \Hy@MakeRemoteAction
10610 \@pdfm@mark{%
10611 bann<<%
10612 /Type/Annot%
10613 /Subtype/Link%
10614 \ifHy@pdfa /F 4\fi
10615 \Hy@setpdfborder
10616 \ifx\@filebordercolor\relax
10617 \else
10618 /C[\@filebordercolor]%
10619 \fi
10620 /A<<%
10621 /S/GoToR%
10622 /F(\Hy@pstringF)%
10623 /D%
10624 \ifx\#3\%
10625 [\Hy@href@page\@pdfremotestartview]%
10626 \else
10627 (\Hy@pstringD)%
10628 \fi
10629 \Hy@SetNewWindow
10630 \Hy@href@nextactionraw
10631 >>%
10632 >>%
10633 }%
10634 \Hy@colorlink\@filecolor
10635 }%
10636 #1\Hy@xspace@end
10637 \Hy@EndAnnot
10638 }
10639 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10640 \leavevmode
10641 \Hy@BeginAnnot{%
10642 \Hy@pstringdef\Hy@pstringF{#1}%
10643 \Hy@pstringdef\Hy@pstringP{#3}%
10644 \@pdfm@mark{%
10645 bann<<%
10646 /Type/Annot%
10647 /Subtype/Link%
10648 \ifHy@pdfa /F 4\fi
10649 \Hy@setpdfborder
10650 \ifx\@runbordercolor\relax
10651 \else
10652 /C[\@runbordercolor]%
10653 \fi
10654 /A<<%
10655 /F(\Hy@pstringF)%
10656 /S/Launch%

```

```

10657      \Hy@SetNewWindow
10658      \ifx\|#3\|%
10659      \else
10660          /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10661      \fi
10662      \Hy@href@nextactionraw
10663      >>%
10664      >>%
10665      }%
10666      \Hy@colorlink\@runcolor
10667      }%
10668      #2\Hy@xspace@end
10669      \Hy@EndAnnot
10670  }
10671  \def\hyper@linkurl#1#2{%
10672      \leavevmode
10673      \Hy@BeginAnnot{%
10674          \Hy@pstringdef\Hy@pstringURI{#2}%
10675          \@pdfm@mark{%
10676              bann<<%
10677                  /Type/Annot%
10678                  /Subtype/Link%
10679                  \ifHy@pdfa /F 4\fi
10680                  \Hy@setpdfborder
10681                  \ifx\@urlbordercolor\relax
10682                      \else
10683                          /C[\@urlbordercolor]%
10684                      \fi
10685                  /A<<%
10686                  /S/URI%
10687                  /URI(\Hy@pstringURI)%
10688                  \ifHy@href@ismap
10689                      /IsMap true%
10690                  \fi
10691                  \Hy@href@nextactionraw
10692                  >>%
10693                  >>%
10694              }%
10695              \Hy@colorlink\@urlcolor
10696          }%
10697          #1\Hy@xspace@end
10698          \Hy@EndAnnot
10699      }
10700  \def\Acrobatmenu#1#2{%
10701      \Hy@Acrobatmenu{#1}{#2}{%
10702          \Hy@BeginAnnot{%
10703              \EdefEscapeName\Hy@temp@menu{#1}%
10704              \@pdfm@mark{%
10705                  bann<<%
10706                      /Type/Annot%
10707                      /Subtype/Link%
10708                      \ifHy@pdfa /F 4\fi
10709                      \Hy@setpdfborder
10710                      \ifx\@menubordercolor\relax
10711                          \else
10712                              /C[\@menubordercolor]%
10713                          \fi

```

```

10714      /A<<%
10715      /S/Named%
10716      /N/\Hy@temp@menu
10717      \Hy@href@nextactionraw
10718      >>%
10719      >>%
10720      }%
10721      \Hy@colorlink\@menucolor
10722      }%
10723      #2\Hy@xspace@end
10724      \Hy@endAnnot
10725      }%
10726      }
10727      \ifx\@pdfproducer\relax
10728      \def\@pdfproducer{dvipdfm}%

```

Detect Xe_T_EX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

10729      \begingroup\expandafter\expandafter\expandafter\endgroup
10730      \expandafter\ifx\csname XeTeXversion\endcsname\relax
10731      \else
10732      \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10733      \fi
10734      \fi
10735      \def\PDF@FinishDoc{%
10736      \Hy@UseMaketitleInfos
10737      \HyInfo@GenerateAddons
10738      \@pdfm@mark{%
10739      docinfo<<%
10740      /Title(\@pdftitle)%
10741      /Subject(\@pdfsubject)%
10742      /Creator(\@pdfcreator)%
10743      \ifx\@pdfcreationdate\@empty
10744      \else
10745      /CreationDate(\@pdfcreationdate)%
10746      \fi
10747      \ifx\@pdfmoddate\@empty
10748      \else
10749      /ModDate(\@pdfmoddate)%
10750      \fi
10751      /Author(\@pdfauthor)%
10752      \ifx\@pdfproducer\relax
10753      \else
10754      /Producer(\@pdfproducer)%
10755      \fi
10756      /Keywords(\@pdfkeywords)%
10757      \ifx\@pdftrapped\@empty
10758      \else
10759      /Trapped/\@pdftrapped
10760      \fi
10761      \HyInfo@Addons
10762      >>%
10763      }%
10764      \Hy@DisableOption{pdfauthor}%
10765      \Hy@DisableOption{pdftitle}%
10766      \Hy@DisableOption{pdfsubject}%
10767      \Hy@DisableOption{pdfcreator}%
10768      \Hy@DisableOption{pdfcreationdate}%
10769      \Hy@DisableOption{pdfmoddate}%

```

```

10770 \Hy@DisableOption{pdfproducer}%
10771 \Hy@DisableOption{pdfkeywords}%
10772 \Hy@DisableOption{pdftrapped}%
10773 \Hy@DisableOption{pdfinfo}%
10774 }

10775 \def\PDF@SetupDoc{%
10776 \edef\Hy@temp{%
10777 \ifHy@pdftoolbar\else /HideToolbar true\fi
10778 \ifHy@pdfmenubar\else /HideMenubar true\fi
10779 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10780 \ifHy@pdfwindow /FitWindow true\fi
10781 \ifHy@pdfcenterwindow /CenterWindow true\fi
10782 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10783 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10784 \Hy@UseNameKey{Direction}\@pdfdirection
10785 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10786 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10787 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10788 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10789 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10790 \Hy@UseNameKey{Duplex}\@pdfduplex
10791 \ifx\@pdfpicktraybypdfsize\@empty
10792 \else
10793 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10794 \fi
10795 \ifx\@pdfprintpagerange\@empty
10796 \else
10797 /PrintPageRange[\@pdfprintpagerange]%
10798 \fi
10799 \ifx\@pdfnumcopies\@empty
10800 \else
10801 /NumCopies \@pdfnumcopies
10802 \fi
10803 }%
10804 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10805 \@pdfm@mark{%
10806 docview<<%
10807 \ifx\@pdfstartpage\@empty
10808 \else
10809 \ifx\@pdfstartview\@empty
10810 \else
10811 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10812 \fi
10813 \fi
10814 \ifx\@baseurl\@empty
10815 \else
10816 /URI<</Base(\Hy@pstringB)>>%
10817 \fi
10818 /PageMode/\@pdfpagemode
10819 \ifx\Hy@temp\@empty
10820 \else
10821 /ViewerPreferences<<\Hy@temp>>%
10822 \fi
10823 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10824 \ifx\@pdflang\@empty
10825 \else
10826 /Lang(\@pdflang)%

```

```

10827 \fi
10828 >>%
10829 }%
10830 \ifx\@pdfpagescrop\@empty
10831 \else
10832 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}}%
10833 \fi
10834 }
10835 </dvipdfm | xetex>
10836 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

10837 \def\hyper@pagetransition{%
10838 \ifx\@pdfpagetransition\relax
10839 \else
10840 \ifx\@pdfpagetransition\@empty
10841 \else
10842 \special{pdf:put @thispage %
10843 <</Trans<</S/\@pdfpagetransition>>>>%
10844 }%
10845 \fi
10846 \fi
10847 }

```

\hyper@pageduration

```

10848 \def\hyper@pageduration{%
10849 \ifx\@pdfpageduration\relax
10850 \else
10851 \ifx\@pdfpageduration\@empty
10852 \else
10853 \special{pdf:put @thispage %
10854 <</Dur \@pdfpageduration>>>%
10855 }%
10856 \fi
10857 \fi
10858 }

```

\hyper@pagehidden

```

10859 \def\hyper@pagehidden{%
10860 \ifHy@useHidKey
10861 \special{pdf:put @thispage %
10862 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10863 }%
10864 \fi
10865 }

10866 \g@addto@macro\Hy@EveryPageBoxHook{%
10867 \hyper@pagetransition
10868 \hyper@pageduration
10869 \hyper@pagehidden
10870 }

10871 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method \pdfpagewidth and \pdfpageheight for setting the paper size.

```

10872 <*dvipdfm>
10873 \AtBeginShipoutFirst{%

```

```

10874 \ifHy@setpagesize
10875 \begingroup
10876 \ifundefined{stockwidth}{%
10877 \ifdim\paperwidth>\z@
10878 \ifdim\paperheight>\z@
10879 \special{papersize=\the\paperwidth,\the\paperheight}%
10880 \fi
10881 \fi
10882 }{%
10883 \ifdim\stockwidth>\z@
10884 \ifdim\stockheight>\z@
10885 \special{papersize=\the\stockwidth,\the\stockheight}%
10886 \fi
10887 \fi
10888 }%
10889 \endgroup
10890 \fi
10891 \Hy@DisableOption{setpagesize}%
10892 }
10893 </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.

```

10894 <*vtexhtml>
10895 \providecommand*{\XR@ext}{.htm}
10896 \RequirePackage{vtexhtml}
10897 \newif\if@Localurl
10898 \let\PDF@FinishDoc\ltx@empty
10899 \def\PDF@SetupDoc{%
10900 \ifx\@baseurl\@empty
10901 \else
10902 \special{!direct <base href="\@baseurl">}%
10903 \fi
10904 }
10905 \def\@urltype{url}
10906 \def\hyper@link#1#2#3{%
10907 \Hy@VerboseLinkStart{#1}{#2}%
10908 \leavevmode
10909 \special{!direct <a href=%
10910 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10911 #3\Hy@xspace@end
10912 \special{!direct </a>}%
10913 }
10914 \def\hyper@linkurl#1#2{%
10915 \begingroup
10916 \hyper@chars
10917 \leavevmode
10918 \MathBSuppress=1\relax
10919 \special{!direct <a href=%
10920 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10921 #1\Hy@xspace@end
10922 \MathBSuppress=0\relax
10923 \special{!direct </a>}%
10924 \endgroup
10925 }

```

```

10926 \def\hyper@linkfile#1#2#3{%
10927   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10928 }
10929 \def\hyper@linkstart#1#2{%
10930   \Hy@VerboseLinkStart{#1}{#2}%
10931   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
10932     \@Localurltrue
10933     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10934   \else
10935     \@Localurlfalse
10936     \begingroup
10937       \hyper@chars
10938       \special{!aref \HyperDestNameFilter{#2}}%
10939     \endgroup
10940   \fi
10941 }
10942 \def\hyper@linkend{%
10943   \if@Localurl
10944     \special{!endaref}%
10945   \else
10946     \special{!direct </a>}%
10947   \fi
10948 }
10949 \Hy@WrapperDef\hyper@anchorstart#1{%
10950   \Hy@SaveLastskip
10951   \Hy@VerboseAnchor{#1}%
10952   \begingroup
10953     \hyper@chars
10954     \special{!aname #1}%
10955     \special{!direct <a name=%
10956       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10957   \endgroup
10958   \Hy@activeanchortrue
10959 }
10960 \def\hyper@anchorend{%
10961   \special{!direct </a>}%
10962   \Hy@activeanchorfalse
10963   \Hy@RestoreLastskip
10964 }
10965 \Hy@WrapperDef\hyper@anchor#1{%
10966   \Hy@SaveLastskip
10967   \Hy@VerboseAnchor{#1}%
10968   \begingroup
10969     \let\protect=\string
10970     \hyper@chars
10971     \leavevmode
10972     \special{!aname #1}%
10973     \special{!direct <a name=%
10974       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10975   \endgroup
10976   \Hy@activeanchortrue
10977   \bgroup\anchor@spot\egroup
10978   \special{!direct </a>}%
10979   \Hy@activeanchorfalse
10980   \Hy@RestoreLastskip
10981 }
10982 \def\@Form[#1]{%

```



```

10983 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10984 }
10985 \let\@endForm\ltx@empty
10986 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10987 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10988 }
10989 \def\@TextField[#1]#2{% parameters, label
10990 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10991 }
10992 \def\@CheckBox[#1]#2{% parameters, label
10993 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10994 }
10995 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10996 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10997 }
10998 \def\@PushButton[#1]#2{% parameters, label
10999 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11000 }
11001 \def\@Reset[#1]#2{%
11002 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11003 }
11004 \def\@Submit[#1]#2{%
11005 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11006 }
11007 </vtexthtml>
11008 <*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.

```

11009 \ifx\mediaheight\@undefined
11010 \else
11011 \ifx\mediaheight\relax
11012 \else
11013 \ifHy@setpagesize
11014 \providecommand*\VTeXInitMediaSize{%
11015 \ltx@ifundefined{stockwidth}{%
11016 \ifdim\paperheight>0pt %
11017 \setlength\mediaheight\paperheight
11018 \fi
11019 \ifdim\paperheight>0pt %
11020 \setlength\mediawidth\paperwidth
11021 \fi
11022 }{%
11023 \ifdim\stockheight>0pt %
11024 \setlength\mediaheight\stockheight
11025 \fi
11026 \ifdim\stockwidth>0pt %
11027 \setlength\mediawidth\stockwidth
11028 \fi
11029 }%
11030 }%
11031 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11032 \fi
11033 \Hy@DisableOption{setpagesize}%
11034 \fi
11035 \fi

```

Older versions of VTeX require xyz in lower case.

```

11036 \providecommand*\@pdfview{xyz}
11037 \providecommand*\@pdfborder{0 0 1}
11038 \providecommand*\@pdfborderstyle{}
11039 \let\CurrentBorderColor\@linkbordercolor
11040 \Hy@WrapperDef\hyper@anchor#1{%
11041   \Hy@SaveLastskip
11042   \Hy@VerboseAnchor{#1}%
11043   \begingroup
11044     \let\protect=\string
11045     \hyper@chars
11046     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11047   \endgroup
11048   \Hy@activeanchortrue
11049   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11050   \Hy@activeanchorfalse
11051   \Hy@RestoreLastskip
11052 }
11053 \Hy@WrapperDef\hyper@anchorstart#1{%
11054   \Hy@SaveLastskip
11055   \Hy@VerboseAnchor{#1}%
11056   \begingroup
11057     \hyper@chars
11058     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11059   \endgroup
11060   \Hy@activeanchortrue
11061 }
11062 \def\hyper@anchorend{%
11063   \Hy@activeanchorfalse
11064   \Hy@RestoreLastskip
11065 }
11066 \def\@urltype{url}
11067 \def\Hy@undefinedname{UNDEFINED}
11068 \def\hyper@linkstart#1#2{%
11069   \Hy@VerboseLinkStart{#1}{#2}%
11070   \Hy@pstringdef\Hy@pstringURI{#2}%
11071   \expandafter\Hy@colorlink\csname @#1color\endcsname
11072   \ltx@ifundefined{#1bordercolor}{%
11073     \let\CurrentBorderColor\relax
11074   }{%
11075     \edef\CurrentBorderColor{%
11076       \csname @#1bordercolor\endcsname
11077     }%
11078   }%
11079   \def\Hy@tempa{#1}%
11080   \ifx\Hy@tempa\@urltype
11081     \special{!%
11082       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11083       \ifHy@href@ismap
11084         /IsMap true%
11085       \fi
11086       \Hy@href@nextactionraw
11087       >;%
11088       a=<%
11089       \ifHy@pdfa /F 4\fi
11090       \Hy@setpdfborder
11091       \ifx\CurrentBorderColor\relax

```

```

11092     \else
11093     /C [\CurrentBorderColor]%
11094     \fi
11095     >%
11096     }%
11097 \else
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 \fi
11119 }
11120 \def\hyper@linkend{%
11121 \special{!endaref}%
11122 \Hy@endcolorlink
11123 }
11124 \def\hyper@linkfile#1#2#3{%
11125 \leavevmode
11126 \def\Hy@pstringF{#2}%
11127 \Hy@CleanupFile\Hy@pstringF
11128 \special{!%
11129     aref <%
11130     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11131     f=\Hy@pstringF>#3;%
11132     a=<%
11133     \ifHy@pdfa /F 4\fi
11134     \Hy@setpdfborder
11135     \ifx\@filebordercolor\relax
11136     \else
11137     /C [\@filebordercolor]%
11138     \fi
11139     >%
11140     }%
11141     \Hy@colorlink\@filecolor
11142     #1\Hy@xspace@end
11143     \Hy@endcolorlink
11144     \special{!endaref}%
11145 }
11146 \def\hyper@linkurl#1#2{%
11147 \begingroup
11148 \Hy@pstringdef\Hy@pstringURI{#2}%

```

```

11149 \hyper@chars
11150 \leavevmode
11151 \special{!%
11152   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11153   \ifHy@href@ismap
11154     /IsMap true%
11155   \fi
11156   \Hy@href@nextactionraw
11157   >,%
11158   a=<%
11159   \ifHy@pdfa /F 4\fi
11160   \Hy@setpdfborder
11161   \ifx\@urlbordercolor\relax
11162   \else
11163     /C [\@urlbordercolor]%
11164   \fi
11165   >%
11166   }%
11167   \Hy@colorlink\@urlcolor
11168   #1\Hy@xspace@end
11169   \Hy@endcolorlink
11170   \special{!endaref}%
11171 \endgroup
11172 }
11173 \def\hyper@link#1#2#3{%
11174   \Hy@VerboseLinkStart{#1}{#2}%
11175   \ltx@ifundefined{@#1bordercolor}{%
11176     \let\CurrentBorderColor\relax
11177   }{%
11178     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11179   }%
11180   \leavevmode
11181   \protected@edef\Hy@testname{#2}%
11182   \ifx\Hy@testname\@empty
11183     \Hy@Warning{%
11184       Empty destination name,\MessageBreak
11185       using '\Hy@undefinedname'%
11186     }%
11187     \let\Hy@testname\Hy@undefinedname
11188   \fi
11189   \special{!%
11190     aref \expandafter\HyperDestNameFilter
11191       \expandafter{\Hy@testname};%
11192     a=<%
11193     \ifHy@pdfa /F 4\fi
11194     \Hy@setpdfborder
11195     \ifx\CurrentBorderColor\relax
11196     \else
11197       /C [\CurrentBorderColor]%
11198     \fi
11199     >%
11200   }%
11201   \expandafter
11202   \Hy@colorlink\csname @#1color\endcsname
11203   #3\Hy@xspace@end
11204   \Hy@endcolorlink
11205   \special{!endaref}%

```

```

11206 }
11207 \def\hyper@image#1#2{%
11208   \hyper@linkurl{#2}{#1}%
11209 }
11210 \def\@hyper@launch run:#1\#2#3{%
11211   \Hy@pstringdef\Hy@pstringF{#1}%
11212   \Hy@pstringdef\Hy@pstringP{#3}%
11213   \leavevmode
11214   \special{!aref %
11215     <u=%
11216       /Type/Action%
11217       /S/Launch%
11218       /F(\Hy@pstringF)%
11219       \Hy@SetNewWindow
11220       \ifx\#3\%
11221         \else
11222           /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11223         \fi
11224         \Hy@href@nextactionraw
11225       >,%
11226       a=<%
11227         \ifHy@pdfa /F 4\fi
11228         \Hy@setpdfborder
11229         \ifx\@runbordercolor\relax
11230           \else
11231             /C[\@runbordercolor]%
11232           \fi
11233       >%
11234     }%
11235     \Hy@colorlink\@runcolor
11236     #2\Hy@xspace@end
11237     \Hy@endcolorlink
11238     \special{!endaref}%
11239 }
11240 \def\Acrobatmenu#1#2{%
11241   \EdefEscapeName\Hy@temp@menu{#1}%
11242   \Hy@Acrobatmenu{#1}{#2}{%
11243     \special{!%
11244       aref <u=/S /Named /N /\Hy@temp@menu>;%
11245       a=<%
11246         \ifHy@pdfa /F 4\fi
11247         \Hy@setpdfborder
11248         \ifx\@menubordercolor\relax
11249           \else
11250             /C[\@menubordercolor]%
11251           \fi
11252       >%
11253     }%
11254     \Hy@colorlink\@menucolor
11255     #2\Hy@xspace@end
11256     \Hy@endcolorlink
11257     \special{!endaref}%
11258   }%
11259 }

```

The following code (transition effects) is made by Alex Kostin.
The code below makes sense for $\text{\texttt{V\TeX}}$ 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{..}{..}` globally.

```
11260 \ifnum\Hy@VTeXversion<702 %
11261 \else
11262   \def\hyper@pagetransition{%
11263     \ifx\@pdfpagetransition\relax
11264     \else
11265     \ifx\@pdfpagetransition\@empty
```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```
11266   \else
11267   \hvtex@parse@trans\@pdfpagetransition
11268   \fi
11269 \fi
11270 }%
```

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:

```
11271 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11272 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11273 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11274 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11275 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11276 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11277 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
11278 \def\hvtex@par@dimension{/Dm}%
11279 \def\hvtex@par@direction{/Di}%
11280 \def\hvtex@par@duration{/D}%
11281 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11282 \def\hvtex@gettoken{%
11283   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11284 }%
```

Notice that tokens in the input buffer must be space delimited.

```
11285 \def\hvtex@gettoken@#1 #2\@nil{%
11286   \edef\hvtex@token{#1}%
```

```

11287 \edef\hvtex@buffer{#2}%
11288 }%
11289 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11290 \let\hvtex@trans@code\@empty
11291 \let\hvtex@param@dimension\@empty
11292 \let\hvtex@param@direction\@empty
11293 \let\hvtex@param@duration\@empty
11294 \let\hvtex@param@motion\@empty
11295 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11296 \hvtex@gettoken
11297 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11298 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11299 \else
11300 \hvtex@gettoken
11301 \fi
11302 \fi
11303 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11304 \hvtex@trans@params
11305 }%

```

Reentrant macro to parse optional parameters.

```

11306 \def\hvtex@trans@params{%
11307 \ifx\hvtex@buffer\@empty
11308 \else
11309 \hvtex@gettoken
11310 \let\hvtex@trans@par\hvtex@token
11311 \ifx\hvtex@buffer\@empty
11312 \else
11313 \hvtex@gettoken
11314 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_T_EX special takes it in milliseconds.

```

11315 \let\hvtex@param@duration\hvtex@token
11316 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

11317 \expandafter\edef\expandafter\hvtex@param@motion
11318 \expandafter{\expandafter\@gobble\hvtex@token}%
11319 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

11320 \expandafter\edef\expandafter\hvtex@param@dimension
11321 \expandafter{\expandafter\@gobble\hvtex@token}%
11322 \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).

```

11323 \let\hvtex@param@direction\hvtex@token
11324 \fi\fi\fi\fi
11325 \fi
11326 \fi

```

```

11327 \ifx\hvtex@buffer\@empty
11328 \let\next\hvtex@produce@trans
11329 \else
11330 \let\next\hvtex@trans@params
11331 \fi
11332 \next
11333 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11334 \def\hvtex@produce@trans{%
11335 \let\vtex@trans@special\@empty
11336 \if S\hvtex@trans@code
11337 \edef\vtex@trans@special{\hvtex@trans@code
11338 \hvtex@param@dimension\hvtex@param@motion}%
11339 \else\if B\hvtex@trans@code
11340 \edef\vtex@trans@special{%
11341 \hvtex@trans@code\hvtex@param@dimension
11342 }%
11343 \else\if X\hvtex@trans@code
11344 \edef\vtex@trans@special{%
11345 \hvtex@trans@code\hvtex@param@motion
11346 }%
11347 \else\if W\hvtex@trans@code
11348 \edef\vtex@trans@special{%
11349 \hvtex@trans@code\hvtex@param@direction
11350 }%
11351 \else\if D\hvtex@trans@code
11352 \let\vtex@trans@special\hvtex@trans@code
11353 \else\if R\hvtex@trans@code
11354 \let\vtex@trans@special\hvtex@trans@code
11355 \else\if G\hvtex@trans@code
11356 \edef\vtex@trans@special{%
11357 \hvtex@trans@code\hvtex@param@direction
11358 }%
11359 \fi\fi\fi\fi\fi\fi
11360 \ifx\vtex@trans@special\@empty
11361 \else
11362 \ifx\hvtex@param@duration\@empty
11363 \else
11364 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11365 \multiply\dimen@\@m
11366 \edef\vtex@trans@special{%
11367 \vtex@trans@special,\strip@pt\dimen@
11368 }%
11369 \fi

```

And all the mess is just for this.

```

11370 \special{!trans \vtex@trans@special}%
11371 \fi
11372 }%

11373 \def\hyper@pageduration{%
11374 \ifx\@pdfpageduration\relax
11375 \else
11376 \ifx\@pdfpageduration\@empty
11377 \special{!duration-}%

```



```

11378 \else
11379 \special{!duration \@pdfpageduration}%
11380 \fi
11381 \fi
11382 }%
11383 \def\hyper@pagehidden{%
11384 \ifHy@useHidKey
11385 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11386 \fi
11387 }%
11388 \g@addto@macro\Hy@EveryPageBoxHook{%
11389 \hyper@pagetransition
11390 \hyper@pageduration
11391 \hyper@pagehidden
11392 }%
11393 \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

```

11394 \ifx\@pdfproducer\relax
11395 \def\@pdfproducer{VTeX}%
11396 \ifnum\Hy@VTeXversion>\z@
11397 \count@\VTeXversion
11398 \divide\count@ 100 %
11399 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11400 \multiply\count@ -100 %
11401 \advance\count@\VTeXversion
11402 \edef\@pdfproducer{%
11403 \@pdfproducer
11404 .\ifnum\count@<10 0\fi\the\count@
11405 \ifx\VTeXOS\@undefined\else
11406 \ifnum\VTeXOS>0 %
11407 \ifnum\VTeXOS<6 %
11408 \space%
11409 \ifcase\VTeXOS
11410 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11411 \fi
11412 )%
11413 \fi
11414 \fi
11415 \fi
11416 ,\space
11417 \ifnum\OpMode=\@ne PDF\else PS\fi
11418 \space backend%
11419 \ifx\gexmode\@undefined\else
11420 \ifnum\gexmode>\z@\space with GeX\fi
11421 \fi
11422 }%
11423 \fi

```

11424 \fi

Current !pdfinfo key syntax:

Key	Field	Type
a	Author	String
b	CropBox	String
c	Creator	String
k	Keywords	String
l	PageLayout	PS
p	PageMode	PS
r	Producer	String
s	Subject	String
t	Title	String
u	URI	PS
v	ViewPreferences	PS

Note: PS objects that are dicts are in <<...>> (yuck; no choice).

```

11425 \def\PDF@SetupDoc{%
11426   \ifx\@pdfpagescrop\@empty
11427   \else
11428     \special{!pdfinfo b=<\@pdfpagescrop>}%
11429   \fi
11430   \ifx\@pdfstartpage\@empty
11431   \else
11432     \ifx\@pdfstartview\@empty
11433     \else
11434       \special{!onopen Page\@pdfstartpage}%
11435     \fi
11436   \fi
11437   \special{!pdfinfo p=</\@pdfpagemode>}%
11438   \ifx\@baseurl\@empty
11439   \else
11440     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11441   \fi
11442   \special{!pdfinfo v=<<<%
11443     \ifHy@pdftoolbar\else /HideToolbar true\fi
11444     \ifHy@pdfmenubar\else /HideMenubar true\fi
11445     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11446     \ifHy@pdffitwindow /FitWindow true\fi
11447     \ifHy@pdfcenterwindow /CenterWindow true\fi
11448     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11449     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11450     \Hy@UseNameKey{Direction}\@pdfdirection
11451     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11452     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11453     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11454     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11455     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11456     \Hy@UseNameKey{Duplex}\@pdfduplex
11457     \ifx\@pdfpicktraybypdfsize\@empty
11458     \else
11459       /PickTrayByPDFSize \@pdfpicktraybypdfsize
11460     \fi
11461     \ifx\@pdfprintpagerange\@empty
11462     \else
11463       /PrintPageRange[\@pdfprintpagerange]%
11464     \fi
11465     \ifx\@pdfnumcopies\@empty

```

```

11466 \else
11467 /NumCopies \@pdfnumcopies
11468 \fi
11469 >>>}%
11470 \ifx\@pdfpagelayout\@empty
11471 \else
11472 \special{!pdffinfo l=</\@pdfpagelayout\space>}%
11473 \fi
11474 }%
11475 \HyInfo@AddonUnsupportedtrue
11476 \define@key{Hyp}{pdfcreationdate}{%
11477 \Hy@Warning{%
11478 VTeX does not support pdfcreationdate.\MessageBreak
11479 Therefore its setting is ignored%
11480 }%
11481 }
11482 \define@key{Hyp}{pdfmoddate}{%
11483 \Hy@Warning{%
11484 VTeX does not support pdfmoddate.\MessageBreak
11485 Therefore its setting is ignored%
11486 }%
11487 }
11488 \def\PDF@FinishDoc{%
11489 \Hy@UseMaketitleInfos
11490 \HyInfo@TrappedUnsupported
11491 \special{!pdffinfo a=<\@pdfauthor>}%
11492 \special{!pdffinfo t=<\@pdftitle>}%
11493 \special{!pdffinfo s=<\@pdfsubject>}%
11494 \special{!pdffinfo c=<\@pdfcreator>}%
11495 \ifx\@pdfproducer\relax
11496 \else
11497 \special{!pdffinfo r=<\@pdfproducer>}%
11498 \fi
11499 \special{!pdffinfo k=<\@pdfkeywords>}%
11500 \Hy@DisableOption{pdfauthor}%
11501 \Hy@DisableOption{pdftitle}%
11502 \Hy@DisableOption{pdfsubject}%
11503 \Hy@DisableOption{pdfcreator}%
11504 \Hy@DisableOption{pdfcreationdate}%
11505 \Hy@DisableOption{pdfmoddate}%
11506 \Hy@DisableOption{pdfproducer}%
11507 \Hy@DisableOption{pdfkeywords}%
11508 \Hy@DisableOption{pdftrapped}%
11509 \Hy@DisableOption{pdffinfo}%
11510 }
11511 \</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.

```

11512 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11513 <package>\providecommand*{\Hy@DistillerDestFix}{%
11514 <*pdfmark | dviwindo>
11515 \def\Hy@DistillerDestFix{%
11516 \begingroup
11517 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11518 \ifnum \@ifundefined{OpMode}{0}{%
11519 \ifundefined{gexmode}{0}{%
11520 \ifnum\gexmode>0 \OpMode\else 0\fi
11521 }>1 %
11522 \def\x##1{%
11523 \immediate\special{!=##1}%
11524 }%
11525 \fi
11526 \x{%
11527 /product where{%
11528 pop %
11529 product(Distiller)search{%
11530 pop pop pop %
11531 version(.)search{%
11532 exch pop exch pop%
11533 (3011)eq{%
11534 gsave %
11535 newpath 0 0 moveto closepath clip%
11536 /Courier findfont 10 scalefont setfont %
11537 72 72 moveto(.)show %
11538 grestore%
11539 }if%
11540 }{pop}ifelse%
11541 }{pop}ifelse%
11542 }if%
11543 }%
11544 \endgroup
11545 }
11546 </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

```

```

11547 \*pdfmark
11548 \Hy@breaklinks@unsupported
11549 \def\HyPat@ObjRef{%
11550   \[~{}]+\}%
11551 }
11552 \Hy@WrapperDef\hyper@anchor#1{%
11553   \Hy@SaveLastskip
11554   \Hy@VerboseAnchor{#1}%
11555   \begingroup
11556     \pdfmark[\anchor@spot]{%
11557       pdfmark=/DEST,%
11558       linktype=anchor,%
11559       View=/\@pdfview \@pdfviewparams,%
11560       DestAnchor={#1}%
11561     }%
11562   \endgroup
11563   \Hy@RestoreLastskip
11564 }
11565 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11566 \Hy@WrapperDef\hyper@anchorstart#1{%
11567   \Hy@SaveLastskip
11568   \Hy@VerboseAnchor{#1}%
11569   \literalps@out{H.S}%
11570   \Hy@AllowHyphens
11571   \xdef\hyper@currentanchor{#1}%
11572   \Hy@activeanchortrue
11573 }
11574 \def\hyper@anchorend{%
11575   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11576   \pdfmark{%
11577     pdfmark=/DEST,%
11578     linktype=anchor,%
11579     View=/\@pdfview \@pdfviewparams,%
11580     DestAnchor=\hyper@currentanchor,%
11581   }%
11582   \Hy@activeanchorfalse
11583   \Hy@RestoreLastskip
11584 }
11585 \def\hyper@linkstart#1#2{%
11586   \Hy@VerboseLinkStart{#1}{#2}%
11587   \ifHy@breaklinks
11588   \else
11589     \leavevmode
11590     \ifmmode
11591       \def\Hy@LinkMath{$}%
11592     \else
11593       \let\Hy@LinkMath\ltx@empty
11594     \fi
11595     \Hy@SaveSpaceFactor
11596     \hbox\bgroup
11597     \Hy@RestoreSpaceFactor
11598     \Hy@LinkMath
11599   \fi
11600   \expandafter\Hy@colorlink\csname @#1color\endcsname
11601   \literalps@out{H.S}%
11602   \Hy@AllowHyphens
11603   \xdef\hyper@currentanchor{#2}%

```

```

11604 \gdef\hyper@currentlinktype{#1}%
11605 }
11606 \def\hyper@linkend{%
11607 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11608 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11609 \let\Hy@tempcolor\relax
11610 }{%
11611 \edef\Hy@tempcolor{%
11612 \csname @\hyper@currentlinktype bordercolor\endcsname
11613 }%
11614 }%
11615 \pdfmark{%
11616 pdfmark=/ANN,%
11617 linktype=link,%
11618 Subtype=/Link,%
11619 PDFAFlags=4,%
11620 Dest=\hyper@currentanchor,%
11621 AcroHighlight=\@pdfhighlight,%
11622 Border=\@pdfborder,%
11623 BorderStyle=\@pdfborderstyle,%
11624 Color=\Hy@tempcolor,%
11625 Raw=H.B%
11626 }%
11627 \Hy@endcolorlink
11628 \ifHy@breaklinks
11629 \else
11630 \Hy@LinkMath
11631 \Hy@SaveSpaceFactor
11632 \egroup
11633 \Hy@RestoreSpaceFactor
11634 \fi
11635 }

```

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.

```

11636 \begingroup
11637 \catcode'P=12 %
11638 \catcode'T=12 %
11639 \lowercase{\endgroup
11640 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11641 }
11642 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11643 \def\hyper@pagetransition{%
11644 \ifx\@pdfpagetransition\relax
11645 \else
11646 \ifx\@pdfpagetransition\@empty
11647 % 1. Does an old entry have to be deleted?
11648 % 2. If 1=yes, how to delete?
11649 \else
11650 \pdfmark{%
11651 pdfmark=/PUT,%
11652 Raw={%
11653 \string{ThisPage\string}%
11654 <</Trans << /S /\@pdfpagetransition\space >> >>%

```

```

11655     }%
11656     }%
11657   \fi
11658 \fi
11659 }

```

\hyper@pageduration

```

11660 \def\hyper@pageduration{%
11661   \ifx\@pdfpageduration\relax
11662   \else
11663     \ifx\@pdfpageduration\@empty
11664       % 1. Does an old entry have to be deleted?
11665       % 2. If 1=yes, how to delete?
11666     \else
11667       \pdfmark{%
11668         pdfmark=/PUT,%
11669         Raw={%
11670           \string{ThisPage\string}%
11671           <</Dur \@pdfpageduration>>%
11672         }%
11673       }%
11674     \fi
11675   \fi
11676 }

```

\hyper@pagehidden

```

11677 \def\hyper@pagehidden{%
11678   \ifHy@useHidKey
11679     \pdfmark{%
11680       pdfmark=/PUT,%
11681       Raw={%
11682         \string{ThisPage\string}%
11683         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11684       }%
11685     }%
11686   \fi
11687 }

11688 \g@addto@macro\Hy@EveryPageBoxHook{%
11689   \hyper@pagetransition
11690   \hyper@pageduration
11691   \hyper@pagehidden
11692 }

11693 \def\hyper@image#1#2{%
11694   \hyper@linkurl{#2}{#1}%
11695 }
11696 \def\Hy@undefinedname{UNDEFINED}
11697 \def\hyper@link#1#2#3{%
11698   \Hy@VerboseLinkStart{#1}{#2}%
11699   \ltx@ifundefined{@#1bordercolor}{%
11700     \let\Hy@tempcolor\relax
11701   }{%
11702     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11703   }%
11704   \begingroup
11705     \protected@edef\Hy@testname{#2}%
11706     \ifx\Hy@testname\@empty

```

```

11707 \Hy@Warning{%
11708   Empty destination name,\MessageBreak
11709   using '\Hy@undefinedname'%
11710 }%
11711 \let\Hy@testname\Hy@undefinedname
11712 \fi
11713 \pdfmark[#{#3}]{%
11714   Color=\Hy@tempcolor,%
11715   linktype={#1},%
11716   AcroHighlight=\@pdfhighlight,%
11717   Border=\@pdfborder,%
11718   BorderStyle=\@pdfborderstyle,%
11719   pdfmark=/ANN,%
11720   Subtype=/Link,%
11721   PDFAFlags=4,%
11722   Dest=\Hy@testname
11723 }%
11724 \endgroup
11725 }
11726 \newtoks\pdf@docset
11727 \def\PDF@FinishDoc{%
11728   \Hy@UseMaketitleInfos
11729   \HyInfo@GenerateAddons
11730   \let\Hy@temp\@empty
11731   \ifx\@pdfcreationdate\@empty
11732   \else
11733     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11734   \fi
11735   \ifx\@pdfmoddate\@empty
11736   \else
11737     \expandafter\def\expandafter\Hy@temp\expandafter{%
11738       \Hy@temp
11739       ModDate=\@pdfmoddate,%
11740     }%
11741   \fi
11742   \ifx\@pdfproducer\relax
11743   \else
11744     \expandafter\def\expandafter\Hy@temp\expandafter{%
11745       \Hy@temp
11746       Producer=\@pdfproducer,%
11747     }%
11748   \fi
11749   \expandafter
11750   \pdfmark\expandafter{%
11751     \Hy@temp
11752     pdfmark=/DOCINFO,%
11753     Title=\@pdftitle,%
11754     Subject=\@pdfsubject,%
11755     Creator=\@pdfcreator,%
11756     Author=\@pdfauthor,%
11757     Keywords=\@pdfkeywords,%
11758     Trapped=\@pdftrapped
11759   }%
11760   \ifx\HyInfo@Addons\@empty
11761   \else
11762     \pdfmark{%
11763       pdfmark=/DOCINFO,%

```



```

11764     Raw={\HyInfo@Addons}%
11765   }%
11766 \fi
11767 \Hy@DisableOption{pdfauthor}%
11768 \Hy@DisableOption{pdftitle}%
11769 \Hy@DisableOption{pdfsubject}%
11770 \Hy@DisableOption{pdfcreator}%
11771 \Hy@DisableOption{pdfcreationdate}%
11772 \Hy@DisableOption{pdfmoddate}%
11773 \Hy@DisableOption{pdfproducer}%
11774 \Hy@DisableOption{pdfkeywords}%
11775 \Hy@DisableOption{pdftrapped}%
11776 \Hy@DisableOption{pdfinfo}%
11777 }
11778 \def\PDF@SetupDoc{%
11779   \def\Hy@temp{}%
11780   \ifx\@pdfstartpage\@empty
11781     \else
11782       \ifx\@pdfstartview\@empty
11783         \else
11784           \edef\Hy@temp{%
11785             ,Page=\@pdfstartpage
11786             ,View=\@pdfstartview
11787           }%
11788         \fi
11789       \fi
11790     \edef\Hy@temp{%
11791       \noexpand\pdfmark{%
11792         pdfmark=/DOCVIEW,%
11793         PageMode=/\@pdfpagemode
11794       }\Hy@temp
11795     }%
11796   }%
11797   \Hy@temp
11798   \ifx\@pdfpagescrop\@empty
11799     \else
11800       \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11801     \fi
11802   \edef\Hy@temp{%
11803     \ifHy@pdftoolbar\else /HideToolbar true\fi
11804     \ifHy@pdfmenubar\else /HideMenubar true\fi
11805     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11806     \ifHy@pdfwindow /FitWindow true\fi
11807     \ifHy@pdfcenterwindow /CenterWindow true\fi
11808     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11809     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11810     \Hy@UseNameKey{Direction}\@pdfdirection
11811     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11812     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11813     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11814     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11815     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11816     \Hy@UseNameKey{Duplex}\@pdfduplex
11817     \ifx\@pdfpicktraybypdfsize\@empty
11818       \else
11819         /PickTrayByPDFSize \@pdfpicktraybypdfsize
11820       \fi

```

```

11821 \ifx\@pdfprintpagerange\@empty
11822 \else
11823 /PrintPageRange[\@pdfprintpagerange]%
11824 \fi
11825 \ifx\@pdfnumcopies\@empty
11826 \else
11827 /NumCopies \@pdfnumcopies
11828 \fi
11829 }%
11830 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11831 \pdfmark{%
11832 pdfmark=/PUT,%
11833 Raw={%
11834 \string{Catalog\string}<<%
11835 \ifx\Hy@temp\@empty
11836 \else
11837 /ViewerPreferences<<\Hy@temp>>%
11838 \fi
11839 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11840 \ifx\@pdflang\@empty
11841 \else
11842 /Lang(\@pdflang)%
11843 \fi
11844 \ifx\@baseurl\@empty
11845 \else
11846 /URI<</Base(\Hy@pstringB)>>%
11847 \fi
11848 >>%
11849 }%
11850 }%
11851 }
11852 \pdfmark>
11853 \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.

```

11854 \newif\ifHy@pdfmarkerror
11855 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11856 \def\pdfmark@[#1]#2{%
11857 \Hy@pdfmarkerrorfalse
11858 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11859 \@processme
11860 \let\pdf@type\relax
11861 \let\pdf@objdef\ltx@empty
11862 \kvsetkeys{PDF}{#2}%
11863 \ifHy@pdfmarkerror
11864 \else
11865 \ifx\pdf@type\relax
11866 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11867 \ifx\\#1\\%
11868 \else
11869 \pdf@rect{#1}%
11870 \fi

```

```

11871 \else
11872 \ifx\#1\%
11873 \literalps@out{%
11874 [%
11875 \ifx\pdf@objdef\ltx@empty
11876 \else
11877 /_objdef\string{\pdf@objdef\string}%
11878 \fi
11879 \the\pdf@toks\space\pdf@type\space pdfmark%
11880 }%
11881 \else
11882 \ltx@ifundefined{@\pdf@linktype color}{%
11883 \Hy@colorlink\@linkcolor
11884 }{%
11885 \expandafter\Hy@colorlink
11886 \csname @\pdf@linktype color\endcsname
11887 }%
11888 \pdf@rect{#1}%
11889 \literalps@out{%
11890 [%
11891 \ifx\pdf@objdef\ltx@empty
11892 \else
11893 /_objdef\string{\pdf@objdef\string}%
11894 \fi
11895 \the\pdf@toks\space\pdf@type\space pdfmark%
11896 }%
11897 \Hy@endcolorlink
11898 \fi
11899 \fi
11900 \fi
11901 }

```

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}

```

```

11902 \newsavebox{\pdf@box}
11903 \providecommand*{\Hy@setouterhbox}{\sbox}
11904 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11905 \def\Hy@DEST{/DEST}
11906 \def\pdf@rect#1{%
11907 \begingroup
11908 \chardef\x=1 %
11909 \def\Hy@temp{#1}%
11910 \ifx\Hy@temp\ltx@empty
11911 \chardef\x=0 %
11912 \else
11913 \def\y{\anchor@spot}%
11914 \ifx\Hy@temp\y

```

```

11915     \def\y{\relax}%
11916     \ifx\anchor@spot\y
11917         \chardef\x=0 %
11918     \fi
11919     \fi
11920     \fi
11921 \expandafter\endgroup
11922 \ifcase\x
11923     \literalps@out{H.S}%
11924     \literalps@out{H.R}%
11925 \else
11926     \leavevmode
11927     \Hy@SaveSpaceFactor
11928     \ifmmode
11929         \def\Hy@LinkMath{$}%
11930     \else
11931         \let\Hy@LinkMath\ltx@empty
11932     \fi
11933     \ifHy@breaklinks
11934         \Hy@setouterhbox\pdf@box{%
11935             \Hy@RestoreSpaceFactor
11936             \Hy@LinkMath
11937             \Hy@AllowHyphens#1\Hy@xspace@end
11938             \Hy@LinkMath
11939             \Hy@SaveSpaceFactor
11940         }%
11941     \else
11942         \sbox\pdf@box{%
11943             \Hy@RestoreSpaceFactor
11944             \Hy@LinkMath
11945             #1\Hy@xspace@end
11946             \Hy@LinkMath
11947             \Hy@SaveSpaceFactor
11948         }%
11949     \fi
11950     \dimen@ \ht\pdf@box
11951     \ifdim\dp\pdf@box=\z@
11952         \literalps@out{H.S}%
11953     \else
11954         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11955     \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...).

```

11956     \ifHy@breaklinks
11957         \ifhmode
11958             \Hy@breaklinksunhbox\pdf@box
11959         \else
11960             \box\pdf@box
11961         \fi
11962     \else
11963         \expandafter\box\pdf@box
11964     \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

```

```

11965 \ifdim\dimen@=\z@
11966 \literalps@out{H.R}%
11967 \else
11968 \raise\dimen@\hbox{\literalps@out{H.R}}}%
11969 \fi
11970 \Hy@RestoreSpaceFactor
11971 \fi
11972 \ifx\pdf@type\Hy@DEST
11973 \else
11974 \pdf@addtoksx{H.B}%
11975 \fi
11976 }

```

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.

```

11977 \newtoks\pdf@toks
11978 \newtoks\pdf@defaulttoks
11979 \pdf@defaulttoks={}%
11980 \def\pdf@addtoks#1#2{%
11981 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11982 \@processme
11983 }
11984 \def\pdf@addtoksx#1{%
11985 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11986 \@processme
11987 }
11988 \def\PDFdefaults#1{%
11989 \pdf@defaulttoks={#1}%
11990 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11991 % what is the type of pdfmark?
11992 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11993 % what is the link type?
11994 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11995 \def\pdf@linktype{link}
11996 % named object?
11997 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11998 \let\pdf@objdef\ltx@empty
11999 % parameter is a stream of PDF
12000 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12001 % parameter is a name
12002 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12003 % parameter is a array
12004 \define@key{PDF}{Border}{%
12005 \edef\Hy@temp{#1}%
12006 \ifx\Hy@temp\@empty
12007 \else
12008 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12009 \fi
12010 }
12011 \let\Hy@BorderArrayPatch\@empty
12012 % parameter is a dictionary
12013 \define@key{PDF}{BorderStyle}{%
12014 \edef\Hy@temp{#1}%
12015 \ifx\Hy@temp\@empty
12016 \else

```

```

12017 \pdf@addtoks{<<#1>>}{BS}%
12018 \fi
12019 }
12020 % parameter is a array
12021 \define@key{PDF}{Color}{%
12022 \ifx\relax#1\relax
12023 \else
12024 \pdf@addtoks{[#1]}{Color}% hash-ok
12025 \fi
12026 }
12027 % parameter is a string
12028 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12029 % parameter is a integer
12030 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12031 % parameter is a array
12032 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12033 % parameter is a string
12034 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12035 % parameter is a string or file
12036 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12037 % parameter is a destination
12038 \define@key{PDF}{Dest}{%
12039 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12040 \ifx\Hy@pstringDest\@empty
12041 \Hy@pdfmarkerrortrue
12042 \Hy@Warning{Destination with empty name ignored}%
12043 \else
12044 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12045 \fi
12046 }
12047 \define@key{PDF}{DestAnchor}{%
12048 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12049 \ifx\Hy@pstringDest\@empty
12050 \Hy@pdfmarkerrortrue
12051 \Hy@Warning{Destination with empty name ignored}%
12052 \else
12053 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12054 \fi
12055 }
12056 % parameter is a string
12057 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12058 % parameter is a string
12059 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12060 % parameter is a int
12061 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12062 \define@key{PDF}{PDFAFlags}{%
12063 \ifHy@pdfa
12064 \pdf@addtoks{#1}{F}%
12065 \fi
12066 }
12067 % parameter is a name
12068 \define@key{PDF}{AcroHighlight}{%
12069 \begingroup
12070 \edef\x{#1}%
12071 \expandafter\endgroup\ifx\x\@empty
12072 \else
12073 \pdf@addtoks{#1}{H}%

```

```

12074 \fi
12075 }
12076 % parameter is a string
12077 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12078 % parameter is a string
12079 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
12080 % parameter is a string
12081 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12082 % parameter is a string
12083 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
12084 % parameter is a Boolean
12085 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12086 % parameter is a integer or name
12087 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12088 % parameter is a name
12089 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12090 % parameter is a string
12091 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
12092 % parameter is a array
12093 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
12094 % parameter is a integer
12095 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12096 % parameter is a name
12097 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12098 % parameter is a string
12099 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
12100 % parameter is a string
12101 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
12102 % parameter is a string
12103 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
12104 % parameter is an array
12105 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
12106 % parameter is a string
12107 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12108 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
12109 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
12110 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
12111 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12112 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
12113 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
12114 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
12115 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12116 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12117 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12118 \define@key{PDF}{Trapped}{%
12119 \edef\Hy@temp{#1}%
12120 \ifx\Hy@temp\@empty
12121 \else
12122 \pdf@addtoks{/#1}{Trapped}%
12123 \fi
12124 }
12125
12126 </pdfmarkbase>
12127 <*pdfmark>
12128 \def\Acrobatmenu#1#2{%
12129 \EdefEscapeName\Hy@temp@menu{#1}%

```

```

12130 \Hy@Acrobatmenu{#1}{#2}{%
12131 \pdfmark[{#2}]{%
12132 linktype=menu,%
12133 pdfmark=/ANN,%
12134 AcroHighlight=\@pdfhighlight,%
12135 Border=\@pdfborder,%
12136 BorderStyle=\@pdfborderstyle,%
12137 Color=\@menubordercolor,%
12138 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12139 Subtype=/Link,%
12140 PDFAFlags=4%
12141 }%
12142 }%
12143 }

```

And now for some useful examples:

```

12144 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12145 \def\PDFNextPage@[#1]#2{%
12146 \pdfmark[{#2}]{%
12147 #1,%
12148 Border=\@pdfborder,%
12149 BorderStyle=\@pdfborderstyle,%
12150 Color=.2 .1 .5,%
12151 pdfmark=/ANN,%
12152 Subtype=/Link,%
12153 PDFAFlags=4,%
12154 Page=/Next%
12155 }%
12156 }
12157 \def\PDFPreviousPage{%
12158 \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12159 }
12160 \def\PDFPreviousPage@[#1]#2{%
12161 \pdfmark[{#2}]{%
12162 #1,%
12163 Border=\@pdfborder,%
12164 BorderStyle=\@pdfborderstyle,%
12165 Color=.4 .4 .1,%
12166 pdfmark=/ANN,%
12167 Subtype=/Link,%
12168 PDFAFlags=4,%
12169 Page=/Prev%
12170 }%
12171 }
12172 \def\PDFOpen#1{%
12173 \pdfmark{#1,pdfmark=/DOCVIEW}%
12174 }

```

This will only work if you use Distiller 2.1 or higher.

```

12175 \def\hyper@linkurl#1#2{%
12176 \begingroup
12177 \Hy@pstringdef\Hy@pstringURI{#2}%
12178 \hyper@chars
12179 \leavevmode
12180 \pdfmark[{#1}]{%
12181 pdfmark=/ANN,%
12182 linktype=url,%
12183 AcroHighlight=\@pdfhighlight,%

```



```

12184   Border=\@pdfborder,%
12185   BorderStyle=\@pdfborderstyle,%
12186   Color=\@urlbordercolor,%
12187   Action={<<%
12188     /Subtype/URI%
12189     /URI(\Hy@pstringURI)%
12190     \ifHy@href@ismap
12191       /IsMap true%
12192     \fi
12193   >>},%
12194   Subtype=/Link,%
12195   PDFAFlags=4%
12196   }%
12197 \endgroup
12198 }
12199 \def\hyper@linkfile#1#2#3{%
12200 \begingroup
12201   \def\Hy@pstringF{#2}%
12202   \Hy@CleanupFile\Hy@pstringF
12203   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12204   \Hy@pstringdef\Hy@pstringD{#3}%
12205   \Hy@MakeRemoteAction
12206   \leavevmode
12207   \pdfmark[{#1}]{%
12208     pdfmark=/ANN,%
12209     Subtype=/Link,%
12210     PDFAFlags=4,%
12211     AcroHighlight=\@pdfhighlight,%
12212     Border=\@pdfborder,%
12213     BorderStyle=\@pdfborderstyle,%
12214     linktype=file,%
12215     Color=\@filebordercolor,%
12216     Action={%
12217       <<%
12218         /S/GoToR%
12219         \Hy@SetNewWindow
12220         /F(\Hy@pstringF)%
12221         /D%
12222         \ifx\#3\%
12223           [\Hy@href@page\@pdfremotestartview]%
12224         \else
12225           (\Hy@pstringD)cvn%
12226         \fi
12227         \Hy@href@nextactionraw
12228       >>%
12229     }%
12230   }%
12231 \endgroup
12232 }
12233 \def\@hyper@launch run:#1\#2#3{%
12234 \begingroup
12235   \Hy@pstringdef\Hy@pstringF{#1}%
12236   \Hy@pstringdef\Hy@pstringP{#3}%
12237   \leavevmode
12238   \pdfmark[{#2}]{%
12239     pdfmark=/ANN,%
12240     Subtype=/Link,%

```

```

12241   PDFAFlags=4,%
12242   AcroHighlight=\@pdfhighlight,%
12243   Border=\@pdfborder,%
12244   BorderStyle=\@pdfborderstyle,%
12245   linktype=run,%
12246   Color=\@runbordercolor,%
12247   Action={%
12248     <<%
12249       /S/Launch%
12250       \Hy@SetNewWindow
12251       /F(\Hy@pstringF)%
12252       \ifx\#3\%
12253       \else
12254         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12255       \fi
12256       \Hy@href@nextactionraw
12257     >>%
12258   }%
12259 }%
12260 \endgroup
12261 }
12262 </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.

```

12263 (*dvips)
12264 \providecommand*\XR@ext>{pdf}
12265 \let\Hy@raisedlink\ltx@empty
12266 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12267 \def\headerps@out#1{\special{! #1}}%
12268 \input{pdfmark.def}%
12269 \ifx\@pdfproducer\relax
12270   \def\@pdfproducer{dvips + Distiller}%
12271 \fi
12272 \providecommand*\@pdfborder{0 0 1}
12273 \providecommand*\@pdfborderstyle{}
12274 \providecommand*\@pdfview{XYZ}
12275 \providecommand*\@pdfviewparams{ H.V}
12276 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12277 \g@addto@macro\Hy@FirstPageHook{%
12278   \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.

```
12279 /DvipsToPDF{72.27 mul Resolution div} def%
12280 /PDFToDvips{72.27 div Resolution mul} def%
12281 /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.

```
12282 /BorderArrayPatch{%
12283   [exch{%
12284     dup dup type/integertype eq exch type/realtype eq or%
12285     {BPToDvips}if%
12286   }forall]%
12287 }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.

```
12288 /HyperBorder {1 PDFToDvips} def%
12289 /H.V {pdf@hoff pdf@voff null} def%
12290 /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

```
12291 /H.S {%
12292   currentpoint %
12293   HyperBorder add /pdf@lly exch def %
12294   dup DvipsToPDF 72 add /pdf@hoff exch def %
12295   HyperBorder sub /pdf@llx exch def%
12296 } def%
```

The calculation of upper left y is done without raising the point in $\text{T}_{\text{E}}\text{X}$, 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`

```
12297 /H.L {%
12298   2 sub dup%
12299   /HyperBasePt exch def %
12300   PDFToDvips /HyperBaseDvips exch def %
12301   currentpoint %
12302   HyperBaseDvips sub /pdf@ury exch def%
12303   /pdf@urx exch def%
12304 } def%
12305 /H.A {%
12306   H.L %
12307 % |pdf@voff| = the distance from the top of the page to a point
12308 % |\baselineskip| above the current point in PDF coordinates
12309   currentpoint exch pop %
12310   vsize 72 sub exch DvipsToPDF %
12311   HyperBasePt sub % baseline skip
12312   sub /pdf@voff exch def%
12313 } def%
12314 /H.R {%
```

```

12315     currentpoint %
12316     HyperBorder sub /pdf@ury exch def %
12317     HyperBorder add /pdf@urx exch def %
12318 % | /pdf@voff| = the distance from the top of the page to the current point, in
12319 % PDF coordinates
12320     currentpoint exch pop vsize 72 sub %
12321     exch DvipsToPDF sub /pdf@voff exch def%
12322 } def%
12323 }%
12324 }
12325 \AtBeginShipoutFirst{%
12326   \ifHy@setpagesize
12327     \begingroup
12328       \@ifundefined{stockwidth}{%
12329         \ifdim\paperwidth>\z@
12330           \ifdim\paperheight>\z@
12331             \special{papersize=\the\paperwidth,\the\paperheight}%
12332           \fi
12333         \fi
12334       }{%
12335         \ifdim\stockwidth>\z@
12336           \ifdim\stockheight>\z@
12337             \special{papersize=\the\stockwidth,\the\stockheight}%
12338           \fi
12339         \fi
12340       }%
12341     \endgroup
12342   \fi
12343   \Hy@DisableOption{setpagesize}%
12344 }

12345 \def\setpdfinkmargin#1{%
12346   \begingroup
12347     \setlength{\dimen@}{#1}%
12348     \literalps@out{%
12349       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12350     }%
12351   \endgroup
12352 }

12353 </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.

```

12354 <*vtexpdfmark>
12355 \providecommand*\XR@ext}{pdf}
12356 \let\Hy@raisedlink\ltx@empty
12357 \def\literalps@out#1{\special{pS:#1}}%
12358 \def\headerps@out#1{\immediate\special{pS:#1}}%
12359 \input{pdfmark.def}%
12360 \ifx\@pdfproducer\relax
12361   \ifnum\OpMode=\@ne
12362     \def\@pdfproducer{VTeX}%
12363   \else

```

```

12364 \def\@pdfproducer{VTeX + Distiller}%
12365 \fi
12366 \fi
12367 \providecommand*\@pdfborder{0 0 1}
12368 \providecommand*\@pdfborderstyle{}
12369 \providecommand*\@pdfview{XYZ}
12370 \providecommand*\@pdfviewparams{ H.V}

12371 \g@addto@macro\Hy@FirstPageHook{%
12372 \headerps@out{%
12373 /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.

```

12374 /HyperBorder {1} def%
12375 /H.V {pdf@hoff pdf@voff null} def%
12376 /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12377 /H.S {%
12378 currentpoint %
12379 HyperBorder sub%
12380 /pdf@lly exch def %
12381 dup 72 add /pdf@hoff exch def %
12382 HyperBorder sub%
12383 /pdf@llx exch def%
12384 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12385 /H.L {%
12386 2 sub%
12387 /HyperBasePt exch def %
12388 currentpoint %
12389 HyperBasePt add HyperBorder add%
12390 /pdf@ury exch def %
12391 HyperBorder add%
12392 /pdf@urx exch def%
12393 } def%
12394 /H.A {%
12395 H.L %
12396 currentpoint exch pop %
12397 vsize 72 sub exch %
12398 HyperBasePt add add%
12399 /pdf@voff exch def%
12400 } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12401 /H.R {%
12402 currentpoint %
12403 HyperBorder add%
12404 /pdf@ury exch def %
12405 HyperBorder add%
12406 /pdf@urx exch def %
12407 currentpoint exch pop vsize 72 sub add%
12408 /pdf@voff exch def%
12409 } def%

```

```

12410 }%
12411 }
12412 \def\setpdfinkmargin#1{%
12413   \begingroup
12414     \setlength{\dimen@}{#1}%
12415     \literalps@out{%
12416       /HyperBorder{\strip@pt\dimen@}def%
12417     }%
12418   \endgroup
12419 }
12420 \</vtxpdfmark>

```

47.11 Textures

```

12421 \<*textures>
12422 \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.

```

12423 \begingroup
12424   \obeylines %
12425   \gdef\Hy@ps@CR{\noexpand
12426   }%
12427 \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`.

```

12428 \def\literalps@out#1{%
12429   \special{postscript 0 0 transform}%
12430   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12431 }%
12432 %

```

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.

```

12433 \def\headerps@out#1{%
12434   \special{%
12435     prepostscript TeXdict begin\Hy@ps@CR
12436     #1\Hy@ps@CR
12437     end%

```

```

12438 }%
12439 }%
12440 %

```

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.

```

12441 \g@addto@macro\Hy@FirstPageHook{%
12442   \headerps@out{%
12443     /betterpdfmark {%
12444       systemdict begin %
12445         dup /BP eq%
12446         {cleartomark gsave nulldevice []}%
12447         {dup /EP eq%
12448           {cleartomark cleartomark grestore}%
12449           {cleartomark}%
12450         }ifelse%
12451       }ifelse %
12452     end%
12453   }def\Hy@ps@CR
12454   ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12455 }% end of \headerps@out
12456 }% end of \AtBeginShipoutFirst
12457 %
12458 \input{pdfmark.def}%
12459 %
12460 \ifx\@pdfproducer\relax
12461   \def\@pdfproducer{Textures + Distiller}%
12462 \fi
12463 \providecommand*\@pdfborder{0 0 1}
12464 \providecommand*\@pdfborderstyle{}
12465 \providecommand*\@pdfview{XYZ}
12466 \providecommand*\@pdfviewparams{ H.V}
12467 %

```

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 .

```

12468 \Hy@AtBeginDocument{%
12469   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12470     /vsize {\Hy@pageheight} def%
12471     /DvipsToPDF {} def%
12472     /PDFToDvips {} def%
12473     /BPToDvips {} def%
12474     /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12475     /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12476     /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12477     /H.S {%
12478       currentpoint %
12479       HyperBorder add /pdf@lly exch def %
12480       dup DvipsToPDF 72 add /pdf@hoff exch def %
12481       HyperBorder sub /pdf@llx exch def%

```

```

12482 } def\Hy@ps@CR
12483 /H.L {%
12484   2 sub %
12485   PDFToDvips /HyperBase exch def %
12486   currentpoint %
12487   HyperBase sub /pdf@ury exch def%
12488   /pdf@urx exch def%
12489 } def\Hy@ps@CR
12490 /H.A {%
12491   H.L %
12492   currentpoint exch pop %
12493   vsize 72 sub exch DvipsToPDF %
12494   HyperBase sub % baseline skip
12495   sub /pdf@voff exch def%
12496 } def\Hy@ps@CR
12497 /H.R {%
12498   currentpoint %
12499   HyperBorder sub /pdf@ury exch def %
12500   HyperBorder add /pdf@urx exch def %
12501   currentpoint exch pop vsize 72 sub %
12502   exch DvipsToPDF sub /pdf@voff exch def%
12503 } def\Hy@ps@CR
12504 }%
12505 }

12506 \def\setpdfinkmargin#1{%
12507   \begingroup
12508     \setlength{\dimen@}{#1}%
12509     \literalps@out{%
12510       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12511     }%
12512   \endgroup
12513 }

12514 \Hy@AtBeginDocument{%
12515   \ifHy@colorlinks
12516     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12517   \fi
12518 }

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.

12519 \expandafter\let\expandafter\keepPDF@SetupDoc
12520   \csname PDF@SetupDoc\endcsname
12521 \def\PDF@SetupDoc{%
12522   \ifx\@baseurl\@empty
12523     \else
12524       \special{html:<base href="\@baseurl">}%
12525     \fi
12526   \keepPDF@SetupDoc
12527 }

12528 \Hy@WrapperDef\hyper@anchor#1{%
12529   \Hy@SaveLastskip
12530   \Hy@VerboseAnchor{#1}%
12531   \begingroup
12532     \let\protect=\string
12533     \special{html:<a name=%
12534       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%

```



```

12535 \endgroup
12536 \Hy@activeanchortrue
12537 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12538 \special{html:</a>}%
12539 \Hy@activeanchorfalse
12540 \Hy@RestoreLastskip
12541 }
12542 \Hy@WrapperDef\hyper@anchorstart#1{%
12543 \Hy@SaveLastskip
12544 \Hy@VerboseAnchor{#1}%
12545 \begingroup
12546 \hyper@chars
12547 \special{html:<a name=%
12548 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12549 \endgroup
12550 \Hy@activeanchortrue
12551 }
12552 \def\hyper@anchorend{%
12553 \special{html:</a>}%
12554 \Hy@activeanchorfalse
12555 \Hy@RestoreLastskip
12556 }
12557 \def\@urltype{url}
12558 \def\hyper@linkstart#1#2{%
12559 \Hy@VerboseLinkStart{#1}{#2}%
12560 \expandafter\Hy@colorlink\csname @#1color\endcsname
12561 \def\Hy@tempa{#1}%
12562 \ifx\Hy@tempa\@urltype
12563 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12564 \else
12565 \begingroup
12566 \hyper@chars
12567 \special{%
12568 html:<a href=%
12569 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12570 }%
12571 \endgroup
12572 \fi
12573 }
12574 \def\hyper@linkend{%
12575 \special{html:</a>}%
12576 \Hy@endcolorlink
12577 }
12578 \def\hyper@linkfile#1#2#3{%
12579 \hyper@linkurl{#1}{%
12580 \Hy@linkfileprefix#2\ifx\#3\\\else\#3\fi
12581 }%
12582 }
12583 \def\hyper@linkurl#1#2{%
12584 \leavevmode
12585 \ifHy@raiselinks
12586 \Hy@SaveSpaceFactor
12587 \Hy@SaveSavedSpaceFactor
12588 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12589 \Hy@RestoreSavedSpaceFactor
12590 \@linkdim\dp\@tempboxa
12591 \lower\@linkdim\hbox{%

```

```

12592 \hyper@chars
12593 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12594 }%
12595 \Hy@colorlink\@urlcolor
12596 \Hy@RestoreSpaceFactor
12597 #1\Hy@xspace@end
12598 \Hy@SaveSpaceFactor
12599 \@linkdim\ht\@tempboxa
12600 \advance\@linkdim by -6.5\p@
12601 \raise\@linkdim\hbox{\special{html:</a>}}%
12602 \Hy@endcolorlink
12603 \Hy@RestoreSpaceFactor
12604 \else
12605 \begingroup
12606 \hyper@chars
12607 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12608 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12609 \special{html:</a>}%
12610 \Hy@endcolorlink
12611 \endgroup
12612 \fi
12613 }

```

Very poor implementation of \hyper@link without considering #1.

```

12614 \def\hyper@link#1#2#3{%
12615 \Hy@VerboseLinkStart{#1}{#2}%
12616 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
12617 }
12618 \def\hyper@image#1#2{%
12619 \begingroup
12620 \hyper@chars
12621 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12622 \endgroup
12623 }
12624 </textures>

```

47.12 dvipsone

```

12625 % \subsection{dvipsone driver}
12626 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12627 % |\special| commands.
12628 (*dvipsone)
12629 \providecommand*\XR@ext>{pdf}
12630 \let\Hy@raisedlink\ltx@empty
12631 \providecommand*\@pdfborder{0 0 1}
12632 \providecommand*\@pdfborderstyle{}
12633 \def\literalps@out#1{\special{ps:#1}}%
12634 \def\headerps@out#1{\special{headertext=#1}}%
12635 \input{pdfmark.def}%
12636 \ifx\@pdfproducer\relax
12637 \def\@pdfproducer{dvipsone + Distiller}%
12638 \fi
12639 \HyInfo@AddonUnsupportedtrue
12640 \def\PDF@FinishDoc{%
12641 \Hy@UseMaketitleInfos
12642 \HyInfo@TrappedUnsupported
12643 \special{PDF: Keywords \@pdfkeywords}%
12644 \special{PDF: Title \@pdftitle}%

```

```

12645 \special{PDF: Creator \@pdfcreator}%
12646 \ifx\@pdfcreationdate\@empty
12647 \else
12648 \special{PDF: CreationDate \@pdfcreationdate}%
12649 \fi
12650 \ifx\@pdfmoddate\@empty
12651 \else
12652 \special{PDF: ModDate \@pdfmoddate}%
12653 \fi
12654 \special{PDF: Author \@pdfauthor}%
12655 \ifx\@pdfproducer\relax
12656 \else
12657 \special{PDF: Producer \@pdfproducer}%
12658 \fi
12659 \special{PDF: Subject \@pdfsubject}%
12660 \Hy@DisableOption{pdfauthor}%
12661 \Hy@DisableOption{pdftitle}%
12662 \Hy@DisableOption{pdfsubject}%
12663 \Hy@DisableOption{pdfcreator}%
12664 \Hy@DisableOption{pdfcreationdate}%
12665 \Hy@DisableOption{pdfmoddate}%
12666 \Hy@DisableOption{pdfproducer}%
12667 \Hy@DisableOption{pdfkeywords}%
12668 \Hy@DisableOption{pdftrapped}%
12669 \Hy@DisableOption{pdfinfo}%
12670 }
12671 \def\PDF@SetupDoc{%
12672 \def\Hy@temp{}%
12673 \ifx\@pdfstartpage\@empty
12674 \else
12675 \ifx\@pdfstartview\@empty
12676 \else
12677 \edef\Hy@temp{%
12678 ,Page=\@pdfstartpage
12679 ,View=\@pdfstartview
12680 }%
12681 \fi
12682 \fi
12683 \edef\Hy@temp{%
12684 \noexpand\pdfmark{%
12685 pdfmark=/DOCVIEW,%
12686 PageMode=/\@pdfpagemode
12687 \Hy@temp
12688 }%
12689 }%
12690 \Hy@temp
12691 \ifx\@pdfpagescrop\@empty
12692 \else
12693 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12694 \fi
12695 \edef\Hy@temp{%
12696 \ifHy@pdftoolbar\else /HideToolbar true\fi
12697 \ifHy@pdfmenubar\else /HideMenubar true\fi
12698 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12699 \ifHy@pdffitwindow /FitWindow true\fi
12700 \ifHy@pdfcenterwindow /CenterWindow true\fi
12701 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi

```

```

12702 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12703 \Hy@UseNameKey{Direction}\@pdfdirection
12704 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12705 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12706 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12707 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12708 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12709 \Hy@UseNameKey{Duplex}\@pdfduplex
12710 \ifx\@pdfpicktraybypdfsize\@empty
12711 \else
12712 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12713 \fi
12714 \ifx\@pdfprintpagerange\@empty
12715 \else
12716 /PrintPageRange[\@pdfprintpagerange]%
12717 \fi
12718 \ifx\@pdfnumcopies\@empty
12719 \else
12720 /NumCopies \@pdfnumcopies
12721 \fi
12722 }%
12723 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12724 \pdfmark{%
12725 pdfmark=/PUT,%
12726 Raw={%
12727 \string{Catalog\string}<<%
12728 \ifx\Hy@temp\@empty
12729 \else
12730 /ViewerPreferences<<\Hy@temp>>%
12731 \fi
12732 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12733 \ifx\@pdflang\@empty
12734 \else
12735 /Lang(\@pdflang)%
12736 \fi
12737 \ifx\@baseurl\@empty
12738 \else
12739 /URI<</Base(\Hy@pstringB)>>%
12740 \fi
12741 >>%
12742 }%
12743 }%
12744 }
12745 \providecommand*\@pdfview{XYZ}
12746 \providecommand*\@pdfviewparams{ %
12747 gsave revscl currentpoint grestore %
12748 72 add exch pop null exch null%
12749 }
12750 \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 .

```

12751 \g@addto@macro\Hy@FirstPageHook{%
12752 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

12753 /DvipsToPDF { 65781 div } def%
12754 /PDFToDvips { 65781 mul } def%
12755 /BPToDvips{65781 mul}def%
12756 /HyperBorder { 1 PDFToDvips } def%
12757 /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.

```

12758 /BorderArrayPatch{%
12759   [exch{%
12760     dup dup type/integertype eq exch type/realtype eq or%
12761     {BPToDvips}if%
12762   }forall]%
12763 }def%

12764 /H.S {%
12765   currentpoint %
12766   HyperBorder add /pdf@lly exch def %
12767   dup DvipsToPDF 72 add /pdf@hoff exch def %
12768   HyperBorder sub /pdf@llx exch def%
12769 } def%

12770 /H.L {%
12771   2 sub %
12772   PDFToDvips /HyperBase exch def %
12773   currentpoint %
12774   HyperBase sub /pdf@ury exch def%
12775   /pdf@urx exch def%
12776 } def%

12777 /H.A {%
12778   H.L %
12779   currentpoint exch pop %
12780   HyperBase sub % baseline skip
12781   DvipsToPDF /pdf@voff exch def%
12782 } def%

12783 /H.R {%
12784   currentpoint %
12785   HyperBorder sub /pdf@ury exch def %
12786   HyperBorder add /pdf@urx exch def %
12787   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12788 } def%
12789 }%
12790 }

12791 \def\setpdfinkmargin#1{%
12792   \begingroup
12793     \setlength{\dimen@}{#1}%
12794     \literalps@out{%
12795       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12796     }%
12797   \endgroup
12798 }

12799 </dvipsone>

```

47.13 TeX4ht

```

12800 <*tex4ht>
12801 \providecommand*\XR@ext}{html}
12802 \let\Hy@raisedlink\ltx@empty

```

```

12803 \@ifpackageloaded{tex4ht}{%
12804   \Hy@InfoNoLine{tex4ht is already loaded}%
12805 }{%
12806   \RequirePackage[hTeX]{tex4ht}%
12807 }
12808 \hyperlinkfileprefix{}
12809 \let\PDF@FinishDoc\ltx@empty
12810 \def\PDF@SetupDoc{%
12811   \ifx\@baseurl\@empty
12812   \else
12813     \special{t4ht=<base href="\@baseurl">}%
12814   \fi
12815 }
12816 \Hy@WrapperDef\hyper@anchor#1{%
12817   \Hy@SaveLastskip
12818   \Hy@VerboseAnchor{#1}%
12819   \begingroup
12820     \let\protect=\string
12821     \special{t4ht=<a name=%
12822       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12823   \endgroup
12824   \Hy@activeanchortrue
12825   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12826   \special{t4ht=</a>}%
12827   \Hy@activeanchorfalse
12828   \Hy@RestoreLastskip
12829 }
12830 \Hy@WrapperDef\hyper@anchorstart#1{%
12831   \Hy@SaveLastskip
12832   \Hy@VerboseAnchor{#1}%
12833   \begingroup
12834     \hyper@chars\special{t4ht=<a name=%
12835       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12836   \endgroup
12837   \Hy@activeanchortrue
12838 }
12839 \def\hyper@anchorend{%
12840   \special{t4ht=</a>}%
12841   \Hy@activeanchorfalse
12842   \Hy@RestoreLastskip
12843 }
12844 \def\@urltype{url}
12845 \def\hyper@linkstart#1#2{%
12846   \Hy@VerboseLinkStart{#1}{#2}%
12847   \expandafter\Hy@colorlink\csname @#1color\endcsname
12848   \def\Hy@tempa{#1}%
12849   \ifx\Hy@tempa\@urltype
12850     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12851   \else
12852     \begingroup
12853       \hyper@chars
12854       \special{t4ht=<a href=%
12855         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12856     \endgroup
12857   \fi
12858 }
12859 \def\hyper@linkend{%

```

```

12860 \special{t4ht=</a>}%
12861 \Hy@endcolorlink
12862 }
12863 \def\hyper@linkfile#1#2#3{%
12864 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12865 }
12866 \def\hyper@linkurl#1#2{%
12867 \leavevmode
12868 \ifHy@raiselinks
12869 \Hy@SaveSpaceFactor
12870 \Hy@SaveSavedSpaceFactor
12871 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12872 \Hy@RestoreSavedSpaceFactor
12873 \@linkdim\dp\@tempboxa
12874 \lower\@linkdim\hbox{%
12875 \begingroup
12876 \hyper@chars
12877 \special{%
12878 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12879 }%
12880 \endgroup
12881 }%
12882 \Hy@colorlink\@urlcolor
12883 \Hy@RestoreSpaceFactor
12884 #1\Hy@xspace@end
12885 \Hy@SaveSpaceFactor
12886 \Hy@endcolorlink
12887 \@linkdim\ht\@tempboxa
12888 \advance\@linkdim by -6.5\p@
12889 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12890 \Hy@RestoreSpaceFactor
12891 \else
12892 \begingroup
12893 \hyper@chars
12894 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12895 \Hy@colorlink\@urlcolor
12896 #1\Hy@xspace@end
12897 \Hy@endcolorlink
12898 \special{t4ht=</a>}%
12899 \endgroup
12900 \fi
12901 }

```

Poor implementation of \hyper@link without considering #1.

```

12902 \def\hyper@link#1#2#3{%
12903 \Hy@VerboseLinkStart{#1}{#2}%
12904 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
12905 }
12906 \def\hyper@image#1#2{%
12907 \begingroup
12908 \hyper@chars
12909 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12910 \endgroup
12911 }
12912 \let\autoref\ref
12913 \ifx \rEfLiNK \UnDef
12914 \def\rEfLiNK #1#2{#2}%
12915 \fi

```

```

12916 \let\backref\ltx@gobble
Fix for tex4ht.
12917 \AtBeginDocument{%
12918   \expandafter
12919   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12920   \expandafter\def\csname Make:Label\endcsname#1#2{%
12921     \ifhmode
12922       \Hy@SaveSpaceFactor
12923     \else
12924       \global\Hy@SavedSpaceFactor=1000 %
12925     \fi
12926     \Hy@OrgMakeLabel{#1}{%
12927       \Hy@RestoreSpaceFactor
12928       #2\Hy@xspace@end%
12929       \Hy@SaveSpaceFactor
12930     }%
12931     \Hy@RestoreSpaceFactor
12932   }%
12933 }
12934 </tex4ht>
12935 <*tex4htcfg>
12936 \IfFileExists{\jobname.cfg}{\endinput}{}
12937 \Preamble{html}
12938   \begin{document}%
12939 \EndPreamble
12940 \def\TeX{TeX}
12941 \def\OMEGA{Omega}
12942 \def\LaTeX{LaTeX}
12943 \def\LaTeXe{\LaTeX2e}
12944 \def\eTeX{e-TeX}
12945 \def\MF{Metafont}
12946 \def\MP{MetaPost}
12947 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

12948 <*pdfmark>
12949 \long\def\@Form[#1]{%
12950 \g@addto@macro\Hy@FirstPageHook{%
12951   \headerps@out{%
12952 [%
12953   /_objdef{pdfDocEncoding}%
12954   /type/dict%
12955   /OBJ pdfmark%
12956 [%
12957   {pdfDocEncoding}%
12958   <<%
12959   /Type/Encoding%
12960   /Differences[%
12961     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12962     /tilde %
12963     39/quotesingle %
12964     96/grave %
12965     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12966     /fraction/guilsinglleft/guilsinglright/minus/perthousand%

```


12967 /quotedblbase/quotedblleft/quotedblright/quoteleft%
 12968 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
 12969 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
 12970 164/currency %
 12971 166/brokenbar %
 12972 168/dieresis/copyright/ordfeminine %
 12973 172/logicalnot/.notdef/registered/macron/degree/plusminus%
 12974 /twosuperior/threesuperior/acute/mu %
 12975 183/periodcentered/cedilla/onesuperior/ordmasculine %
 12976 188/onequarter/onehalf/threequarters %
 12977 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
 12978 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
 12979 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
 12980 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
 12981 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
 12982 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
 12983 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
 12984 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
 12985 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
 12986 /ucircumflex/udieresis/yacute/thorn/ydieresis%
 12987]%
 12988 >>%
 12989 /PUT pdfmark%
 12990 [%
 12991 /_objdef{ZaDb}%
 12992 /type/dict%
 12993 /OBJ pdfmark%
 12994 [%
 12995 {ZaDb}%
 12996 <<%
 12997 /Type/Font%
 12998 /Subtype/Type1%
 12999 /Name/ZaDb%
 13000 /BaseFont/ZapfDingbats%
 13001 >>%
 13002 /PUT pdfmark%
 13003 [%
 13004 /_objdef{Helv}%
 13005 /type/dict%
 13006 /OBJ pdfmark%
 13007 [%
 13008 {Helv}%
 13009 <<%
 13010 /Type/Font%
 13011 /Subtype/Type1%
 13012 /Name/Helv%
 13013 /BaseFont/Helvetica%
 13014 /Encoding{pdfDocEncoding}%
 13015 >>%
 13016 /PUT pdfmark%
 13017 [%
 13018 /_objdef{aform}%
 13019 /type/dict%
 13020 /OBJ pdfmark%
 13021 [%
 13022 /_objdef{afields}%
 13023 /type/array%

```

13024 /OBJ pdfmark%
13025 [%
13026   /__objdef{corder}%
13027   /type/array%
13028 /OBJ pdfmark%
13029 {%
13030 [%
13031   /BBox[0 0 100 100]%
13032   /__objdef{Check}%
13033 /BP pdfmark %
13034 1 0 0 setrgbcolor%
13035 /ZapfDingbats 80 selectfont %
13036 20 20 moveto%
13037 (4)show%
13038 [/EP pdfmark%
13039 [%
13040   /BBox[0 0 100 100]%
13041   /__objdef{Cross}%
13042 /BP pdfmark %
13043 1 0 0 setrgbcolor%
13044 /ZapfDingbats 80 selectfont %
13045 20 20 moveto%
13046 (8)show%
13047 [/EP pdfmark%
13048 [%
13049   /BBox[0 0 250 100]%
13050   /__objdef{Submit}%
13051 /BP pdfmark %
13052 0.6 setgray %
13053 0 0 250 100 rectfill %
13054 1 setgray %
13055 2 2 moveto %
13056 2 98 lineto %
13057 248 98 lineto %
13058 246 96 lineto %
13059 4 96 lineto %
13060 4 4 lineto %
13061 fill %
13062 0.34 setgray %
13063 248 98 moveto %
13064 248 2 lineto %
13065 2 2 lineto %
13066 4 4 lineto %
13067 246 4 lineto %
13068 246 96 lineto %
13069 fill%
13070 /Helvetica 76 selectfont %
13071 0 setgray %
13072 8 22.5 moveto%
13073 (Submit)show%
13074 [/EP pdfmark%
13075 [%
13076   /BBox[0 0 250 100]%
13077   /__objdef{SubmitP}%
13078 /BP pdfmark %
13079 0.6 setgray %
13080 0 0 250 100 rectfill %

```

```

13081 0.34 setgray %
13082 2 2 moveto %
13083 2 98 lineto %
13084 248 98 lineto %
13085 246 96 lineto %
13086 4 96 lineto %
13087 4 4 lineto %
13088 fill %
13089 1 setgray %
13090 248 98 moveto %
13091 248 2 lineto %
13092 2 2 lineto %
13093 4 4 lineto %
13094 246 4 lineto %
13095 246 96 lineto %
13096 fill%
13097 /Helvetica 76 selectfont %
13098 0 setgray %
13099 10 20.5 moveto%
13100 (Submit)show%
13101 [/EP pdfmark%
13102 } ?pdfmark%
13103 [%
13104 {aform}%
13105 <<%
13106 /Fields{afields}%
13107 /DR<<%
13108 /Font<<%
13109 /ZaDb{ZaDb}%
13110 /Helv{Helv}%
13111 >>%
13112 >>%
13113 /DA(/Helv 10 Tf 0 g)%
13114 /CO{corder}%
13115 \ifHy@pdfa
13116 \else
13117 \ifHyField@NeedAppearances
13118 /NeedAppearances true%
13119 \fi
13120 \fi
13121 >>%
13122 /PUT pdfmark%
13123 [%
13124 {Catalog}%
13125 <<%
13126 /AcroForm{aform}%
13127 >>%
13128 /PUT pdfmark%
13129 }}%
13130 \kvsetkeys{Form}{#1}%
13131 }
13132 \let\@endForm\ltx@empty
13133 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13134 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13135 }

13136 \newcount\HyField@AnnotCount
13137 \HyField@AnnotCount=\z@

```

```

13138 \def\HyField@AdvanceAnnotCount{%
13139   \global\advance\HyField@AnnotCount\@ne
13140 }
13141 \def\HyField@TheAnnotCount{%
13142   \the\HyField@AnnotCount
13143 }
13144 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13145 \def\HyField@AddToFields#1{%
13146   \pdfmark{%
13147     pdfmark=/APPEND,%
13148     Raw={%
13149       \string{afields\string}%
13150       \string{#1\HyField@TheAnnotCount\string}%
13151     }%
13152   }%
13153   \ifx\Fld@calculate@code\ltx@empty
13154   \else
13155     \pdfmark{%
13156       pdfmark=/APPEND,%
13157       Raw={%
13158         \string{corder\string}%
13159         \string{#1\HyField@TheAnnotCount\string}%
13160       }%
13161     }%
13162   \fi
13163 }
13164 \def\@TextField[#1]#2{% parameters, label
13165   \def\Fld@name{#2}%
13166   \let\Fld@default\ltx@empty
13167   \let\Fld@value\@empty
13168   \def\Fld@width{\DefaultWidthofText}%
13169   \def\Fld@height{%
13170     \ifFld@multiline
13171       \DefaultHeightofTextMultiline
13172     \else
13173       \DefaultHeightofText
13174     \fi
13175   }%
13176   \begingroup
13177   \expandafter\HyField@SetKeys\expandafter{%
13178     \DefaultOptionsofText,#1%
13179   }%
13180   \HyField@FlagsText
13181   \ifFld@hidden\def\Fld@width{1sp}\fi
13182   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13183   \HyField@AdvanceAnnotCount
13184   \LayoutTextField{#2}{%
13185     \leavevmode
13186     \Hy@escapeform\PDFForm@Text
13187     \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
13188       pdfmark=/ANN,%
13189       objdef=text\HyField@TheAnnotCount,%
13190       Raw={\PDFForm@Text}%
13191     }%
13192   }%
13193   \HyField@AddToFields{text}%

```

```

13194 \endgroup
13195 }
13196 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13197 \def\Fld@name{#2}%
13198 \let\Fld@default\relax
13199 \let\Fld@value\relax
13200 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13201 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13202 \begingroup
13203 \Fld@menulength=0 %
13204 \@tempdima\z@
13205 \@for\@curropt:=#3\do{%
13206 \expandafter\Fld@checkequals\@curropt==\%
13207 \Hy@StepCount\Fld@menulength
13208 \settowidth{\@tempdimb}{\@currDisplay}%
13209 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13210 }%
13211 \advance\@tempdima by 15\p@
13212 \begingroup
13213 \HyField@SetKeys{#1}%
13214 \edef\x{\endgroup
13215 \noexpand\expandafter
13216 \noexpand\HyField@SetKeys
13217 \noexpand\expandafter{%
13218 \expandafter\noexpand\csname DefaultOptionsof%
13219 \ifFld@radio
13220 Radio%
13221 \else
13222 \ifFld@combo
13223 \ifFld@popdown
13224 PopdownBox%
13225 \else
13226 ComboBox%
13227 \fi
13228 \else
13229 ListBox%
13230 \fi
13231 \fi
13232 \endcsname
13233 }%
13234 }\x
13235 \HyField@SetKeys{#1}%
13236 \ifFld@hidden\def\Fld@width{1sp}\fi
13237 \ifx\Fld@value\relax
13238 \let\Fld@value\Fld@default
13239 \fi
13240 \LayoutChoiceField{#2}{%
13241 \ifFld@radio
13242 \HyField@FlagsRadioButton
13243 \@@Radio{#3}%
13244 \else
13245 \begingroup
13246 \HyField@FlagsChoice
13247 \ifdim\Fld@width<\@tempdima
13248 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13249 \edef\Fld@width{\the\@tempdima}%
13250 \fi

```

```

13251      \ifFld@combo
13252      \else
13253      \@tempdima=\the\Fld@menulength\Fld@charsize
13254      \advance\@tempdima by \Fld@borderwidth bp %
13255      \advance\@tempdima by \Fld@borderwidth bp %
13256      \edef\Fld@height{\the\@tempdima}%
13257      \fi
13258      \@@ListBox{#3}%
13259  \endgroup
13260  \fi
13261  }%
13262  \endgroup
13263  }
13264  \def\@@Radio#1{%
13265  \Fld@listcount=0 %
13266  \EdefEscapeName\Fld@default{\Fld@default}%
13267  \@for\@curropt:=#1\do{%
13268  \expandafter\Fld@checkequals\@curropt==\%
13269  \EdefEscapeName\@currValue{\@currValue}%
13270  \Hy@StepCount\Fld@listcount
13271  \@currDisplay\space
13272  \Hy@escapeform\PDFForm@Radio
13273  \ifnum\Fld@listcount=1 %
13274  \HyField@AdvanceAnnotCount
13275  \fi
13276  \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13277  pdfmark=/ANN,%
13278  objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13279  Raw={%
13280  \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13281  }%
13282  } % deliberate space between radio buttons
13283  \ifnum\Fld@listcount=1 %
13284  \HyField@AddToFields{radio}%
13285  \fi
13286  }%
13287  }
13288  \newcount\Fld@listcount
13289  \def\@@ListBox#1{%
13290  \HyField@PDFChoices{#1}%
13291  \Hy@escapeform\PDFForm@List
13292  \HyField@AdvanceAnnotCount
13293  \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13294  pdfmark=/ANN,%
13295  objdef=list\HyField@TheAnnotCount,%
13296  Raw={\PDFForm@List}%
13297  }%
13298  \HyField@AddToFields{list}%
13299  }
13300  \def\@PushButton[#1]#2{% parameters, label
13301  \def\Fld@name{#2}%
13302  \begingroup
13303  \expandafter\HyField@SetKeys\expandafter{%
13304  \DefaultOptionsofPushButton,#1%
13305  }%
13306  \ifHy@pdfa
13307  \Hy@Error{%

```

```

13308     PDF/A: Push button with JavaScript is prohibited%
13309 } \@ehc
13310 \LayoutPushButtonField{%
13311     \leavevmode
13312     \MakeButtonField{#2}%
13313 }%
13314 \else
13315     \HyField@FlagsPushButton
13316     \ifFld@hidden\def\Fld@width{1sp}\fi
13317     \HyField@AdvanceAnnotCount
13318     \LayoutPushButtonField{%
13319         \leavevmode
13320         \Hy@escapeform\PDFForm@Push
13321         \pdfmark[\MakeButtonField{#2}]{%
13322             pdfmark=/ANN,%
13323             objdef=push\HyField@TheAnnotCount,%
13324             Raw={\PDFForm@Push}%
13325         }%
13326     }%
13327     \HyField@AddToFields{push}%
13328 \fi
13329 \endgroup
13330 }
13331 \def\@Submit[#1]#2{%
13332     \def\Fld@width{\DefaultWidthofSubmit}%
13333     \def\Fld@height{\DefaultHeightofSubmit}%
13334     \begingroup
13335         \expandafter\HyField@SetKeys\expandafter{%
13336             \DefaultOptionsofSubmit,#1%
13337         }%
13338         \HyField@FlagsPushButton
13339         \HyField@FlagsSubmit
13340         \ifFld@hidden\def\Fld@width{1sp}\fi
13341         \Hy@escapeform\PDFForm@Submit
13342         \HyField@AdvanceAnnotCount
13343         \pdfmark[\MakeButtonField{#2}]{%
13344             pdfmark=/ANN,%
13345             objdef=submit\HyField@TheAnnotCount,%
13346             Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13347         }%
13348         \HyField@AddToFields{submit}%
13349     \endgroup
13350 }
13351 \def\@Reset[#1]#2{%
13352     \def\Fld@width{\DefaultWidthofReset}%
13353     \def\Fld@height{\DefaultHeightofReset}%
13354     \begingroup
13355         \expandafter\HyField@SetKeys\expandafter{%
13356             \DefaultOptionsofReset,#1%
13357         }%
13358         \leavevmode
13359         \ifHy@pdfa
13360             \Hy@Error{%
13361                 PDF/A: Reset action is prohibited%
13362             } \@ehc
13363             \MakeButtonField{#2}%
13364         \else

```

```

13365 \HyField@FlagsPushButton
13366 \ifFld@hidden\def\Fld@width{1sp}\fi
13367 \Hy@escapeform\PDFForm@Reset
13368 \HyField@AdvanceAnnotCount
13369 \pdfmark[\MakeButtonField{#2}]{%
13370 pdfmark=/ANN,%
13371 objdef=reset\HyField@TheAnnotCount,%
13372 Raw={\PDFForm@Reset}%
13373 }%
13374 \HyField@AddToFields{reset}%
13375 \fi
13376 \endgroup
13377 }%
13378 \def\@CheckBox[#1]#2{% parameters, label
13379 \def\Fld@name{#2}%
13380 \def\Fld@default{0}%
13381 \begingroup
13382 \def\Fld@width{\DefaultWidthofCheckBox}%
13383 \def\Fld@height{\DefaultHeightofCheckBox}%
13384 \expandafter\HyField@SetKeys\expandafter{%
13385 \DefaultOptionsofCheckBox,#1%
13386 }%
13387 \HyField@FlagsCheckBox
13388 \ifFld@hidden\def\Fld@width{1sp}\fi
13389 \HyField@AdvanceAnnotCount
13390 \LayoutCheckField{#2}{%
13391 \leavevmode
13392 \Hy@escapeform\PDFForm@Check
13393 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13394 pdfmark=/ANN,%
13395 objdef=check\HyField@TheAnnotCount,%
13396 Raw={\PDFForm@Check}%
13397 }%
13398 }%
13399 \HyField@AddToFields{check}%
13400 \endgroup
13401 }
13402 \pdfmark>

```

48.2 HyperTeX

```

13403 (*hypertex)
13404 \def\@Form[#1]{%
13405 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13406 }
13407 \let\@endForm\ltx@empty
13408 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13409 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13410 }
13411 \def\@TextField[#1]#2{% parameters, label
13412 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13413 }
13414 \def\@CheckBox[#1]#2{% parameters, label
13415 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13416 }
13417 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13418 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13419 }

```



```

13420 \def\@PushButton[#1]#2{% parameters, label
13421   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13422 }
13423 \def\@Reset[#1]#2{%
13424   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13425 }
13426 \def\@Submit[#1]#2{%
13427   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13428 }
13429 </hypertex>

```

48.3 TeX4ht

```

13430 (*tex4ht)
13431 \def\@Form[#1]{%
13432   \kvsetkeys{Form}{#1}%
13433   \HCode{<form action="\Form@action" method="\Form@method">}%
13434 }
13435 \def\@endForm{\HCode{</form>}}
13436 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13437   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13438 }
13439 \def\@TextField[#1]#2{% parameters, label
13440   \let\Hy@reserved@a\@empty
13441   \def\Fld@name{#2}%
13442   \let\Fld@default\ltx@empty
13443   \bgroup
13444     \Field@toks={ }%
13445     \kvsetkeys{Field}{#1}%
13446     \HCode{<label for="\Fld@name">#2</label>}%
13447     \ifFld@password
13448       \@@PasswordField
13449     \else
13450       \@@TextField
13451     \fi
13452   \egroup
13453 }
13454 \def\@@PasswordField{%
13455   \HCode{%
13456     <input type="password" %
13457       id="\Fld@name" %
13458       name="\Fld@name" %
13459       \ifFld@hidden type="hidden" \fi
13460       value="\Fld@default" %
13461       \the\Field@toks
13462     >%
13463   }%
13464 }
13465 \def\@@TextField{%
13466   \ifFld@multiline
13467     \HCode{<textarea %
13468       \ifFld@readonly readonly \fi
13469       id="\Fld@name" %
13470       name="\Fld@name" %
13471       \ifFld@hidden type="hidden" \fi
13472       \the\Field@toks>%
13473   }%
13474   \Fld@default

```

```

13475 \HCode{</textarea>}%
13476 \else
13477 \HCode{<input type="textbox" %
13478 \ifFld@readonly readonly \fi
13479 id="\Fld@name" %
13480 name="\Fld@name" %
13481 \ifFld@hidden type="hidden" \fi
13482 value="\Fld@default" %
13483 \the\Field@toks>%
13484 }%
13485 \fi
13486 }
13487 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13488 \def\Fld@name{#2}%
13489 \let\Fld@default\ltx@empty
13490 \let\Hy@reserved@a\relax
13491 \begingroup
13492 \expandafter\Fld@findlength#3\\%
13493 \Field@toks={ }%
13494 \kvsetkeys{Field}{#1}%
13495 #2%
13496 \ifFld@radio
13497 \expandafter\@@Radio#3\\%
13498 \else
13499 \expandafter\@@Menu#3\\%
13500 \fi
13501 \endgroup
13502 }
13503 \def\Fld@findlength#1\\{%
13504 \Fld@menulength=0 %
13505 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13506 }
13507 \def\@@Menu#1\\{%
13508 \HCode{<select size="\the\Fld@menulength" %
13509 name="\Fld@name" %
13510 \the\Field@toks>%
13511 }%
13512 \@for\@curropt:=#1\do{%
13513 \expandafter\Fld@checkequals\@curropt==\\%
13514 \HCode{<option %
13515 \ifx\@curropt\Fld@default selected \fi
13516 value="\@currValue">\@currDisplay</option>%
13517 }%
13518 }%
13519 \HCode{</select>}%
13520 }
13521 \def\@@Radio#1\\{%
13522 \@for\@curropt:=#1\do{%
13523 \expandafter\Fld@checkequals\@curropt==\\%
13524 \HCode{<input type="radio" %
13525 \ifx\@curropt\Fld@default checked \fi
13526 name="\Fld@name" %
13527 value="\@currValue" %
13528 \the\Field@toks>%
13529 }%
13530 \@currDisplay
13531 }%

```

```

13532 }
13533 \def\@PushButton[#1]#2{% parameters, label
13534 \def\Fld@name{#2}%
13535 \bgroup
13536 \Field@toks={ }%
13537 \kvsetkeys{Field}{#1}%
13538 \HCode{<input type="button" %
13539 name="\Fld@name" %
13540 value="#2" %
13541 \the\Fld@toks>%
13542 }%
13543 \HCode{</button>}%
13544 \egroup
13545 }
13546 \def\@Submit[#1]#2{%
13547 \HCode{<button type="submit">#2</button>}%
13548 }
13549 \def\@Reset[#1]#2{%
13550 \HCode{<button type="reset">#2</button>}%
13551 }
13552 \def\@CheckBox[#1]#2{% parameters, label
13553 \let\Hy@reserved@a\@empty
13554 \def\Fld@name{#2}%
13555 \def\Fld@default{0}%
13556 \bgroup
13557 \Field@toks={ }%
13558 \kvsetkeys{Field}{#1}%
13559 \HCode{<input type="checkbox" %
13560 \ifFld@checked checked \fi
13561 \ifFld@disabled disabled \fi
13562 \ifFld@readonly readonly \fi
13563 name="\Fld@name" %
13564 \ifFld@hidden type="hidden" \fi
13565 value="\Fld@default" %
13566 \the\Fld@toks>%
13567 #2%
13568 }%
13569 \egroup
13570 }
13571 </tex4ht>

```

48.4 pdfTeX

```

13572 <*pdfTeX>
13573 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13574 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13575 }
13576 \def\MakeFieldObject#1#2{\sbox0{#1}%
13577 \immediate\pdfxform0 %
13578 \expandafter\edef\csname #2Object\endcsname{%
13579 \the\pdflastxform\space 0 R%
13580 }%
13581 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
13582 }%
13583 \let\HyField@afields\ltx@empty
13584 \let\HyField@cofields\ltx@empty
13585 \begingroup\expandafter\expandafter\expandafter\endgroup
13586 \expandafter\ifx\csname pdflastlink\endcsname\relax

```

```

13587 \let\HyField@AddToFields\relax
13588 \PackageInfo{hyperref}{%
13589   You need pdfTeX 1.40.0 for setting the /Fields entry.%
13590   \MessageBreak
13591   Adobe Reader/Acrobat accepts an empty /Field array,%
13592   \MessageBreak
13593   but other PDF viewers might complain%
13594 }%
13595 \else
13596 \let\HyField@AuxAddToFields\ltx@gobble
13597 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13598 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%

```

Insertion sort for calculation field list. In case of equal sort keys (for example, if ‘calculatesortkey’ is not used at all) the keys keep document calling order.

```

13599 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13600   \begingroup
13601     \Hy@safe@activetrue
13602     \let\ltx@secondoftwo\relax
13603     \ifx\HyField@cofields\ltx@empty
13604       \xdef\HyField@cofields{%
13605         \ltx@secondoftwo{#1}{ #2 0 R}%
13606       }%
13607     \else
13608       \let\ltx@secondoftwo\relax
13609       \def\HyField@AddCoField##1##2##3{%
13610         \ifx##1\ltx@empty
13611           \ltx@secondoftwo{#1}{ #2 0 R}%
13612           \expandafter\ltx@gobble
13613         \else
13614           \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13615             \ltx@secondoftwo{#1}{ #2 0 R}%
13616             \ltx@secondoftwo{##2}{##3}%
13617             \expandafter\expandafter\expandafter\ltx@gobble
13618           \else
13619             \ltx@secondoftwo{##2}{##3}%
13620           \fi
13621         \fi
13622         \HyField@AddCoField
13623       }%
13624       \xdef\HyField@cofields{%
13625         \expandafter\HyField@AddCoField
13626         \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13627       }%
13628     \fi
13629   \endgroup
13630 }%
13631 \Hy@AtBeginDocument{%
13632   \if@filesw
13633     \immediate\write\@mainaux{%
13634       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13635     }%
13636     \immediate\write\@mainaux{%
13637       \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13638     }%
13639   \fi
13640   \let\HyField@AfterAuxOpen\@firstofone
13641   \def\HyField@AuxAddToFields#1{%

```

```

13642 \xdef\HyField@afields{%
13643 \ifx\HyField@afields\@empty
13644 \else
13645 \HyField@afields
13646 \space
13647 \fi
13648 #1 0 R%
13649 }%
13650 }%
13651 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13652 }%
13653 \def\HyField@AddToFields{%
13654 \expandafter\HyField@@AddToFields\expandafter{%
13655 \the\pdfastlink
13656 }%
13657 \ifx\Fld@calculate@code\ltx@empty
13658 \else
13659 \begingroup
13660 \Hy@safe@activetrue
13661 \edef\Hy@temp{%
13662 \endgroup
13663 \if@filesw
13664 \write\@mainaux{%
13665 \string\HyField@AuxAddToCoFields{%
13666 \Fld@calculate@sortkey
13667 }{%
13668 \the\pdfastlink
13669 }%
13670 }%
13671 \fi
13672 }%
13673 \Hy@temp
13674 \fi
13675 }%
13676 \def\HyField@@AddToFields#1{%
13677 \HyField@AfterAuxOpen{%
13678 \if@filesw
13679 \write\@mainaux{%
13680 \string\HyField@AuxAddToFields{#1}%
13681 }%
13682 \fi
13683 }%
13684 }%
13685 \fi
13686 \def\@Form[#1]{%
13687 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13688 \kvsetkeys{Form}{#1}%
13689 \pdf@ifdraftmode{}{%
13690 \Hy@FormObjects
13691 \ifnum\pdfTeXversion>13 %
13692 \pdfrefobj\OBJ@pdfdocencoding
13693 \pdfrefobj\OBJ@ZaDb
13694 \pdfrefobj\OBJ@Helv
13695 \fi
13696 \AtVeryEndDocument{%
13697 \immediate\pdfobj{%
13698 <<%

```

```

13699      /Fields[\HyField@afields]%
13700      \ifx\HyField@cofields\ltx@empty
13701      \else
13702      /CO[\romannumeral-'\Q\HyField@cofields]%
13703      \fi
13704      /DR<<%
13705      /Font<<%
13706      /ZaDb \OBJ@ZaDb\space 0 R%
13707      /Helv \OBJ@Helv\space 0 R%
13708      >>%
13709      >>%
13710      /DA(/Helv 10 Tf 0 g)%
13711      \ifHy@pdfa
13712      \else
13713      \ifHyField@NeedAppearances
13714      /NeedAppearances true%
13715      \fi
13716      \fi
13717      >>%
13718      }%
13719      \edef\OBJ@acroform{\the\pdfflastobj}%
13720      \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13721      }%
13722      }%
13723      \MakeFieldObject{%
Same as \ding{123} of package pifont.
13724      \begingroup
13725      \fontfamily{pzd}%
13726      \fontencoding{U}%
13727      \fontseries{m}%
13728      \fontshape{n}%
13729      \selectfont
13730      \char123 %
13731      \endgroup
13732      }{Ding}%
13733      \MakeFieldObject{%
13734      \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13735      }{Submit}%
13736      \MakeFieldObject{%
13737      \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13738      }{SubmitP}%
13739      }
13740      \let\@endForm\ltx@empty
13741      \let\HyAnn@AbsPageLabel\ltx@empty
13742      \let\Fld@pageobjref\ltx@empty
13743      \ltx@ifUndefined{pdfpageref}{%
13744      }{%
13745      \ltx@ifpackageloaded{zref-abspage}{%
13746      \newcount\HyAnn@Count
13747      \HyAnn@Count=\ltx@zero
13748      \def\HyAnn@AbsPageLabel{%
13749      \global\advance\HyAnn@Count by\ltx@one
13750      \zref@labelbyprops{\HyAnn@\the\HyAnn@Count}{abspage}%
13751      \zref@refused{\HyAnn@\the\HyAnn@Count}%
13752      }%
13753      \def\Fld@pageobjref{%
13754      \zref@ifrefundefined{\HyAnn@\the\HyAnn@Count}{%

```

```

13755 }{%
13756 \zref@ifrefcontainsprop{HyAnn@the\HyAnn@Count}{abspage}{%
13757 /P \pdfpageref
13758 \zref@extractdefault{HyAnn@the\HyAnn@Count}{abspage}{1} %
13759 \space 0 R%
13760 }{%
13761 }%
13762 }%
13763 }%
13764 }{%
13765 }%
13766 }

13767 \def\@TextField[#1]#2{% parameters, label
13768 \def\Fld@name{#2}%
13769 \let\Fld@default\ltx@empty
13770 \let\Fld@value\@empty
13771 \def\Fld@width{\DefaultWidthofText}%
13772 \def\Fld@height{%
13773 \ifFld@multiline
13774 \DefaultHeightofTextMultiline
13775 \else
13776 \DefaultHeightofText
13777 \fi
13778 }%
13779 \begingroup
13780 \expandafter\HyField@SetKeys\expandafter{%
13781 \DefaultOptionsofText,#1%
13782 }%
13783 \PDFForm@Name
13784 \HyField@FlagsText
13785 \ifFld@hidden\def\Fld@width{1sp}\fi
13786 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13787 \LayoutTextField{#2}{%
13788 \leavevmode
13789 \HyAnn@AbsPageLabel
13790 \Hy@escapeform\PDFForm@Text
13791 \pdfstartlink user {\PDFForm@Text}\relax
13792 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13793 \HyField@AddToFields
13794 }%
13795 \endgroup
13796 }

13797 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13798 \def\Fld@name{#2}%
13799 \let\Fld@default\relax
13800 \let\Fld@value\relax
13801 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13802 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13803 \begingroup
13804 \Fld@menulength=0 %
13805 \@tempdima\z@
13806 \@for\@curropt:=#3\do{%
13807 \expandafter\Fld@checkequals\@curropt==\%
13808 \Hy@StepCount\Fld@menulength
13809 \settowidth{\@tempdimb}{\@currDisplay}%
13810 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13811 }%

```

```

13812 \advance\@tempdima by 15\p@
13813 \begingroup
13814 \HyField@SetKeys{#1}%
13815 \edef\x{\endgroup
13816 \noexpand\expandafter
13817 \noexpand\HyField@SetKeys
13818 \noexpand\expandafter{%
13819 \expandafter\noexpand\csname DefaultOptionsof%
13820 \ifFld@radio
13821 Radio%
13822 \else
13823 \ifFld@combo
13824 \ifFld@popdown
13825 PopdownBox%
13826 \else
13827 ComboBox%
13828 \fi
13829 \else
13830 ListBox%
13831 \fi
13832 \fi
13833 \endcsname
13834 }%
13835 }\x
13836 \HyField@SetKeys{#1}%
13837 \PDFForm@Name
13838 \ifFld@hidden\def\Fld@width{1sp}\fi
13839 \ifx\Fld@value\relax
13840 \let\Fld@value\Fld@default
13841 \fi
13842 \LayoutChoiceField{#2}{%
13843 \ifFld@radio
13844 \HyField@FlagsRadioButton
13845 \@@Radio{#3}%
13846 \else
13847 \begingroup
13848 \HyField@FlagsChoice
13849 \ifdim\Fld@width<\@tempdima
13850 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13851 \edef\Fld@width{\the\@tempdima}%
13852 \fi
13853 \ifFld@combo
13854 \else
13855 \@tempdima=\the\Fld@menulength\Fld@charsize
13856 \advance\@tempdima by \Fld@borderwidth bp %
13857 \advance\@tempdima by \Fld@borderwidth bp %
13858 \edef\Fld@height{\the\@tempdima}%
13859 \fi
13860 \@@ListBox{#3}%
13861 \endgroup
13862 \fi
13863 }%
13864 \endgroup
13865 }
13866 \def\@@Radio#1{%
13867 \Fld@listcount=0 %
13868 \EdefEscapeName\Fld@default{\Fld@default}%

```



```

13869 \@for\@curropt:=#1\do{%
13870   \expandafter\Fld@checkequals\@curropt==\%
13871   \EdefEscapeName\@currValue{\@currValue}%
13872   \Hy@StepCount\Fld@listcount
13873   \@currDisplay\space
13874   \leavevmode
13875   \HyAnn@AbsPageLabel
13876   \Hy@escapeform\PDFForm@Radio
13877   \pdfstartlink user {%
13878     \PDFForm@Radio
13879     /AP<<%
13880     /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.

```

13881     /\@currValue\space \DingObject
13882     >>%
13883     >>%
13884   }%
13885   \relax
13886   \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13887   \ifnum\Fld@listcount=1 %
13888     \HyField@AddToFields
13889   \fi
13890   \space % deliberate space between radio buttons
13891 }%
13892 }
13893 \newcount\Fld@listcount
13894 \def\@@Listbox#1{%
13895   \HyField@PDFChoices{#1}%
13896   \leavevmode
13897   \HyAnn@AbsPageLabel
13898   \Hy@escapeform\PDFForm@List
13899   \pdfstartlink user {\PDFForm@List}\relax
13900   \MakeChoiceField{\Fld@width}{\Fld@height}%
13901   \pdfendlink
13902   \HyField@AddToFields
13903 }
13904 \def\@PushButton[#1]#2{% parameters, label
13905   \def\Fld@name{#2}%
13906   \begingroup
13907     \expandafter\HyField@SetKeys\expandafter{%
13908       \DefaultOptionsofPushButton,#1%
13909     }%
13910     \PDFForm@Name
13911     \ifHy@pdfa
13912       \Hy@Error{%
13913         PDF/A: Push button with JavaScript is prohibited%
13914       }\@ehc
13915     \LayoutPushButtonField{%
13916       \leavevmode
13917       \MakeButtonField{#2}%
13918     }%
13919   \else
13920     \HyField@FlagsPushButton
13921     \ifFld@hidden\def\Fld@width{1sp}\fi
13922     \LayoutPushButtonField{%

```

```

13923     \leavevmode
13924     \HyAnn@AbsPageLabel
13925     \Hy@escapeform\PDFForm@Push
13926     \pdfstartlink user {\PDFForm@Push}\relax
13927     \MakeButtonField{#2}%
13928     \pdfendlink
13929     \HyField@AddToFields
13930   }%
13931   \fi
13932 \endgroup
13933 }
13934 \def\@Submit[#1]#2{%
13935   \def\Fld@width{\DefaultWidthofSubmit}%
13936   \def\Fld@height{\DefaultHeightofSubmit}%
13937   \begingroup
13938     \expandafter\HyField@SetKeys\expandafter{%
13939       \DefaultOptionsofSubmit,#1%
13940     }%
13941     \HyField@FlagsPushButton
13942     \HyField@FlagsSubmit
13943     \ifFld@hidden\def\Fld@width{1sp}\fi
13944     \leavevmode
13945     \HyAnn@AbsPageLabel
13946     \Hy@escapeform\PDFForm@Submit
13947     \pdfstartlink user {%
13948       \PDFForm@Submit
13949       /AP<</N \SubmitObject/D \SubmitPObject>>%
13950     }%
13951     \relax
13952     \MakeButtonField{#2}%
13953     \pdfendlink
13954     \HyField@AddToFields
13955   \endgroup
13956 }
13957 \def\@Reset[#1]#2{%
13958   \def\Fld@width{\DefaultWidthofReset}%
13959   \def\Fld@height{\DefaultHeightofReset}%
13960   \begingroup
13961     \expandafter\HyField@SetKeys\expandafter{%
13962       \DefaultOptionsofReset,#1%
13963     }%
13964     \leavevmode
13965     \ifHy@pdfa
13966       \Hy@Error{%
13967         PDF/A: Reset action is prohibited%
13968       }\@ehc
13969       \MakeButtonField{#2}%
13970     \else
13971       \HyField@FlagsPushButton
13972       \ifFld@hidden\def\Fld@width{1sp}\fi
13973       \HyAnn@AbsPageLabel
13974       \Hy@escapeform\PDFForm@Reset
13975       \pdfstartlink user {\PDFForm@Reset}\relax
13976       \MakeButtonField{#2}%
13977       \pdfendlink
13978       \HyField@AddToFields
13979     \fi

```

```

13980 \endgroup
13981 }
13982 \def\@CheckBox[#1]#2{% parameters, label
13983 \def\Fld@name{#2}%
13984 \def\Fld@default{0}%
13985 \begingroup
13986 \def\Fld@width{\DefaultWidthofCheckBox}%
13987 \def\Fld@height{\DefaultHeightofCheckBox}%
13988 \expandafter\HyField@SetKeys\expandafter{%
13989 \DefaultOptionsofCheckBox,#1%
13990 }%
13991 \PDFForm@Name
13992 \HyField@FlagsCheckBox
13993 \ifFld@hidden\def\Fld@width{1sp}\fi
13994 \LayoutCheckField{#2}{%
13995 \leavevmode
13996 \HyAnn@AbsPageLabel
13997 \Hy@escapeform\PDFForm@Check
13998 \pdfstartlink user {\PDFForm@Check}\relax
13999 \MakeCheckField{\Fld@width}{\Fld@height}%
14000 \pdfendlink
14001 \HyField@AddToFields
14002 }%
14003 \endgroup
14004 }
14005 \def\Hy@FormObjects{%
14006 \pdfobj {%
14007 <<%
14008 /Type/Encoding%
14009 /Differences[%
14010 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14011 /ring/tilde %
14012 39/quotesingle %
14013 96/grave %
14014 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14015 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14016 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14017 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14018 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14019 164/currency %
14020 166/brokenbar %
14021 168/dieresis/copyright/ordfeminine %
14022 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14023 /twosuperior/threesuperior/acute/mu %
14024 183/periodcentered/cedilla/onesuperior/ordmasculine %
14025 188/onequarter/onehalf/threequarters %
14026 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14027 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14028 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14029 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14030 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14031 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14032 /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14033 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14034 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
14035 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14036 ]%

```

```

14037 >>%
14038 }%
14039 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
14040 \pdfobj{%
14041 <<%
14042 /Type/Font%
14043 /Subtype/Type1%
14044 /Name/ZaDb%
14045 /BaseFont/ZapfDingbats%
14046 >>%
14047 }%
14048 \xdef\OBJ@ZaDb{\the\pdflastobj}%
14049 \pdfobj{%
14050 <<%
14051 /Type/Font%
14052 /Subtype/Type1%
14053 /Name/Helv%
14054 /BaseFont/Helvetica%
14055 /Encoding \OBJ@pdfdocencoding\space 0 R%
14056 >>%
14057 }%
14058 \xdef\OBJ@Helv{\the\pdflastobj}%
14059 \global\let\Hy@FormObjects\relax
14060 }
14061 \</pdfTeX>

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
14062 \<*dvipdfm | xetex>
```

\@Gauge

```

14063 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14064 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14065 }

```

\@Form

```

14066 \def\@Form[#1]{%
14067 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14068 \kvsetkeys{Form}{#1}%
14069 \Hy@FormObjects
14070 \@pdfm@mark{obj @afields []}%
14071 \@pdfm@mark{obj @corder []}%
14072 \@pdfm@mark{%
14073 obj @aform <<%
14074 /Fields @afields%
14075 /DR<<%
14076 /Font<<%
14077 /ZaDb @OBJZaDb%
14078 /Helv @OBJHelv%
14079 >>%
14080 >>%
14081 /DA(/Helv 10 Tf 0 g)%
14082 /CO @corder%
14083 \ifHy@pdfa
14084 \else
14085 \ifHyField@NeedAppearances

```

```

14086         /NeedAppearances true%
14087         \fi
14088     \fi
14089     >>%
14090 }%
14091 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14092 }

\@endForm

14093 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
14094 \def\dvipdfm@setdim{%
14095     height \the\ht\pdfm@box\space
14096     width \the\wd\pdfm@box\space
14097     depth \the\dp\pdfm@box\space
14098 }

\HyField@AnnotCount
14099 \newcount\HyField@AnnotCount
14100 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
14101 \def\HyField@AdvanceAnnotCount{%
14102     \global\advance\HyField@AnnotCount\@ne
14103 }

\HyField@TheAnnotCount
14104 \def\HyField@TheAnnotCount{%
14105     \the\HyField@AnnotCount
14106 }

\Fld@pageobjref
14107 \def\Fld@pageobjref{/P @thispage}%

\HyField@AddToFields
14108 \def\HyField@AddToFields#1{%
14109     \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14110     \ifx\Fld@calculate@code\ltx@empty
14111     \else
14112         \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14113     \fi
14114 }

\@TextField
14115 \def\@TextField[#1]#2{% parameters, label
14116     \def\Fld@name{#2}%
14117     \let\Fld@default\ltx@empty
14118     \let\Fld@value\@empty
14119     \def\Fld@width{\DefaultWidthofText}%
14120     \def\Fld@height{%
14121         \ifFld@multiline
14122             \DefaultHeightofTextMultiline
14123         \else
14124             \DefaultHeightofText
14125         \fi

```

```

14126 }%
14127 \begingroup
14128 \expandafter\HyField@SetKeys\expandafter{%
14129 \DefaultOptionsofText,#1%
14130 }%
14131 \PDFForm@Name
14132 \HyField@FlagsText
14133 \ifFld@hidden\def\Fld@width{1sp}\fi
14134 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14135 \setbox\pdfm@box=\hbox{%
14136 \MakeTextField{\Fld@width}{\Fld@height}%
14137 }%
14138 \HyField@AdvanceAnnotCount
14139 \LayoutTextField{#2}{%
14140 \leavevmode
14141 \Hy@escapeform\PDFForm@Text
14142 \@pdfm@mark{%
14143 ann @text\HyField@TheAnnotCount\space
14144 \dvi pdfm@setdim << \PDFForm@Text >>%
14145 }%
14146 }%
14147 \unhbox\pdfm@box
14148 \HyField@AddToFields{text}%
14149 % record in @afields array
14150 \endgroup
14151 }

```

\@ChoiceMenu

```

14152 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14153 \def\Fld@name{#2}%
14154 \let\Fld@default\relax
14155 \let\Fld@value\relax
14156 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14157 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14158 \begingroup
14159 \Fld@menulength=0 %
14160 \@tempdima\z@
14161 \@for\@curropt:=#3\do{%
14162 \expandafter\Fld@checkequals\@curropt==\%
14163 \Hy@StepCount\Fld@menulength
14164 \settowidth{\@tempdimb}{\@currDisplay}%
14165 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14166 }%
14167 \advance\@tempdima by 15\p@
14168 \begingroup
14169 \HyField@SetKeys{#1}%
14170 \edef\x{\endgroup
14171 \noexpand\expandafter
14172 \noexpand\HyField@SetKeys
14173 \noexpand\expandafter{%
14174 \expandafter\noexpand\csname DefaultOptionsof%
14175 \ifFld@radio
14176 Radio%
14177 \else
14178 \ifFld@combo
14179 \ifFld@popdown
14180 PopdownBox%
14181 \else

```

```

14182         ComboBox%
14183     \fi
14184 \else
14185     ListBox%
14186 \fi
14187 \fi
14188 \endcsname
14189 }%
14190 }\x
14191 \HyField@SetKeys{#1}%
14192 \PDFForm@Name
14193 \ifFld@hidden\def\Fld@width{1sp}\fi
14194 \ifx\Fld@value\relax
14195     \let\Fld@value\Fld@default
14196 \fi
14197 \LayoutChoiceField{#2}{%
14198     \ifFld@radio
14199         \HyField@FlagsRadioButton
14200         \@@Radio{#3}%
14201     \else
14202         \begingroup
14203             \HyField@FlagsChoice
14204             \ifdim\Fld@width<\@tempdima
14205                 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14206                 \edef\Fld@width{\the\@tempdima}%
14207             \fi
14208             \ifFld@combo
14209             \else
14210                 \@tempdima=\the\Fld@menulength\Fld@charsize
14211                 \advance\@tempdima by \Fld@borderwidth bp %
14212                 \advance\@tempdima by \Fld@borderwidth bp %
14213                 \edef\Fld@height{\the\@tempdima}%
14214             \fi
14215             \@@ListBox{#3}%
14216         \endgroup
14217     \fi
14218 }%
14219 \endgroup
14220 }

\@@Radio
14221 \def\@@Radio#1{%
14222     \Fld@listcount=0 %
14223     \EdefEscapeName\Fld@default{\Fld@default}%
14224     \setbox\pdfm@box=\hbox{%
14225         \MakeRadioField{\Fld@width}{\Fld@height}%
14226     }%
14227     \@for\@curropt:=#1\do{%
14228         \expandafter\Fld@checkequals\@curropt==\%
14229         \EdefEscapeName\@currValue{\@currValue}%
14230         \Hy@StepCount\Fld@listcount
14231         \@currDisplay\space
14232         \leavevmode
14233         \Hy@escapeform\PDFForm@Radio
14234         \ifnum\Fld@listcount=1 %
14235             \HyField@AdvanceAnnotCount
14236         \fi
14237         \@pdfm@mark{%

```

```

14238     ann %
14239     \ifnum\Fld@listcount=1 %
14240         @radio\HyField@TheAnnotCount%
14241         \space
14242     \fi
14243     \dvipdfm@setdim
14244     <<%
14245         \PDFForm@Radio
14246         /AP<</N<</\@currValue /null>>>>%
14247     >>%
14248 }%
14249 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14250 \ifnum\Fld@listcount=1 %
14251     \HyField@AddToFields{radio}%
14252 \fi
14253 }%
14254 }

\Fld@listcount
14255 \newcount\Fld@listcount

@@@Listbox
14256 \def\@@Listbox#1{%
14257     \HyField@PDFChoices{#1}%
14258     \setbox\pdfm@box=\hbox{%
14259         \MakeChoiceField{\Fld@width}{\Fld@height}%
14260     }%
14261     \leavevmode
14262     \Hy@escapeform\PDFForm@List
14263     \HyField@AdvanceAnnotCount
14264     \@pdfm@mark{%
14265         ann @list\HyField@TheAnnotCount\space
14266         \dvipdfm@setdim
14267         <<\PDFForm@List>>%
14268     }%
14269     \unhbox\pdfm@box
14270     \HyField@AddToFields{list}%
14271 }

@PushButton
14272 \def\@PushButton[#1]#2{% parameters, label
14273     \def\Fld@name{#2}%
14274     \begingroup
14275         \expandafter\HyField@SetKeys\expandafter{%
14276             \DefaultOptionsofPushButton,#1%
14277         }%
14278         \PDFForm@Name
14279         \ifHy@pdfa
14280             \Hy@Error{%
14281                 PDF/A: Push button with JavaScript is prohibited%
14282             }\@ehc
14283         \LayoutPushButtonField{%
14284             \leavevmode
14285             \MakeButtonField{#2}%
14286         }%
14287     \else
14288         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%

```



```

14289 \HyField@FlagsPushButton
14290 \ifFld@hidden\def\Fld@width{1sp}\fi
14291 \HyField@AdvanceAnnotCount
14292 \LayoutPushButtonField{%
14293 \leavevmode
14294 \Hy@escapeform\PDFForm@Push
14295 \@pdfm@mark{%
14296 ann @push\HyField@TheAnnotCount\space
14297 \dvipdfm@setdim
14298 <<\PDFForm@Push>>%
14299 }%
14300 }%
14301 \unhbox\pdfm@box
14302 \HyField@AddToFields{push}%
14303 \fi
14304 \endgroup
14305 }

\@Submit
14306 \def\@Submit[#1]#2{%
14307 \def\Fld@width{\DefaultWidthofSubmit}%
14308 \def\Fld@height{\DefaultHeightofSubmit}%
14309 \begingroup
14310 \expandafter\HyField@SetKeys\expandafter{%
14311 \DefaultOptionsofSubmit,#1%
14312 }%
14313 \HyField@FlagsPushButton
14314 \HyField@FlagsSubmit
14315 \ifFld@hidden\def\Fld@width{1sp}\fi
14316 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14317 \leavevmode
14318 \Hy@escapeform\PDFForm@Submit
14319 \HyField@AdvanceAnnotCount
14320 \@pdfm@mark{%
14321 ann @submit\HyField@TheAnnotCount\space
14322 \dvipdfm@setdim
14323 <<\PDFForm@Submit>>%
14324 }%
14325 \unhbox\pdfm@box%
14326 \HyField@AddToFields{submit}%
14327 \endgroup
14328 }

\@Reset
14329 \def\@Reset[#1]#2{%
14330 \def\Fld@width{\DefaultWidthofReset}%
14331 \def\Fld@height{\DefaultHeightofReset}%
14332 \begingroup
14333 \expandafter\HyField@SetKeys\expandafter{%
14334 \DefaultOptionsofReset,#1%
14335 }%
14336 \leavevmode
14337 \ifHy@pdfa
14338 \Hy@Error{%
14339 PDF/A: Reset action is prohibited%
14340 }\@ehc
14341 \MakeButtonField{#2}%

```

```

14342 \else
14343 \HyField@FlagsPushButton
14344 \ifFld@hidden\def\Fld@width{1sp}\fi
14345 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}}%
14346 \Hy@escapeform\PDFForm@Reset
14347 \HyField@AdvanceAnnotCount
14348 \@pdfm@mark{%
14349 ann @reset\HyField@TheAnnotCount\space
14350 \dvipdfm@setdim
14351 <<\PDFForm@Reset>>%
14352 }%
14353 \unhbox\pdfm@box
14354 \HyField@AddToFields{reset}%
14355 \fi
14356 \endgroup
14357 }

```

\@CheckBox

```

14358 \def\@CheckBox[#1]#2{% parameters, label
14359 \def\Fld@name{#2}%
14360 \def\Fld@default{0}%
14361 \begingroup
14362 \def\Fld@width{\DefaultWidthofCheckBox}%
14363 \def\Fld@height{\DefaultHeightofCheckBox}%
14364 \expandafter\HyField@SetKeys\expandafter{%
14365 \DefaultOptionsofCheckBox,#1%
14366 }%
14367 \PDFForm@Name
14368 \HyField@FlagsCheckBox
14369 \ifFld@hidden\def\Fld@width{1sp}\fi
14370 \setbox\pdfm@box=\hbox{%
14371 \MakeCheckField{\Fld@width}{\Fld@height}%
14372 }%
14373 \HyField@AdvanceAnnotCount
14374 \LayoutCheckField{#2}{%
14375 \leavevmode
14376 \Hy@escapeform\PDFForm@Check
14377 \@pdfm@mark{%
14378 ann @check\HyField@TheAnnotCount\space
14379 \dvipdfm@setdim
14380 <<\PDFForm@Check>>%
14381 }%
14382 \unhbox\pdfm@box
14383 \HyField@AddToFields{check}%
14384 }%
14385 \endgroup
14386 }

14387 \def\Hy@FormObjects{%
14388 \@pdfm@mark{obj @OBJpdfdocencoding%
14389 <<%
14390 /Type/Encoding%
14391 /Differences[%
14392 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14393 39/quotesingle %
14394 96/grave %
14395 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14396 /fraction/guilsinglleft/guilsinglright/minus/perthousand%

```

```

14397 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14398 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14399 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14400 164/currency %
14401 166/brokenbar %
14402 168/dieresis/copyright/ordfeminine %
14403 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14404 /twosuperior/threesuperior/acute/mu %
14405 183/periodcentered/cedilla/onesuperior/ordmasculine %
14406 188/onequarter/onehalf/threequarters %
14407 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14408 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14409 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14410 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14411 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14412 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14413 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14414 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14415 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14416 /thorn/ydieresis%
14417 }%
14418 >>%
14419 }%
14420 \@pdfm@mark{obj @OBJZaDb%
14421 <<%
14422 /Type/Font%
14423 /Subtype/Type1%
14424 /Name/ZaDb%
14425 /BaseFont/ZapfDingbats%
14426 >>%
14427 }%
14428 \@pdfm@mark{obj @OBJHelv%
14429 <<%
14430 /Type/Font%
14431 /Subtype/Type1%
14432 /Name/Helv%
14433 /BaseFont/Helvetica%
14434 /Encoding @OBJpdfdocencoding%
14435 >>%
14436 }%
14437 \global\let\Hy@FormObjects\relax
14438 }
14439 </dvipdfm|xetex>

```

48.6 Common forms part

```

14440 <*pdfform>

\Fld@pageobjref
14441 \providecommand*{\Fld@pageobjref}{ }

\Hy@escapestring
14442 \begingroup\expandafter\expandafter\expandafter\endgroup
14443 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14444 \let\Hy@escapestring\@firstofone
14445 \def\Hy@escapeform#1{%
14446 \ifHy@pdfescapeform

```

```

14447 \def\Hy@escapestring##1{%
14448 \noexpand\Hy@escapestring{\noexpand##1}%
14449 }%
14450 \edef\Hy@temp{#1}%
14451 \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14452 \def\Hy@escapestring##1{%
14453 \@ifundefined{Hy@esc@\string##1}{%
14454 ##1%
14455 \ThisShouldNotHappen
14456 }{%
14457 \csname Hy@esc@\string##1\endcsname
14458 }%
14459 }%
14460 \else
14461 \let\Hy@escapestring\@firstofone
14462 \fi
14463 }%
14464 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14465 \ifx\#3\%
14466 \else
14467 \expandafter
14468 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14469 \ltx@ReturnAfterFi{%
14470 \Hy@@escapeform#3\@nil
14471 }%
14472 \fi
14473 }%
14474 \else
14475 \def\Hy@escapeform#1{%
14476 \ifHy@pdfescapeform
14477 \let\Hy@escapestring\pdfescapestring
14478 \else
14479 \let\Hy@escapestring\@firstofone
14480 \fi
14481 }%
14482 \Hy@escapeform{}%
14483 \fi

```

\PDFForm@Name

```

14484 \def\PDFForm@Name{%
14485 \PDFForm@@Name\Fld@name
14486 \ifx\Fld@altname\relax
14487 \else
14488 \PDFForm@@Name\Fld@altname
14489 \fi
14490 \ifx\Fld@mappingname\relax
14491 \else
14492 \PDFForm@@Name\Fld@mappingname
14493 \fi
14494 }

```

\PDFForm@@Name

```

14495 \def\PDFForm@@Name#1{%
14496 \begingroup
14497 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14498 \ifHy@unicode
14499 \Hy@unicodedefalse

```

```

14500 \fi
14501 \fi
14502 \HyPsd@XeTeXBigCharstrue
14503 \pdfstringdef\Hy@gtemp#1%
14504 \endgroup
14505 \let#1\Hy@gtemp
14506 }

```

\Fld@additionalactions

```

14507 \def\Fld@@additionalactions{%
K input (keystroke) format
14508 \ifx\Fld@keystroke@code\@empty
14509 \else
14510 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14511 \fi
F display format
14512 \ifx\Fld@format@code\@empty
14513 \else
14514 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14515 \fi
V validation
14516 \ifx\Fld@validate@code\@empty
14517 \else
14518 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14519 \fi
C calculation
14520 \ifx\Fld@calculate@code\@empty
14521 \else
14522 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14523 \fi
Fo receiving the input focus
14524 \ifx\Fld@onfocus@code\@empty
14525 \else
14526 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14527 \fi
Bl loosing the input focus (blurred)
14528 \ifx\Fld@onblur@code\@empty
14529 \else
14530 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14531 \fi
D pressing the mouse button (down)
14532 \ifx\Fld@onmousedown@code\@empty
14533 \else
14534 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14535 \fi
U releasing the mouse button (up)
14536 \ifx\Fld@onmouseup@code\@empty
14537 \else
14538 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14539 \fi

```

E cursor enters the annotation's active area.

```
14540 \ifx\Fld@onenter@code\@empty
14541 \else
14542 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14543 \fi
```

X cursor exits the annotation's active area.

```
14544 \ifx\Fld@onexit@code\@empty
14545 \else
14546 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14547 \fi
14548 }
14549 \def\Fld@additionalactions{%
14550 \if-\Fld@@additionalactions-%
14551 \else
14552 \ifHy@pdfa
14553 \else
14554 /AA<<\Fld@@additionalactions>>%
14555 \fi
14556 \fi
14557 }
```

\Fld@annotnames

```
14558 \def\Fld@annotnames{%
14559 /T(\Fld@name)%
14560 \ifx\Fld@altname\relax
14561 \else
14562 /TU(\Fld@altname)%
14563 \fi
14564 \ifx\Fld@mappingname\relax
14565 \else
14566 /TM(\Fld@mappingname)%
14567 \fi
14568 }
```

\PDFForm@Check

```
14569 \def\PDFForm@Check{%
14570 /Subtype/Widget%
14571 \Fld@annotflags
14572 \Fld@pageobjref
14573 \Fld@annotnames
14574 /FT/Btn%
14575 \Fld@flags
14576 /Q \Fld@align
14577 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14578 /MK<<%
14579 \ifnum\Fld@rotation=\z@
14580 \else
14581 /R \Fld@rotation
14582 \fi
14583 \ifx\Fld@bordercolor\relax
14584 \else
14585 /BC[\Fld@bordercolor]%
14586 \fi
14587 \ifx\Fld@bcolor\relax
14588 \else
14589 /BG[\Fld@bcolor]%

```

```

14590 \fi
14591 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14592 >>%
14593 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14594 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14595 /H/P%
14596 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14597 \Fld@additionalactions
14598 }

```

\PDFForm@Push

```

14599 \ifHy@pdfa
14600 \else
14601 \def\PDFForm@Push{%
14602 /Subtype/Widget%
14603 \Fld@annotflags
14604 \Fld@pageobjref
14605 \Fld@annotnames
14606 /FT/Btn%
14607 \Fld@flags
14608 /H/P%
14609 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14610 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14611 \ifx\Fld@bordercolor\relax\else 1\fi
14612 \space
14613 \else
14614 /MK<<%
14615 \ifnum\Fld@rotation=\z@
14616 \else
14617 /R \Fld@rotation
14618 \fi
14619 \ifx\Fld@bordercolor\relax
14620 \else
14621 /BC[\Fld@bordercolor]%
14622 \fi
14623 >>%
14624 \fi
14625 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14626 \Fld@additionalactions
14627 }%
14628 \fi

```

\PDFForm@List

```

14629 \def\PDFForm@List{%
14630 /Subtype/Widget%
14631 \Fld@annotflags
14632 \Fld@pageobjref
14633 \Fld@annotnames
14634 /FT/Ch%
14635 \Fld@flags
14636 /Q \Fld@align
14637 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14638 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14639 \ifx\Fld@bordercolor\relax\else 1\fi
14640 \ifx\Fld@bcolor\relax \else 1\fi
14641 \space
14642 \else

```

```

14643 /MK<<%
14644 \ifnum\Fld@rotation=\z@
14645 \else
14646 /R \Fld@rotation
14647 \fi
14648 \ifx\Fld@bordercolor\relax
14649 \else
14650 /BC[\Fld@bordercolor]%
14651 \fi
14652 \ifx\Fld@bcolor\relax
14653 \else
14654 /BG[\Fld@bcolor]%
14655 \fi
14656 >>%
14657 \fi
14658 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14659 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14660 \Fld@choices
14661 \Fld@additionalactions
14662 }

```

\PDFForm@Radio

```

14663 \def\PDFForm@Radio{%
14664 /Subtype/Widget%
14665 \Fld@annotflags
14666 \Fld@pageobjref
14667 \Fld@annotnames
14668 /FT/Btn%
14669 \Fld@flags
14670 /H/P%
14671 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14672 /MK<<%
14673 \ifnum\Fld@rotation=\z@
14674 \else
14675 /R \Fld@rotation
14676 \fi
14677 \ifx\Fld@bordercolor\relax
14678 \else
14679 /BC[\Fld@bordercolor]%
14680 \fi
14681 \ifx\Fld@bcolor\relax
14682 \else
14683 /BG[\Fld@bcolor]%
14684 \fi
14685 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14686 >>%
14687 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14688 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14689 \ifx\@currValue\Fld@default
14690 /V/\Fld@default
14691 /DV/\Fld@default
14692 \else
14693 /V/Off%
14694 /DV/Off%
14695 \fi
14696 \Fld@additionalactions
14697 }

```


\PDFForm@Text

```
14698 \def\PDFForm@Text{%
14699 /Subtype/Widget%
14700 \Fld@annotflags
14701 \Fld@pageobjref
14702 \Fld@annotnames
14703 /FT/Tx%
14704 \Fld@flags
14705 /Q \Fld@align
14706 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14707 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14708     \ifx\Fld@bordercolor\relax\else 1\fi
14709     \ifx\Fld@bcolor\relax \else 1\fi
14710     \space
14711 \else
14712 /MK<<%
14713     \ifnum\Fld@rotation=\z@
14714     \else
14715     /R \Fld@rotation
14716     \fi
14717     \ifx\Fld@bordercolor\relax
14718     \else
14719     /BC[\Fld@bordercolor]%
14720     \fi
14721     \ifx\Fld@bcolor\relax
14722     \else
14723     /BG[\Fld@bcolor]%
14724     \fi
14725 >>%
14726 \fi
14727 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14728     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14729 /DV(\Hy@escapestring{\Fld@default})%
14730 /V(\Hy@escapestring{\Fld@value})%
14731 \Fld@additionalactions
14732 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14733 }
```

\PDFForm@Submit

```
14734 \def\PDFForm@Submit{%
14735 /Subtype/Widget%
14736 \Fld@annotflags
14737 \Fld@pageobjref
14738 \Fld@annotnames
14739 /FT/Btn%
14740 \Fld@flags
14741 /H/P%
14742 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14743 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14744     \ifx\Fld@bordercolor\relax\else 1\fi
14745     \space
14746 \else
14747 /MK<<%
14748     \ifnum\Fld@rotation=\z@
14749     \else
14750     /R \Fld@rotation
14751     \fi
```

```

14752     \ifx\Fld@bordercolor\relax
14753     \else
14754         /BC[\Fld@bordercolor]%
14755     \fi
14756     >>%
14757 \fi
14758 /A<<%
14759 /S/SubmitForm%
14760 /F<<%
14761     /FS/URL%
14762     /F(\Hy@escapestring{\Form@action})%
14763     >>%
14764     \Fld@submitflags
14765     >>%
14766     \Fld@additionalactions
14767 }

```

\PDFForm@Reset

```

14768 \ifHy@pdfa
14769 \else
14770     \def\PDFForm@Reset{%
14771         /Subtype/Widget%
14772         \Fld@annotflags
14773         \Fld@pageobjref
14774         \Fld@annotnames
14775         /FT/Btn%
14776         \Fld@flags
14777         /H/P%
14778         /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14779         \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14780             \ifx\Fld@bordercolor\relax\else 1\fi
14781             \space
14782     \else
14783         /MK<<%
14784         \ifnum\Fld@rotation=\z@
14785         \else
14786             /R \Fld@rotation
14787         \fi
14788         \ifx\Fld@bordercolor\relax
14789         \else
14790             /BC[\Fld@bordercolor]%
14791         \fi
14792     %     /CA (Clear)
14793     %     /AC (Done)
14794     >>%
14795 \fi
14796 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14797 /A<</S/ResetForm>>%
14798 \Fld@additionalactions
14799 }%
14800 \fi

14801 </pdfform>
14802 <*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 \LaTeX 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`

```
14803 \def\phantomsection{%
14804   \Hy@MakeCurrentHrefAuto{section*}%
14805   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14806 }
14807 \end{package}
```

49.1 Bookmarks

```
14808 (*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 $\varepsilon\text{-TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of $\varepsilon\text{-TeX}$'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.

```
14809 \def\Hy@writebookmark#1#2#3#4#5{%
14810   % section number, text, label, level, file
14811   \ifx\WriteBookmarks\relax%
14812   \else
14813     \ifnum#4>\Hy@bookmarksdepth\relax
14814     \else
14815       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14816     \fi
14817   \fi
14818 }
14819 \def\Hy@currentbookmarklevel{0}
14820 \def\Hy@numberline#1{#1 }
14821 \def\@@writetorep#1#2#3#4#5{%
14822   \begingroup
14823     \edef\Hy@tempa{#5}%
14824     \ifx\Hy@tempa\Hy@bookmarkstype
14825       \edef\Hy@level{#4}%
14826       \ifx\Hy@levelcheck Y%
14827         \@tempcnta\Hy@level\relax
14828         \advance\@tempcnta by -1 %
```

```

14829 \ifnum\Hy@currentbookmarklevel<\@tempcnta
14830 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14831 \advance\@tempcnta by 1 %
14832 \Hy@Warning{%
14833     Difference (\the\@tempcnta) between bookmark levels is %
14834     greater \MessageBreak than one, level fixed%
14835 }%
14836 \@tempcnta\Hy@currentbookmarklevel
14837 \advance\@tempcnta by 1 %
14838 \edef\Hy@level{\the\@tempcnta}%
14839 \fi
14840 \else
14841 \global\let\Hy@levelcheck Y%
14842 \fi
14843 \global\let\Hy@currentbookmarklevel\Hy@level
14844 \@tempcnta\Hy@level\relax
14845 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14846 \advance\@tempcnta by -1 %
14847 \edef\Hy@tempa{#3}%
14848 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14849 \ifx\Hy@tempa\Hy@tempb
14850 \Hy@Warning{%
14851     The anchor of a bookmark and its parent's must not%
14852     \MessageBreak be the same. Added a new anchor%
14853 }%
14854 \phantomsection
14855 \fi
14856 \ifHy@bookmarksnumbered
14857 \let\numberline\Hy@numberline
14858 \let\booknumberline\Hy@numberline
14859 \let\partnumberline\Hy@numberline
14860 \let\chapternumberline\Hy@numberline
14861 \else
14862 \let\numberline\@gobble
14863 \let\booknumberline\@gobble
14864 \let\partnumberline\@gobble
14865 \let\chapternumberline\@gobble
14866 \fi
14867 \HyPsd@XeTeXBigCharstrue
14868 \pdfstringdef\Hy@tempa{#2}%
14869 \HyPsd@SanitizeForOutFile\Hy@tempa
14870 \if@filesw
14871 \stepcounter{bookmark@seq@number}%
14872 \@ifundefined{@outlinefile}{%
14873 }{%
14874 \protected@write\@outlinefile{%
14875 \protect\BOOKMARK
14876 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14877 {\Hy@tempa}{\Hy@tempb}%
14878 \@percentchar\space\thebookmark@seq@number
14879 }%
14880 }%
14881 \fi
14882 \fi
14883 \endgroup
14884 }
14885 \newcounter{bookmark@seq@number}

```

```

14886 \begingroup
14887 \lccode'('= '{%
14888 \lccode')= '}%
14889 \lccode'1=\z@
14890 \lccode'2=\z@
14891 \lccode'3=\z@
14892 \lccode'5=\z@
14893 \lccode'7=\z@
14894 \lccode'\#=\z@
14895 \lccode'\'=\z@
14896 \lccode'\{=\z@
14897 \lccode'\}=\z@
14898 \lowercase{%
14899 \endgroup
14900 \def\HyPsd@SanitizeForOutFile#1{%
14901 \@onelevel@sanitize\Hy@tempa
14902 \escapechar'\%
14903 \edef\Hy@tempa{%
14904 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14905 }%
14906 \edef\Hy@tempa{%
14907 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14908 }%
14909 }%
14910 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14911 #1%
14912 \ifx\#2\%
14913 \expandafter\ltx@gobble
14914 \else
14915 \expandafter\ltx@firstofone
14916 \fi
14917 {%
14918 \string\173%
14919 \HyPsd@SanitizeOut@BraceLeft#2\@nil
14920 }%
14921 }%
14922 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14923 #1%
14924 \ifx\#2\%
14925 \expandafter\ltx@gobble
14926 \else
14927 \expandafter\ltx@firstofone
14928 \fi
14929 {%
14930 \string\175%
14931 \HyPsd@SanitizeOut@BraceRight#2\@nil
14932 }%
14933 }%
14934 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14935 \newcommand{\currentpdfbookmark}{%
14936 \pdfbookmark[\Hy@currentbookmarklevel]%
14937 }
14938 \newcommand{\subpdfbookmark}{%
14939 \@tempcnta\Hy@currentbookmarklevel
14940 \Hy@StepCount\@tempcnta

```

```

14941 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14942 }
14943 \newcommand{\belowpdfbookmark}[2]{%
14944 \@tempcnta\Hy@currentbookmarklevel
14945 \Hy@StepCount\@tempcnta
14946 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14947 \advance\@tempcnta by -1 %
14948 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14949 }

```

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.

```

14950 \renewcommand\pdfbookmark[3][0]{%
14951 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
14952 \hyper@anchorstart{#3.#1}\hyper@anchorend
14953 }
14954 \def\BOOKMARK{%
14955 \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14956 }
14957 \def\@BOOKMARK[#1]{%
14958 \@ifnextchar{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
14959 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14960 \RequirePackage{rerunfilecheck}[2009/12/10]
14961 \def\Hy@OutlineRerunCheck{%
14962 \RerunFileCheck{\jobname.out}{%
14963 \immediate\closeout\@outlinefile
14964 }{%
14965 Rerun to get outlines right\MessageBreak
14966 or use package 'bookmark'%
14967 }%
14968 }

```

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.

```

14969 (*vtex)
14970 \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.

```

14971 \begingroup
14972 \catcode'\=12 %
14973 \ifnum\Hy@VTeXversion<650 %
14974 \catcode'\=12 %
14975 \gdef\hv@pdf@char#1#2#3{%

```

```

14976 \char
14977 \ifcase'#1#2#3 %
14978 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14979 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14980 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14981 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14982 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14983 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14984 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14985 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14986 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14987 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14988 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14989 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14990 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14991 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14992 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14993 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14994 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14995 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14996 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14997 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14998 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14999 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15000 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15001 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15002 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15003 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15004 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15005 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15006 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15007 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15008 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15009 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15010 \fi
15011 }%
15012 \else
15013 \gdef\hv@pdf@char{\char'}%
15014 \fi
15015 \endgroup

```

\@@BOOKMARK

```

15016 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15017 \expandafter\edef\csname @count@#3\endcsname{%
15018 \the\@serial@counter
15019 }%
15020 \edef\@mycount{\the\@serial@counter}%
15021 \Hy@StepCount\@serial@counter
15022 \edef\@parcount{%
15023 \expandafter\ifx\csname @count@#5\endcsname\relax
15024 0%
15025 \else
15026 \csname @count@#5\endcsname
15027 \fi
15028 }%
15029 \immediate\special{%
15030 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15031 s=\ifx#2-c\else o\fi,t=#4%

```

```

15032 }%
15033 }%

```

\ReadBookmarks

```

15034 \def\ReadBookmarks{%
15035   \begingroup
15036   \def\0{\hv@pdf@char 0}%
15037   \def\1{\hv@pdf@char 1}%
15038   \def\2{\hv@pdf@char 2}%
15039   \def\3{\hv@pdf@char 3}%
15040   \def\{({}%
15041   \def\)}{)%
15042   \def\do##1{%
15043     \ifnum\catcode'##1=\active
15044       \@makeother##1%
15045     \else
15046       \ifnum\catcode'##1=6 %
15047         \@makeother##1%
15048       \fi
15049     \fi
15050   }%
15051   \dospecials
15052   \Hy@safe@activetrue
15053   \InputIfFileExists{\jobname.out}{\}{}%
15054 \endgroup
15055 \ifx\WriteBookmarks\relax
15056 \else
15057   \if@files
15058     \newwrite\@outlinefile
15059     \Hy@OutlineRerunCheck
15060     \immediate\openout\@outlinefile=\jobname.out\relax
15061     \ifHy@typexml
15062       \immediate\write\@outlinefile{<relaxxml>\relax}%
15063     \fi
15064   \fi
15065 \fi
15066 }

15067 </vtex>
15068 <*\vtex>
15069 \def\ReadBookmarks{%
15070   \pdf@ifdraftmode{\}%
15071   \begingroup
15072   \def\do##1{%
15073     \ifnum\catcode'##1=\active
15074       \@makeother##1%
15075     \else
15076       \ifnum\catcode'##1=6 %
15077         \@makeother##1%
15078       \fi
15079     \fi
15080   }%
15081   \dospecials
15082   \Hy@safe@activetrue
15083   \escapechar='\'%
15084   \def\@@BOOKMARK[##1][##2]##3##4##5{%
15085     \calc@bm@number{##5}%

```



```

15086 }%
15087 \InputIfFileExists{\jobname.out}{-}{-}%
15088 \ifx\WriteBookmarks\relax
15089   \global\let\WriteBookmarks\relax
15090 \fi
15091 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15092   \def\Hy@temp{##4}%
15093 (*pdfTeX)
15094   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15095   \Hy@OutlineName{}\Hy@pstringName{%
15096     ##2\check@bm@number{##3}}%
15097 }{%
15098   \expandafter\strip@prefix\meaning\Hy@temp
15099 }%
15100 </pdfTeX>
15101 (*pdfmark)
15102   \pdfmark{%
15103     pdfmark=/OUT,%
15104     Count={##2\check@bm@number{##3}},%
15105     Dest={##3},%
15106     Title=\expandafter\strip@prefix\meaning\Hy@temp
15107 }%
15108 </pdfmark>
15109 (*dvipdfm|xetex)
15110   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15111   \@pdfm@mark{%
15112     outline \ifHy@DvipdfmxOutlineOpen
15113       [%
15114         \ifnum##21>\z@
15115         \else
15116         -%
15117         \fi
15118       ] %
15119       \fi
15120       ##1<<%
15121       /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15122       /A<<%
15123       /S/GoTo%
15124       /D(\Hy@pstringName)%
15125       >>%
15126       >>%
15127     }%
15128 </dvipdfm|xetex>
15129   }%
15130   \begingroup
15131     \def\WriteBookmarks{0}%
15132     \InputIfFileExists{\jobname.out}{-}{-}%
15133   \endgroup
15134   {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15135 \endgroup
15136 }%
15137 \ifx\WriteBookmarks\relax
15138 \else
15139   \if@filesW
15140     \newwrite\@outlinefile
15141     \Hy@OutlineRerunCheck
15142     \immediate\openout\@outlinefile=\jobname.out\relax

```

```

15143 \ifHy@typexml
15144 \immediate\write\@outlinefile{<relaxxml>\relax}%
15145 \fi
15146 \fi
15147 \fi
15148 }
15149 \< *pdftex>
15150 \def\Hy@OutlineName#1#2#3#4{%
15151 \pdfoutline goto name{#2}count#3{#4}%
15152 }
15153 \< /pdftex>
15154 \def\check@bm@number#1{%
15155 \expandafter\ifx\csname B_#1\endcsname\relax
15156 0%
15157 \else
15158 \csname B_#1\endcsname
15159 \fi
15160 }
15161 \def\calc@bm@number#1{%
15162 \@tempcnta=\check@bm@number{#1}\relax
15163 \advance\@tempcnta by 1 %
15164 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15165 }
15166 \< /!vtex>

15167 \ifHy@implicit
15168 \else
15169 \expandafter\endinput
15170 \fi

15171 \< /outlines>
15172 \< *outlines | hypertex>

15173 \newlength\Hy@SectionHShift
15174 \def\Hy@SectionAnchorHref#1{%
15175 \ifx\protect\@typeset@protect
15176 \Hy@@SectionAnchor{#1}%
15177 \fi
15178 }
15179 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
15180 \leavevmode
15181 \hbox to 0pt{%
15182 \kern-\Hy@SectionHShift
15183 \Hy@raisedlink{%
15184 \hyper@anchorstart{#1}\hyper@anchorend
15185 }%
15186 \hss
15187 }%
15188 }
15189 \let\H@old@ssect\@ssect
15190 \def\@ssect#1#2#3#4#5{%
15191 \Hy@MakeCurrentHrefAuto{section*}%
15192 \setlength{\Hy@SectionHShift}{#1}%
15193 \begingroup
15194 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15195 \toks\tw@\expandafter{%
15196 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15197 #5%
15198 }%

```

```

15199 \edef\x{\endgroup
15200   \the\toks@{\the\toks\tw@}%
15201 }\x
15202 }
15203 \let\H@old@schapter\@schapter
15204 \def\@schapter#1{%
15205   \begingroup
15206     \let\@mkboth\@gobbletwo
15207     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15208     \Hy@raisedlink{%
15209       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15210     }%
15211   \endgroup
15212   \H@old@schapter{#1}%
15213 }

```

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:

```

15214 \ltx@ifundefined{@chapter}{-}{%
15215   \let\Hy@org@chapter\@chapter
15216   \def\@chapter{%
15217     \def\Hy@next{%
15218       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15219       \Hy@raisedlink{%
15220         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15221       }%
15222     }%
15223     \ifnum\c@secnumdepth>\m@ne
15224       \ltx@ifundefined{if@mainmatter}%
15225       \iftrue{\csname if@mainmatter\endcsname}%
15226       \let\Hy@next\relax
15227     \fi
15228     \fi
15229     \Hy@next
15230     \Hy@org@chapter
15231   }%
15232 }
15233 \let\H@old@part\@part
15234 \begingroup\expandafter\expandafter\expandafter\endgroup
15235 \expandafter\ifx\csname chapter\endcsname\relax
15236   \let\Hy@secnum@part\z@
15237 \else
15238   \let\Hy@secnum@part\m@ne
15239 \fi
15240 \def\@part{%
15241   \ifnum\Hy@secnum@part>\c@secnumdepth
15242     \phantomsection
15243   \fi
15244   \H@old@part
15245 }
15246 \let\H@old@spart\@spart
15247 \def\@spart#1{%
15248   \Hy@MakeCurrentHrefAuto{part*}%
15249   \Hy@raisedlink{%
15250     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15251   }%

```

```

15252 \H@old@spart{#1}%
15253 }
15254 \let\H@old@sect\@sect
15255 \def\@sect#1#2#3#4#5#6[#7]#8{%
15256 \ifnum #2>\c@secnumdepth
15257 \expandafter\@firstoftwo
15258 \else
15259 \expandafter\@secondoftwo
15260 \fi
15261 {%
15262 \Hy@MakeCurrentHrefAuto{section*}%
15263 \setlength{\Hy@SectionHShift}{#3}%
15264 \begingroup
15265 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15266 \toks\tw@\expandafter{%
15267 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15268 #8%
15269 }%
15270 \edef\x{\endgroup
15271 \the\toks@{\the\toks\tw@}}%
15272 }\x
15273 }{%
15274 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15275 }%
15276 }
15277 </outlines | hypertex>
15278 <*outlines>

15279 \expandafter\def\csname Parent-4\endcsname{}
15280 \expandafter\def\csname Parent-3\endcsname{}
15281 \expandafter\def\csname Parent-2\endcsname{}
15282 \expandafter\def\csname Parent-1\endcsname{}
15283 \expandafter\def\csname Parent0\endcsname{}
15284 \expandafter\def\csname Parent1\endcsname{}
15285 \expandafter\def\csname Parent2\endcsname{}
15286 \expandafter\def\csname Parent3\endcsname{}
15287 \expandafter\def\csname Parent4\endcsname{}
15288 </outlines>

```

50 Compatibility with koma-script classes

```

15289 <*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.

```

15290 \def\Hy@tempa{%
15291 \def\@addchap[##1]##2{%
15292 \typeout{##2}%
15293 \if@twoside
15294 \@mkboth{##1}{}%
15295 \else
15296 \@mkboth{}{##1}%
15297 \fi
15298 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15299 \addtocontents{lot}{\protect\addvspace{10\p@}}%

```

```

15300 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15301 \Hy@raisedlink{%
15302   \hyper@anchorstart{\@currentHref}\hyper@anchorend
15303 }%
15304 \if@twocolumn
15305   \@topnewpage[\@makeschapterhead{##2}]%
15306 \else
15307   \@makeschapterhead{##2}%
15308   \@afterheading
15309 \fi
15310 \addcontentsline{toc}{chapter}{##1}%
15311 }%
15312 }
15313 \@ifclassloaded{scrbook}{%
15314   \@ifclasslater{scrbook}{2001/01/01}{%
15315     \let\Hy@tempa\@empty
15316   }{}%
15317 }{%
15318   \@ifclassloaded{scrreprt}{%
15319     \@ifclasslater{scrreprt}{2001/01/01}{%
15320       \let\Hy@tempa\@empty
15321     }{}%
15322   }{%
15323     \let\Hy@tempa\@empty
15324   }%
15325 }%
15326 \Hy@tempa
15327 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15328 (*pd1enc)
15329 \DeclareFontEncoding{PD1}{}{}

Accents
15330 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15331 \DeclareTextAccent{\'}{PD1}{\textacute}
15332 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15333 \DeclareTextAccent{\~}{PD1}{\texttilde}
15334 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
15335 \DeclareTextAccent{\r}{PD1}{\textring}
15336 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15337 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15338 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15339 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15340 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15341 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15342 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textasciigrave}
15343 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15344 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15345 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15346 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}

```

```

15347 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textstring}
15348 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15349 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15350 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15351 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15352 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15353 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15354 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
15355 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15356 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15357 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15358 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15359 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textstring}
15360 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15361 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15362 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15363 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15364 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15365 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15366 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}}{#1}
15367 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}}{#1}
15368 \DeclareTextCommand{\newtie}{PD1}[1]{%
15369   \TextSymbolUnavailable{\newtie{#1}}}{#1}%
15370 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15371 % U+0009 (CHARACTER TABULATION)
15372 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15373 % U+000A (LINE FEED)
15374 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15375 % U+000D (CARRIAGE RETURN)
15376 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15377 % U+02D8 BREVE; breve
15378 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15379 % U+02C7 CARON; caron
15380 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15381 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15382 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15383 % U+02D9 DOT ABOVE; dotaccent
15384 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15385 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15386 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15387 % U+02DB OGONEK; ogonek
15388 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15389 % U+02DA RING ABOVE; ring
15390 \DeclareTextCommand{\textstring}{PD1}{\036}% U+02DA
15391 % U+02DC SMALL TILDE; ilde, *tilde
15392 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

15393 % U+0022 QUOTATION MARK; quotedbl

15394 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022

15395 % U+0023 NUMBER SIGN; numbersign

15396 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

15397 % U+0024 DOLLAR SIGN; dollar

15398 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15399 % U+0025 PERCENT SIGN; percent
 15400 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15401 % U+0026 AMPERSAND; ampersand
 15402 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15403 % U+0028 LEFT PARENTHESIS; parenleft
 15404 \DeclareTextCommand{\textparenleft}{PD1}{\string\{ }% \050 U+0028
 15405 % U+0029 RIGHT PARENTHESIS; parenright
 15406 \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
 15407 % U+002E FULL STOP; period
 15408 \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
 15409 % U+003C LESS-THAN SIGN; less
 15410 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15411 % U+003E GREATER-THAN SIGN; greater
 15412 \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
 15413 % U+005C REVERSE SOLIDUS; backslash
 15414 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15415 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15416 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15417 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15418 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15419 % U+005F LOW LINE; underscore
 15420 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15421 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15422 % U+0060 GRAVE ACCENT; grave
 15423 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15424 % U+0069 LATIN SMALL LETTER I; i
 15425 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

\152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15426 % U+007B LEFT CURLY BRACKET; braceleft
 15427 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15428 % U+007C VERTICAL LINE; *bar, verticalbar
 15429 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15430 % U+007D RIGHT CURLY BRACKET; braceright
 15431 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15432 % U+007E TILDE; asciitilde
 15433 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15434 % U+2022 BULLET; bullet
 15435 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15436 % U+2020 DAGGER; dagger
 15437 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15438 % U+2021 DOUBLE DAGGER; daggerdbl, \ddagger (LaTeX)
 15439 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15440 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15441 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15442 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15443 % U+2014 EM DASH; emdash
 15444 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15445 % U+2013 EN DASH; endash
 15446 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15447 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15448 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15449 % U+2044 FRACTION SLASH; fraction
 15450 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15451 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15452 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 15453 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 15454 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15455 % U+2212 MINUS SIGN; minus
 15456 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15457 % U+2030 PER MILLE SIGN; perthousand
 15458 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15459 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15460 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15461 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15462 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15463 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15464 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15465 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15466 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15467 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15468 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15469 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15470 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15471 % U+2122 TRADE MARK SIGN; trademark
 15472 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15473 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15474 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15475 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15476 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02

15477 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15478 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15479 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15480 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15481 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15482 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15483 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15484 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
 15485 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15486 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15487 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15488 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15489 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15490 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15491 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15492 % U+0153 LATIN SMALL LIGATURE OE; oe
 15493 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15494 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15495 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15496 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15497 \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.
 15498 % U+20AC EURO SIGN; *Euro, euro
 15499 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15500 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15501 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15502 % U+00A2 CENT SIGN; cent
 15503 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15504 % U+00A3 POUND SIGN; sterling
 15505 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15506 % U+00A4 CURRENCY SIGN; currency
 15507 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15508 % U+00A5 YEN SIGN; yen
 15509 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15510 % U+00A6 BROKEN BAR; brokenbar
 15511 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15512 % U+00A7 SECTION SIGN; section
 15513 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15514 % U+00A8 DIAERESIS; dieresis
 15515 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15516 % U+00A9 COPYRIGHT SIGN; copyright
 15517 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15518 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15519 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15520 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15521 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15522 % U+00AC NOT SIGN; logicalnot
 15523 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15524 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15525 % U+00AE REGISTERED SIGN; registered
 15526 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15527 % U+00AF MACRON; *macron, overscore
 15528 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15529 % U+00B0 DEGREE SIGN; degree

15530 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15531 % U+00B1 PLUS-MINUS SIGN; plusminus
15532 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15533 % U+00B2 SUPERSCRIPT TWO; twosuperior
15534 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15535 % U+00B3 SUPERSCRIPT THREE; threesuperior
15536 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15537 % U+00B4 ACUTE ACCENT; acute
15538 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15539 % U+00B5 MICRO SIGN; mu, mu1
15540 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15541 % U+00B6 PILCROW SIGN; paragraph
15542 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15543 % U+00B7 MIDDLE DOT; middot, *periodcentered
15544 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15545 % U+00B8 CEDILLA; cedilla
15546 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15547 % U+00B9 SUPERSCRIPT ONE; onesuperior
15548 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15549 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15550 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15551 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
15552 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15553 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15554 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15555 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15556 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15557 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15558 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15559 % U+00BF INVERTED QUESTION MARK; questiondown
15560 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15561 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15562 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15563 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15564 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15565 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15566 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15567 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15568 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15569 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15570 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15571 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15572 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15573 % U+00C6 LATIN CAPITAL LETTER AE; AE
15574 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15575 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15576 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15577 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15578 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15579 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15580 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15581 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15582 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15583 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15584 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15585 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave

15586 \DeclareTextCompositeCommand{\'}{PD1}{I}{\314}% U+00CC
15587 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15588 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15589 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15590 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15591 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15592 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15593 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15594 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15595 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15596 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15597 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15598 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15599 \DeclareTextCompositeCommand{\'}{PD1}{O}{\322}% U+00D2
15600 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15601 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15602 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15603 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15604 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15605 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15606 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15607 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15608 % U+00D7 MULTIPLICATION SIGN; multiply
15609 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15610 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15611 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15612 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15613 \DeclareTextCompositeCommand{\'}{PD1}{U}{\331}% U+00D9
15614 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15615 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15616 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15617 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15618 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15619 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15620 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15621 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15622 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15623 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15624 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15625 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15626 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15627 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15628 \DeclareTextCompositeCommand{\'}{PD1}{a}{\340}% U+00E0
15629 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15630 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15631 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15632 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15633 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15634 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15635 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15636 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15637 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15638 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15639 % U+00E6 LATIN SMALL LETTER AE; ae
15640 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15641 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15642 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7

15643 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15644 \DeclareTextCompositeCommand{\'}{PD1}{e}{\350}% U+00E8
15645 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15646 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15647 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15648 \DeclareTextCompositeCommand{\'}{PD1}{e}{\352}% U+00EA
15649 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15650 \DeclareTextCompositeCommand{\'}{PD1}{e}{\353}% U+00EB
15651 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15652 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
15653 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
15654 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15655 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15656 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15657 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15658 \DeclareTextCompositeCommand{\'}{PD1}{i}{\356}% U+00EE
15659 \DeclareTextCompositeCommand{\'}{PD1}{i}{\356}% U+00EE
15660 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15661 \DeclareTextCompositeCommand{\'}{PD1}{i}{\357}% U+00EF
15662 \DeclareTextCompositeCommand{\'}{PD1}{i}{\357}% U+00EF
15663 % U+00F0 LATIN SMALL LETTER ETH; eth
15664 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15665 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15666 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15667 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15668 \DeclareTextCompositeCommand{\'}{PD1}{o}{\362}% U+00F2
15669 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15670 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15671 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15672 \DeclareTextCompositeCommand{\'}{PD1}{o}{\364}% U+00F4
15673 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15674 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15675 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15676 \DeclareTextCompositeCommand{\'}{PD1}{o}{\366}% U+00F6
15677 % U+00F7 DIVISION SIGN; divide
15678 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15679 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15680 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15681 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15682 \DeclareTextCompositeCommand{\'}{PD1}{u}{\371}% U+00F9
15683 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15684 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15685 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15686 \DeclareTextCompositeCommand{\'}{PD1}{u}{\373}% U+00FB
15687 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15688 \DeclareTextCompositeCommand{\'}{PD1}{u}{\374}% U+00FC
15689 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15690 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15691 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15692 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15693 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15694 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15695 \DeclareTextCompositeCommand{\'}{PD1}{y}{\377}% U+00FF
15696 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.
15697 \DeclareTextCommand{\SS}{PD1}{SS}%
15698 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)

```

15699 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15700 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15701 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15702 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15703 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15704 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15705 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15706 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15707 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15708 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15709 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15710 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15711 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15712 \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 Myszk (W.Myszka@immt.pwr.wroc.pl).

```

15713 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15714 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15715 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15716 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15717 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15718 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15719 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15720 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15721 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15722 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15723 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15724 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15725 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15726 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15727 </pd1enc>

```

51.2 PU encoding

```

15728 <*puenc>
15729 \DeclareFontEncoding{PU}{-}{-}

```

51.2.1 NFSS2 accents

```

15730 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15731 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15732 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15733 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15734 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15735 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15736 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
15737 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15738 % U+0304 COMBINING MACRON; macroncmb
15739 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15740 % U+0306 COMBINING BREVE; brevecmb
15741 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15742 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15743 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15744 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15745 % U+0308 COMBINING DIAERESIS; dieresiscmb

```

15746 \DeclareTextCommand{\`}{PU}[1]{#1\83\010}% U+0308
 15747 % U+030A COMBINING RING ABOVE; ringcmb
 15748 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 15749 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 15750 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 15751 % U+030C COMBINING CARON; caroncmb
 15752 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 15753 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 15754 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 15755 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 15756 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 15757 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
 15758 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 15759 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 15760 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
 laut (tipa)
 15761 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
 15762 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
 15763 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
 15764 % U+0327 COMBINING CEDILLA; cedillacmb
 15765 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 15766 % U+0328 COMBINING OGONEK; ogonekcmb
 15767 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 15768 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
 15769 % \textsubcircum (tipa)
 15770 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
 15771 % U+032E COMBINING BREVE BELOW; brevebelowcmb
 15772 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
 15773 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
 15774 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
 15775 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 15776 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 15777 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 15778 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 15779 % U+20DD COMBINING ENCLOSING CIRCLE
 15780 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

15781 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
 15782 \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.

15783 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}%
 15784 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textacute}%
 15785 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
 15786 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
 15787 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
 15788 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
 15789 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
 15790 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
 15791 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
 15792 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
 15793 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
 15794 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
 15795 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
 15796 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
 15797 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}}% U+0311

15798 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\83\044\}}% U+0324
 15799 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\texttringlow}%
 15800 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcirc-
 low}%
 15801 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\83\056\}}% U+032E
 15802 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
 15803 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
 15804 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
 15805 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
 15806 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
 15807 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
 15808 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\83\001\83\004\}}% U+0301 U
 15809 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\83\000\83\004\}}% U+0300 U
 15810 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}%
 15811 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
 15812 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
 15813 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
 15814 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciieresis}%
 15815 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
 15816 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
 15817 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
 15818 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
 15819 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
 15820 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
 15821 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
 15822 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
 15823 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
 15824 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\83\021\}}% U+0311
 15825 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\83\044\}}% U+0324
 15826 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\texttringlow}%
 15827 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcirc-
 low}%
 15828 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\83\056\}}% U+032E
 15829 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
 15830 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
 15831 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
 15832 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
 15833 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
 15834 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
 15835 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\83\001\83\004\}}% U+0301 U+0304
 15836 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

15837 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
 15838 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
 15839 \DeclareTextCommand{\capitalgrave}{PU}[1]{\{#1}}%
 15840 \DeclareTextCommand{\capitalacute}{PU}[1]{\{#1}}%
 15841 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
 15842 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
 15843 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\{#1}}%
 15844 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
 15845 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
 15846 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
 15847 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
 15848 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
 15849 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}%
 15850 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
 15851 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```
15852 % U+0009 (CHARACTER TABULATION)
15853 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15854 % U+000A (LINE FEED)
15855 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
15856 % U+000D (CARRIAGE RETURN)
15857 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

15858 % U+0022 QUOTATION MARK; quotedbl
15859 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
15860 % U+0023 NUMBER SIGN; numbersign
15861 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
15862 % U+0024 DOLLAR SIGN; dollar
15863 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
15864 %* \textdollar -> \mathdollar
15865 %* \textdollar -> \EyesDollar (marvosym)
15866 % U+0025 PERCENT SIGN; percent
15867 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15868 % U+0026 AMPERSAND; ampersand
15869 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15870 %* \textampersand -> \binampersand (stmaryrd)
15871 %* \textampersand -> \with (cmll)
15872 % U+0027 APOSTROPHE; quotesingle
15873 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15874 % U+0028 LEFT PARENTHESIS; parenleft
15875 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15876 % U+0029 RIGHT PARENTHESIS; parenright
15877 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15878 % U+002A ASTERISK; asterisk; (?)
15879 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15880 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15881 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15882 % U+002C COMMA; comma; \MVComma (marvosym)
15883 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15884 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15885 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15886 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15887 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15888 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15889 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15890 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15891 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15892 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15893 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15894 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
15895 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15896 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15897 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15898 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15899 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15900 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15901 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15902 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15903 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
```


15904 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 15905 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 15906 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 15907 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 15908 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 15909 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 15910 % U+003C LESS-THAN SIGN; less
 15911 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 15912 % U+003E GREATER-THAN SIGN; greater
 15913 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 15914 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 15915 \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
 15916 % U+005C REVERSE SOLIDUS; backslash
 15917 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 15918 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15919 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 15920 % U+005F LOW LINE; underscore
 15921 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 15922 %* \textunderscore -> \mathunderscore (LaTeX)
 15923 % U+0060 GRAVE ACCENT; grave
 15924 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
 \80\141: U+0061 LATIN SMALL LETTER A; a
 ...
 \80\150: U+0068 LATIN SMALL LETTER H; h
 15925 % U+0069 LATIN SMALL LETTER I; i
 15926 \DeclareTextCompositeCommand{\.}{PU}{i}% \80\151 U+0069
 15927 \DeclareTextCompositeCommand{\.}{PU}{i}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 15928 % U+007B LEFT CURLY BRACKET; braceleft
 15929 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 15930 % U+007C VERTICAL LINE; *bar, verticalbar
 15931 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 15932 %* \textbar -> \textvertline (tipa)
 15933 % U+007D RIGHT CURLY BRACKET; braceright
 15934 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 15935 % U+007E TILDE; asciitilde
 15936 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace

15937 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15938 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 15939 % U+00A2 CENT SIGN; cent
 15940 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 15941 % U+00A3 POUND SIGN; sterling
 15942 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 15943 %* \textsterling -> \mathsterling (LaTeX)
 15944 %* \textsterling -> \pounds (LaTeX)
 15945 % U+00A4 CURRENCY SIGN; currency
 15946 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 15947 % U+00A5 YEN SIGN; yen
 15948 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 15949 % U+00A6 BROKEN BAR; brokenbar
 15950 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 15951 %* \textbrokenbar -> \brokenvert (wasysym)
 15952 % U+00A7 SECTION SIGN; section
 15953 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 15954 %* \textsection -> \mathsection (LaTeX)
 15955 %* \textsection -> \S (LaTeX)
 15956 % U+00A8 DIAERESIS; dieresis
 15957 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 15958 % U+00A9 COPYRIGHT SIGN; copyright
 15959 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 15960 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15961 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 15962 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15963 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 15964 % U+00AC NOT SIGN; logicalnot
 15965 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 15966 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 15967 % U+00AE REGISTERED SIGN; registered
 15968 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 15969 % U+00AF MACRON; *macron, overscore
 15970 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 15971 % U+00B0 DEGREE SIGN; degree
 15972 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 15973 % U+00B1 PLUS-MINUS SIGN; plusminus
 15974 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 15975 % U+00B2 SUPERScript TWO; twosuperior
 15976 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
 15977 % U+00B3 SUPERScript THREE; threesuperior
 15978 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
 15979 % U+00B4 ACUTE ACCENT; acute
 15980 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 15981 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 15982 % U+00B5 MICRO SIGN; mu, mul
 15983 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 15984 % U+00B6 PILCROW SIGN; paragraph
 15985 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 15986 %* \textparagraph -> \mathparagraph (LaTeX)
 15987 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15988 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 15989 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 15990 %* \textperiodcentered -> \Squaredot (marvosym)
 15991 % U+00B8 CEDILLA; cedilla

15992 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15993 % U+00B9 SUPERSCRIPT ONE; onesuperior
15994 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15995 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15996 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15997 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15998 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15999 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16000 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16001 % U+00BD VULGAR FRACTION ONE HALF; onehalf
16002 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16003 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16004 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16005 % U+00BF INVERTED QUESTION MARK; questiondown
16006 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16007 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16008 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16009 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16010 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16011 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16012 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16013 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16014 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16015 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16016 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
16017 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16018 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16019 % U+00C6 LATIN CAPITAL LETTER AE; AE
16020 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16021 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16022 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16023 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
16024 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16025 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16026 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16027 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16028 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16029 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16030 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16031 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16032 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16033 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16034 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16035 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16036 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
16037 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16038 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
16039 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16040 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16041 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16042 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16043 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16044 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16045 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16046 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16047 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex

16048 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
16049 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16050 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16051 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16052 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
16053 % U+00D7 MULTIPLICATION SIGN; multiply
16054 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16055 %* \textmultiply -> \vartimes (stmaryrd)
16056 %* \textmultiply -> \MVMultiplication (marvosym)
16057 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16058 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16059 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16060 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
16061 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16062 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16063 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16064 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16065 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16066 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
16067 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16068 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16069 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16070 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16071 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16072 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16073 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16074 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16075 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
16076 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16077 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16078 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16079 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
16080 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16081 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16082 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16083 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
16084 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16085 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16086 % U+00E6 LATIN SMALL LETTER AE; ae
16087 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16088 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16089 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16090 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16091 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
16092 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16093 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16094 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16095 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16096 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16097 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16098 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16099 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16100 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16101 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16102 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16103 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16104 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

16105 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
16106 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16107 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16108 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16109 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\357}% U+00EF
16110 % U+00F0 LATIN SMALL LETTER ETH; eth
16111 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16112 %* \dh -> \eth (wsuipa, phonetic)
16113 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16114 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16115 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16116 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16117 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16118 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16119 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16120 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
16121 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16122 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16123 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16124 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16125 % U+00F7 DIVISION SIGN; divide
16126 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16127 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16128 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16129 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16130 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16131 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16132 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16133 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16134 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
16135 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16136 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16137 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16138 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16139 % U+00FE LATIN SMALL LETTER THORN; thorn;
16140 % \th, \thorn (wasysym), \textthorn (tipa)
16141 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16142 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16143 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16144 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16145 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16146 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16147 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
16148 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16149 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16150 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16151 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16152 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16153 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16154 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16155 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16156 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16157 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16158 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106

16159 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 16160 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 16161 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 16162 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 16163 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 16164 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 16165 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 16166 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 16167 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 16168 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 16169 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 16170 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 16171 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 16172 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 16173 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 16174 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 16175 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 16176 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 16177 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 16178 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 16179 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
 16180 % \textcrd (tipa)
 16181 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 16182 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
 16183 %* \textcrd -> \crossd (wsuipa)
 16184 % An alternate glyph with the stroke through the bowl:
 16185 %* \textcrd -> \textbard (tipa)
 16186 %* \textcrd -> \bard (wsuipa)
 16187 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
 16188 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
 16189 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
 16190 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
 16191 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 16192 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 16193 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
 16194 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
 16195 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
 16196 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
 16197 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
 16198 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
 16199 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
 16200 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
 16201 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
 16202 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
 16203 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
 16204 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
 16205 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
 16206 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
 16207 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
 16208 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
 16209 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
 16210 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
 16211 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
 16212 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
 16213 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
 16214 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F

16215 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
16216 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16217 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16218 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16219 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
16220 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16221 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16222 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16223 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16224 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16225 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16226 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16227 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16228 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16229 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AMS)
16230 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16231 %* \texthbar -> \textcrh (tipa)
16232 %* \texthbar -> \crossh (wsuipa)
16233 %* \texthbar -> \planck (phonetic)
16234 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16235 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16236 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16237 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16238 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16239 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16240 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16241 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16242 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16243 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16244 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16245 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16246 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16247 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16248 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16249 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16250 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16251 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16252 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16253 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16254 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16255 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16256 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16257 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16258 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16259 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16260 % U+0133 LATIN SMALL LIGATURE IJ; ij
16261 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16262 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16263 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16264 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16265 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16266 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16267 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
16268 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136

16269 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 16270 \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`.

16271 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 16272 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 16273 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 16274 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 16275 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 16276 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 16277 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 16278 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 16279 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 16280 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 16281 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 16282 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 16283 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 16284 \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`.

16285 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 16286 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 16287 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 16288 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 16289 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 16290 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 16291 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 16292 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 16293 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16294 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16295 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16296 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16297 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 16298 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16299 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16300 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16301 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16302 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16303 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16304 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16305 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 16306 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16307 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16308 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16309 % U+014B LATIN SMALL LETTER ENG; eng
 16310 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16311 %* \ng -> \eng (wsuipa)
 16312 %* \ng -> \engma (phonetic)
 16313 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16314 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C

16315 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16316 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16317 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16318 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16319 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16320 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16321 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 16322 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16323 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 16324 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16325 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16326 \DeclareTextCompositeCommand{\OE}{PU}{\81\122}% U+0152
 16327 % U+0153 LATIN SMALL LIGATURE OE; oe
 16328 \DeclareTextCompositeCommand{\oe}{PU}{\81\123}% U+0153
 16329 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16330 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16331 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16332 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16333 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 16334 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16335 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16336 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16337 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16338 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16339 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16340 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16341 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16342 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16343 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16344 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16345 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16346 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16347 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16348 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16349 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16350 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16351 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16352 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16353 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16354 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16355 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16356 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16357 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 16358 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 16359 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 16360 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 16361 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 16362 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 16363 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 16364 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 16365 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 16366 \DeclareTextCompositeCommand{\textTslash}{PU}{\81\146}% U+0166
 16367 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar

16368 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16369 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16370 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16371 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16372 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16373 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16374 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16375 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16376 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16377 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16378 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16379 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16380 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16381 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16382 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16383 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16384 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16385 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
16386 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16387 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
16388 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16389 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16390 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16391 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16392 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16393 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16394 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16395 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16396 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16397 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16398 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
16399 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
16400 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
16401 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
16402 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
16403 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
16404 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
16405 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
16406 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
16407 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16408 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
16409 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16410 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
16411 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
16412 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
16413 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
16414 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
16415 % U+017F LATIN SMALL LETTER LONG S; longs, slong
16416 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16417 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
16418 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
16419 %* \textcrb -> \crossb (wsuipa)
16420 % An alternate glyph with the stroke through the bowl:

16421 %* \textcrb -> \textbarb (tipa)
16422 %* \textcrb -> \barb (wsuipa)
16423 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
16424 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
16425 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16426 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16427 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
16428 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16429 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
16430 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
16431 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16432 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16433 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16434 %* \textflorin -> \Florin (marvosym)
16435 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16436 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16437 %* \texthvlig -> \hv (wsuipa)
16438 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
16439 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16440 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16441 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16442 %* \texthtk -> \hausak (phonetic)
16443 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16444 % \textbarl (tipa), \barl (wsuipa)
16445 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16446 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16447 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16448 % \textcrlambda (tipa)
16449 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16450 %* \textcrlambda -> \crossnilambda (wsuipa)
16451 %* \textcrlambda -> \barlambd (phonetic)
16452 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16453 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
16454 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegrightlong;
16455 % \textnrleg (tipx)
16456 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16457 %* \textPUnrleg -> \textnrleg (tipx)
16458 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16459 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16460 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16461 % \textlhookt (tipa)
16462 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16463 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16464 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16465 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16466 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16467 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16468 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16469 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16470 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16471 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16472 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16473 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)

16474 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16475 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16476 % \textpipe (tipa)
16477 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16478 %* \textpipe -> \textpipevar (tipx)
16479 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16480 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16481 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16482 %* \textdoublepipe -> \textdoublepipevar (tipx)
16483 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16484 % clickalveolar; \textdoublebarpipe (tipa)
16485 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16486 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16487 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16488 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16489 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
16490 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16491 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16492 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16493 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
16494 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16495 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16496 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16497 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16498 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
16499 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16500 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16501 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16502 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
16503 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16504 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16505 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16506 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16507 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16508 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16509 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16510 %* \textgslash -> \textcrg (tipa)
16511 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16512 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16513 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
16514 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16515 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16516 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16517 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón
16518 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16519 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16520 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16521 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16522 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16523 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcarón
16524 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16525 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16526 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16527 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16528 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute

16529 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16530 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16531 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
16532 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16533 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
16534 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16535 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16536 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16537 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16538 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16539 % *Oslashacute, Ostrokeacute
16540 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16541 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16542 % *oslashacute, ostrokeacute
16543 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16544 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16545 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16546 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16547 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16548 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16549 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16550 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16551 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16552 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16553 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16554 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
16555 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16556 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16557 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16558 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16559 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16560 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16561 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16562 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16563 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16564 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16565 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16566 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16567 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16568 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16569 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16570 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16571 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16572 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16573 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16574 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16575 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16576 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16577 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16578 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16579 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214

16580 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16581 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16582 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 16583 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16584 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve
 16585 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16586 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16587 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16588 % U+021F LATIN SMALL LETTER H WITH CARON
 16589 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16590 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16591 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16592 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16593 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16594 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16595 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16596 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16597 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16598 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16599 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16600 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16601 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16602 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16603 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16604 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16605 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16606 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16607 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16608 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16609 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16610 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16611 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16612 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16613 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16614 % U+0237 LATIN SMALL LETTER DOTLESS J
 16615 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16616 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16617 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16618 %* \textPUdblig -> \textdblig (tipx)
 16619 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16620 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16621 %* \textPUqplig -> \textqplig (tipx)
 16622 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16623 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16624 %* \textslashc -> \textcentoldstyle (textcomp)
 16625 % With bar instead of stroke:
 16626 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16627 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16628 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16629 %* \textturna -> \inva (wasysym)
 16630 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16631 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16632 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251

16633 %* \textscripta -> \vara (phonetic)
16634 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
16635 % \textturnscripta (tipa)
16636 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
16637 %* \textturnscripta -> \invscripta (wsuipa)
16638 %* \textturnscripta -> \rotvara (phonetic)
16639 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
16640 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
16641 %* \texthtb -> \hookb (wsuipa)
16642 %* \texthtb -> \hausab (phonetic)
16643 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16644 % \textopeno (tipa), \openo (wasysym)
16645 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16646 %* \textopeno -> \varopeno (phonetic)
16647 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16648 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16649 %* \textctc -> \curlyc (wsuipa)
16650 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16651 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16652 %* \textrtaild -> \taild (wsuipa)
16653 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16654 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16655 %* \texthtd -> \hookd (wsuipa)
16656 %* \texthtd -> \hausad (phonetic)
16657 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16658 % \textreve (tipa), \reve (wsuipa)
16659 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16660 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16661 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16662 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16663 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16664 % \textrhookschwa (tipa)
16665 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
16666 %* \textrhookschwa -> \er (wsuipa)
16667 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
16668 % \niepsilon (wsuipa)
16669 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16670 %* \textniepsilon -> \epsi (phonetic)
16671 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16672 % \textrevepsilon (tipa), \revepsilon (wsuipa)
16673 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
16674 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
16675 % \textrhookrevepsilon (tipa)
16676 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
16677 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16678 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
16679 % \textcloserevepsilon (tipa)
16680 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
16681 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
16682 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;
16683 % \textbardotlessj (tipa)
16684 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16685 %* \textbardotlessj -> \barj (phonetic)

16686 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16687 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16688 %* \texthtg -> \hookg (wsuipa)
16689 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16690 % \textscriptg (tipa), \scriptg (wsuipa)
16691 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16692 %* \textscriptg -> \varg (phonetic)
16693 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16694 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16695 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16696 % \ipagamma (wsuipa), \vod (phonetic)
16697 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16698 %* \textipagamma -> \vod (phonetic)
16699 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16700 % \babygamma (wsuipa)
16701 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16702 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16703 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16704 %* \textturnh -> \invh (wsuipa)
16705 %* \textturnh -> \udesc (phonetic)
16706 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16707 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16708 %* \texthth -> \hookh (wsuipa)
16709 %* \texthth -> \voicedh (phonetic)
16710 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16711 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16712 %* \texththeng -> \hookheng (wsuipa)
16713 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16714 % \textbari (tipa), \bari (wsuipa)
16715 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16716 %* \textbari -> \ibar (phonetic)
16717 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16718 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16719 %* \textniiota -> \vari (phonetic)
16720 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16721 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16722 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16723 % \textltilde (tipa)
16724 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16725 %* \textltilde -> \tildel (wsuipa)
16726 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16727 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16728 %* \textbeltl -> \latfric (wsuipa)
16729 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16730 % lhookretroflex; \textrtaill (tipa)
16731 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16732 %* \textrtaill -> \taill (wsuipa)
16733 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16734 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16735 %* \textlyoghlig -> \lz (wsuipa)
16736 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16737 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16738 %* \textturnm -> \invm (wsuipa)
16739 %* \textturnm -> \rotm (phonetic)
16740 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;

16741 % \textturnmrlleg (tipa)
16742 \DeclareTextCommand{\textturnmrlleg}{PU}{\82\160}% U+0270
16743 %* \textturnmrlleg -> \legm (wsuipa)
16744 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16745 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16746 %* \textltailm -> \labdentainas (wsuipa)
16747 %* \textltailm -> \emgma (phonetic)
16748 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textltailn (tipa)
16749 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16750 %* \textltailn -> \nj (wsuipa)
16751 %* \textltailn -> \nya (phonetic)
16752 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16753 % nhookretroflex; \textrtailn (tipa)
16754 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16755 %* \textrtailn -> \tailn (wsuipa)
16756 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16757 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16758 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16759 % LATIN CAPITAL LETTER BARRED O; obarred;
16760 % \textbaro (tipa), \baro (wsuipa)
16761 % But \baro from stmaryrd is different!
16762 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16763 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16764 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16765 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16766 % \textcloseomega (tipa)
16767 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16768 %* \textcloseomega -> \closedniomega (wsuipa)
16769 %* \textcloseomega -> \varomega (phonetic)
16770 % U+0278 LATIN SMALL LETTER PHI; philatin; \niph (wsuipa)
16771 \DeclareTextCommand{\textniph}{PU}{\82\170}%* U+0278
16772 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16773 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16774 %* \textturnr -> \invr (wsuipa)
16775 %* \textturnr -> \rotr (phonetic)
16776 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16777 % rlonglegturned; \textturnlongleg (tipa)
16778 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
16779 %* \textturnlongleg -> \invleg (wsuipa)
16780 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhocturned;
16781 % \textturnrrtail (tipa)
16782 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16783 %* \textturnrrtail -> \tailinvr (wsuipa)
16784 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
16785 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
16786 %* \textlongleg -> \leg (wsuipa)
16787 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoct; \textrtailr (tipa)
16788 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16789 %* \textrtailr -> \tailr (wsuipa)
16790 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16791 % \textfishhookr (tipa)
16792 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16793 %* \textfishhookr -> \flapr (wsuipa)
16794 %* \textfishhookr -> \flap (phonetic)

16795 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16796 % \textlhtlongi (tipa)
16797 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16798 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16799 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16800 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16801 % \textinvscr (tipa), \invscr (wsuipa)
16802 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16803 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16804 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16805 %* \textrtails -> \tails (wsuipa)
16806 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16807 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16808 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16809 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16810 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16811 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatereversed;
16812 % \textvibyi (tipa)
16813 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16814 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16815 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16816 %* \textctesh -> \curlyesh (wsuipa)
16817 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16818 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16819 %* \textturnt -> \clickt (wsuipa)
16820 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
16821 % \texttrtailt (tipa)
16822 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
16823 %* \texttrtailt -> \tailt (wsuipa)
16824 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16825 % \textbaru (tipa), \baru (wsuipa)
16826 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16827 %* \textbaru -> \ubar (phonetic)
16828 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16829 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16830 %* \textniupsilon -> \rotOmega (phonetic)
16831 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
16832 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16833 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16834 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16835 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16836 %* \textturnv -> \invv (wsuipa)
16837 %* \textturnv -> \pwedge (phonetic)
16838 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16839 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16840 %* \textturnw -> \invw (wsuipa)
16841 %* \textturnw -> \rotw (phonetic)
16842 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16843 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16844 %* \textturny -> \invy (wsuipa)
16845 %* \textturny -> \roty (phonetic)
16846 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16847 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F

16848 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
 16849 % \texttrtailz (tipa)
 16850 \DeclareTextCommand{\texttrtailz}{PU}{\82\220}% U+0290
 16851 %* \texttrtailz -> \tailz (wsuipa)
 16852 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
 16853 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
 16854 %* \textctz -> \curlyz (wsuipa)
 16855 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
 16856 % \textyogh (tipa), \yogh (wsuipa)
 16857 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
 16858 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
 16859 % ezhcurl; \textctyogh (tipa)
 16860 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
 16861 %* \textctyogh -> \curlyyogh (wsuipa)
 16862 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
 16863 % \textglotstop (tipa), \glotstop (wsuipa)
 16864 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
 16865 %* \textglotstop -> \ejective (wsuipa)
 16866 %* \textglotstop -> \glottal (phonetic)
 16867 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
 16868 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
 16869 % \textrevglotstop (tipa), \revglotstop (wsuipa)
 16870 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
 16871 %* \textrevglotstop -> \reveject (wsuipa)
 16872 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
 16873 % \textinvglotstop (tipa), \invglotstop (wsuipa)
 16874 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
 16875 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
 16876 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
 16877 %* \textstretchc -> \clickc (wsuipa)
 16878 %* \textstretchc -> \textstretchcvar (tipx)
 16879 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
 16880 % \textbullseye (tipa)
 16881 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
 16882 %* \textbullseye -> \clickb (wsuipa)
 16883 %* \textbullseye -> \textObullseye (tipx)
 16884 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
 16885 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
 16886 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
 16887 % \textclosepsilon (tipa)
 16888 \DeclareTextCommand{\textclosepsilon}{PU}{\82\232}% U+029A
 16889 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
 16890 % \texthtscg (tipa)
 16891 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
 16892 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
 16893 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 16894 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail; \textcdj (tipa)
 16895 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 16896 %* \textctj -> \textctjvar (tipx)
 16897 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
 16898 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
 16899 %* \textturnk -> \textturnsck (tipx)
 16900 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
 16901 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F

16902 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 16903 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 16904 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
 stroke;
 16905 % \textbarglotstop (tipa)
 16906 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 16907 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 16908 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 16909 % \textbarrevglotstop (tipa)
 16910 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 16911 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 16912 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 16913 %* \textdzlig -> \dz (wsupipa)
 16914 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 16915 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16916 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16917 % \textdctzlig (tipa)
 16918 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16919 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16920 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16921 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 16922 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 16923 %* \textteshlig -> \tesh (wsuipa)
 16924 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16925 % \texttctclig (tipa)
 16926 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16927 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16928 % \textlhtlongy (tipa)
 16929 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16930 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16931 % \textvibyy (tipa)
 16932 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16933 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16934 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 16935 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16936 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16937 % \textraiseglotstop (tipa)
 16938 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 16939 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16940 % \textlptr (tipa)
 16941 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16942 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16943 % \textrptr (tipa)
 16944 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16945 % U+02C7 CARON; caron
 16946 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16947 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16948 % \textprimstress (tipa)
 16949 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 16950 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 16951 % \textsecstress (tipa)
 16952 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 16953 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;

16954 % \textlengthmark (tipa)
 16955 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 16956 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 16957 % \texthalflength (tipa)
 16958 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 16959 % U+02D8 BREVE; breve
 16960 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 16961 % U+02D9 DOT ABOVE; dotaccent
 16962 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 16963 % U+02DA RING ABOVE; ring
 16964 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 16965 % U+02DB OGONEK; ogonek
 16966 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 16967 % U+02DC SMALL TILDE; ilde, *tilde
 16968 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 16969 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 16970 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 16971 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 16972 % U+02F3 MODIFIER LETTER LOW RING
 16973 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 16974 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 16975 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 16976 % U+02F7 MODIFIER LETTER LOW TILDE
 16977 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 16978 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 16979 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 16980 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 16981 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

16982 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 16983 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 16984 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 16985 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 16986 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 16987 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 16988 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16989 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 16990 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 16991 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

16992 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 16993 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 16994 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 16995 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 16996 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 16997 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 16998 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 16999 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17000 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 17001 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17002 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 17003 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A

17004 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 17005 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 17006 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 17007 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 17008 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 17009 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 17010 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 17011 % iotadieresis
 17012 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 17013 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 17014 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 17015 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 17016 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 17017 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
 17018 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
 17019 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
 17020 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
 17021 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 17022 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 17023 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 17024 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 17025 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 17026 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 17027 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
 17028 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
 17029 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 17030 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 17031 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 17032 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 17033 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
 17034 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
 17035 % U+039C GREEK CAPITAL LETTER MU; Mu
 17036 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 17037 % U+039D GREEK CAPITAL LETTER NU; Nu
 17038 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
 17039 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
 17040 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
 17041 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
 17042 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
 17043 % U+03A0 GREEK CAPITAL LETTER PI; Pi
 17044 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
 17045 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
 17046 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
 17047 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
 17048 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
 17049 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 17050 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 17051 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
 17052 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
 17053 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
 17054 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
 17055 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 17056 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 17057 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
 17058 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8

17059 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17060 % \Omega (LaTeX)
17061 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17062 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17063 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17064 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17065 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silondieresis
17066 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17067 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17068 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17069 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
17070 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17071 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
17072 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17073 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
17074 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17075 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17076 % AND TONOS; upsilon
17077 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
17078 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17079 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17080 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17081 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17082 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17083 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17084 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17085 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17086 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17087 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17088 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17089 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17090 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17091 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17092 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17093 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17094 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17095 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17096 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17097 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17098 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17099 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17100 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17101 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17102 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17103 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17104 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17105 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17106 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17107 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17108 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17109 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17110 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17111 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17112 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17113 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17114 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)

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17115 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17116 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17117 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17118 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17119 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17120 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17121 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17122 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17123 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17124 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17125 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17126 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17127 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17128 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17129 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17130 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
      silondieresis
17131 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17132 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17133 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17134 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17135 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17136 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17137 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17138 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17139 % U+03DA GREEK LETTER STIGMA; Stigmagreek
17140 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
17141 % U+03DB GREEK SMALL LETTER STIGMA
17142 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
17143 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17144 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17145 % U+03DD GREEK SMALL LETTER DIGAMMA
17146 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17147 %* \textdigammagreek -> \digamma (AmS)
17148 % U+03DE GREEK LETTER KOPPA; Koppagreek
17149 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17150 % U+03DF GREEK SMALL LETTER KOPPA
17151 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17152 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17153 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17154 % U+03E1 GREEK SMALL LETTER SAMPI
17155 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17156 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17157 % \backepsilon (AmS)
17158 \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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17159 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17160 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
17161 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afi10023
17162 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17163 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
17164 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afi10051
17165 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17166 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afi10052

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17167 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17168 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afi10053
17169 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17170 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzeyrillic, *afi10054
17171 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17172 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17173 % Icyrillic, *afi10055
17174 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17175 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afi10056
17176 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17177 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17178 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afi10057
17179 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17180 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afi10058
17181 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17182 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afi10059
17183 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17184 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshcyrillic, *afi10060
17185 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17186 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afi10061
17187 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17188 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17189 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
17190 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afi10062
17191 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17192 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17193 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhcyrillic, *afi10145
17194 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17195 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afi10017
17196 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17197 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afi10018
17198 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17199 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afi10019
17200 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17201 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afi10020
17202 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17203 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afi10021
17204 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17205 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afi10022
17206 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17207 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhcyrillic, *afi10024
17208 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17209 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afi10025
17210 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17211 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afi10026
17212 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17213 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afi10027
17214 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17215 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17216 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afi10028
17217 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17218 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afi10029
17219 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17220 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afi10030
17221 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17222 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afi10031
17223 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D

17224 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17225 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17226 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17227 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17228 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17229 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17230 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17231 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17232 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17233 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17234 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17235 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17236 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17237 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17238 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17239 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17240 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17241 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17242 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17243 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17244 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17245 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17246 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17247 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17248 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17249 % Hardsigncyrillic, *afii10044
17250 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17251 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17252 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17253 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17254 % Softsigncyrillic, *afii10046
17255 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17256 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17257 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17258 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17259 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17260 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17261 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17262 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17263 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17264 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17265 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17266 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17267 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17268 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17269 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17270 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17271 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17272 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17273 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17274 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17275 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
17276 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17277 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17278 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17279 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17280 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic

17281 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17282 \DeclareTextCompositeCommand{\U}{PU}{\cyr}{\84\071}% U+0439
17283 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17284 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17285 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17286 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
17287 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17288 \DeclareTextCommand{\cyr}{PU}{\84\074}% U+043C
17289 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17290 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17291 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17292 \DeclareTextCommand{\cyr}{PU}{\84\076}% U+043E
17293 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17294 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17295 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17296 \DeclareTextCommand{\cyr}{PU}{\84\100}% U+0440
17297 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17298 \DeclareTextCommand{\cyr}{PU}{\84\101}% U+0441
17299 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17300 \DeclareTextCommand{\cyr}{PU}{\84\102}% U+0442
17301 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17302 \DeclareTextCommand{\cyr}{PU}{\84\103}% U+0443
17303 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17304 \DeclareTextCommand{\cyr}{PU}{\84\104}% U+0444
17305 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17306 \DeclareTextCommand{\cyr}{PU}{\84\105}% U+0445
17307 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17308 \DeclareTextCommand{\cyr}{PU}{\84\106}% U+0446
17309 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17310 \DeclareTextCommand{\cyr}{PU}{\84\107}% U+0447
17311 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17312 \DeclareTextCommand{\cyr}{PU}{\84\110}% U+0448
17313 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17314 \DeclareTextCommand{\cyr}{PU}{\84\111}% U+0449
17315 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17316 \DeclareTextCommand{\cyr}{PU}{\84\112}% U+044A
17317 %* \cyrhrdsn -> \hardsign (tipa)
17318 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17319 \DeclareTextCommand{\cyr}{PU}{\84\113}% U+044B
17320 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17321 \DeclareTextCommand{\cyr}{PU}{\84\114}% U+044C
17322 %* \cyrsoftsn -> \softsign (tipa)
17323 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17324 \DeclareTextCommand{\cyr}{PU}{\84\115}% U+044D
17325 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17326 \DeclareTextCommand{\cyr}{PU}{\84\116}% U+044E
17327 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17328 \DeclareTextCommand{\cyr}{PU}{\84\117}% U+044F
17329 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17330 \DeclareTextCompositeCommand{\'}{PU}{\cyr}{\84\120}% U+0450
17331 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17332 \DeclareTextCommand{\cyr}{PU}{\84\121}% U+0451
17333 \DeclareTextCompositeCommand{\"}{PU}{\cyr}{\84\121}% U+0451
17334 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17335 \DeclareTextCommand{\cyr}{PU}{\84\122}% U+0452
17336 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic

17337 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17338 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17339 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17340 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17341 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17342 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17343 % *afii10103, icyrillic
17344 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17345 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17346 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17347 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17348 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17349 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17350 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17351 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
17352 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17353 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17354 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17355 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17356 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17357 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17358 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17359 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
17360 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17361 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17362 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17363 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17364 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17365 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17366 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17367 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17368 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17369 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17370 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17371 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17372 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17373 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17374 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17375 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17376 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17377 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
17378 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17379 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
17380 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17381 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17382 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17383 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17384 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17385 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17386 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17387 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17388 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17389 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17390 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C

17391 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-cyrillic
 17392 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17393 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17394 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17395 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17396 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17397 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17398 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17399 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17400 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17401 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17402 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17403 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17404 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17405 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17406 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17407 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17408 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17409 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17410 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17411 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17412 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17413 % GRAVE ACCENT; izhitsadblgravecyrillic
 17414 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17415 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17416 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17417 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17418 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17419 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 17420 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17421 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17422 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17423 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 17424 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17425 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 17426 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17427 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17428 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17429 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17430 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17431 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17432 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17433 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17434 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17435 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17436 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-cyrillicmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-acyrillicmb

\84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17437 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17438 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17439 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17440 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17441 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17442 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17443 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17444 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17445 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17446 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17447 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17448 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17449 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 17450 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17451 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 17452 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17453 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 17454 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17455 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17456 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17457 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17458 % Ghemiddlehookcyrillic
 17459 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17460 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17461 % ghemiddlehookcyrillic
 17462 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17463 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17464 % Zhedescendercyrillic
 17465 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17466 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17467 % zhedescendercyrillic
 17468 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17469 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 17470 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17471 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17472 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 17473 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17474 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17475 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 17476 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17477 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesendercyrillic
 17478 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17479 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17480 % Kavertikalstrokecyrillic
 17481 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17482 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17483 % kavertikalstrokecyrillic

17484 \DeclareTextCommand{\cyrvcrs}{PU}{\84\235}% U+049D
17485 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
17486 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
17487 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
17488 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
17489 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
17490 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
17491 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
17492 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
17493 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
17494 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
17495 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
cyrillic
17496 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
17497 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
17498 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
17499 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
17500 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
17501 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
17502 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
17503 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
17504 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
17505 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
lic
17506 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
17507 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
17508 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
17509 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
dercyrillic
17510 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
17511 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
17512 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
cyrillic
17513 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
17514 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
17515 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
dercyrillic
17516 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
17517 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
dercyrillic
17518 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
17519 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17520 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17521 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17522 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17523 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
traightstrokecyrillic
17524 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17525 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
traightstrokecyrillic
17526 \DeclareTextCommand{\cyr yhcrs}{PU}{\84\261}% U+04B1
17527 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
dercyrillic
17528 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2

17529 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 17530 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17531 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17532 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17533 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17534 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 17535 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17536 % Chedescendercyrillic
 17537 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 17538 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
 17539 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 17540 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 17541 % Cheverticalstrokecyrillic
 17542 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 17543 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 17544 % cheverticalstrokecyrillic
 17545 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 17546 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 17547 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 17548 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 17549 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 17550 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
 17551 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 17552 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 17553 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 17554 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 17555 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 17556 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 17557 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 17558 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 17559 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 17560 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 17561 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 17562 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 17563 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 17564 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 17565 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 17566 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17567 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17568 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17569 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17570 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17571 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17572 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17573 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 17574 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17575 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17576 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17577 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17578 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic

17579 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
17580 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
17581 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
17582 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
17583 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
17584 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
17585 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
17586 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
17587 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
17588 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
17589 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
17590 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
17591 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
17592 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
17593 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
17594 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
17595 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
17596 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
17597 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
17598 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
17599 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
17600 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
17601 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
17602 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
17603 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
17604 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afi10846, schwacyrillic
17605 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
17606 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
17607 % Schwadiescyrillic
17608 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
17609 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
17610 % schwadiescyrillic
17611 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
17612 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
17613 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
17614 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
17615 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
17616 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
17617 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
17618 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
17619 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
17620 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
17621 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
17622 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
17623 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
17624 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
17625 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2
17626 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic

17627 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\343}% U+04E3
17628 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17629 \DeclareTextCompositeCommand{"} {PU}{\CYRI}{\84\344}% U+04E4
17630 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17631 \DeclareTextCompositeCommand{"} {PU}{\cyri}{\84\345}% U+04E5
17632 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17633 \DeclareTextCompositeCommand{"} {PU}{\CYRO}{\84\346}% U+04E6
17634 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
17635 \DeclareTextCompositeCommand{"} {PU}{\cyro}{\84\347}% U+04E7
17636 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17637 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17638 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17639 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17640 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17641 % Obarreddieresiscyrillic
17642 \DeclareTextCompositeCommand{"} {PU}{\CYROTLD}{\84\352}% U+04EA
17643 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17644 % obarreddieresiscyrillic
17645 \DeclareTextCompositeCommand{"} {PU}{\cyrotld}{\84\353}% U+04EB
17646 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17647 \DeclareTextCompositeCommand{"} {PU}{\CYREREV}{\84\354}% U+04EC
17648 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17649 \DeclareTextCompositeCommand{"} {PU}{\cyreref}{\84\355}% U+04ED
17650 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17651 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
17652 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17653 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF
17654 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17655 \DeclareTextCompositeCommand{"} {PU}{\CYRU}{\84\360}% U+04F0
17656 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17657 \DeclareTextCompositeCommand{"} {PU}{\cyru}{\84\361}% U+04F1
17658 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
garumlautcyrillic
17659 \DeclareTextCompositeCommand{\H} {PU}{\CYRU}{\84\362}% U+04F2
17660 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
garumlautcyrillic
17661 \DeclareTextCompositeCommand{\H} {PU}{\cyru}{\84\363}% U+04F3
17662 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
siscyrillic
17663 \DeclareTextCompositeCommand{"} {PU}{\CYRCH}{\84\364}% U+04F4
17664 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
17665 \DeclareTextCompositeCommand{"} {PU}{\cyrch}{\84\365}% U+04F5
17666 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17667 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17668 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17669 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17670 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17671 \DeclareTextCompositeCommand{"} {PU}{\CYRERY}{\84\370}% U+04F8
17672 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17673 \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

17674 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17675 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17676 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17677 \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`.

17678 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17679 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17680 % U+05D0 HEBREW LETTER ALEF
17681 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17682 % U+05D1 HEBREW LETTER BET
17683 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17684 % U+05D2 HEBREW LETTER GIMEL
17685 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17686 % U+05D3 HEBREW LETTER DALET
17687 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17688 % U+05D4 HEBREW LETTER HE
17689 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17690 % U+05D5 HEBREW LETTER VAV
17691 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17692 % U+05D6 HEBREW LETTER ZAYIN
17693 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17694 % U+05D7 HEBREW LETTER HET
17695 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
17696 % U+05D8 HEBREW LETTER TET
17697 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17698 % U+05D9 HEBREW LETTER YOD
17699 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17700 % U+05DA HEBREW LETTER FINAL KAF
17701 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17702 % U+05DB HEBREW LETTER KAF
17703 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
17704 % U+05DC HEBREW LETTER LAMED
17705 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17706 % U+05DD HEBREW LETTER FINAL MEM
17707 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
17708 % U+05DE HEBREW LETTER MEM
17709 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
17710 % U+05DF HEBREW LETTER FINAL NUN
17711 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
17712 % U+05E0 HEBREW LETTER NUN
17713 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
17714 % U+05E1 HEBREW LETTER SAMEKH
17715 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
17716 % U+05E2 HEBREW LETTER AYIN
17717 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
17718 % U+05E3 HEBREW LETTER FINAL PE
17719 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
17720 % U+05E4 HEBREW LETTER PE
17721 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4

17722 % U+05E5 HEBREW LETTER FINAL TSADI
 17723 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17724 % U+05E6 HEBREW LETTER TSADI
 17725 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17726 % U+05E7 HEBREW LETTER QOF
 17727 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17728 % U+05E8 HEBREW LETTER RESH
 17729 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17730 % U+05E9 HEBREW LETTER SHIN
 17731 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17732 %* \hebshin -> \hebsin (he8)
 17733 % U+05EA HEBREW LETTER TAV
 17734 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17735 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17736 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17737 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17738 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17739 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17740 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17741 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17742 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17743 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 17744 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 17745 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17746 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17747 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17748 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17749 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 17750 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 17751 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 17752 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 17753 %* \textPUscK -> \textscK (tipx)
 17754 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 17755 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 17756 %* \textPUscm -> \textscm (tipx)
 17757 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 17758 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 17759 %* \textPUscP -> \textscP (tipx)
 17760 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17761 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17762 %* \textPUrevscr -> \textrevscr (tipx)
 17763 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scu (wsuipa)
 17764 \DeclareTextCommand{\textscU}{PU}{\9035\034}%* U+1D1C
 17765 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17766 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 17767 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17768 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17769 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17770 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 17771 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17772 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 17773 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA

17774 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 17775 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17776 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 17777 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17778 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 17779 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17780 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 17781 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17782 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 17783 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 17784 % \barsci (wsuipa)
 17785 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 17786 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 17787 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 17788 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17789 % \barscu (wsuipa)
 17790 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17791 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 17792 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 17793 %* \textPURhooka -> \textrhooka (tipx)
 17794 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 17795 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17796 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 17797 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 17798 %* \textPURhooke -> \textrhooke (tipx)
 17799 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 17800 % \textrhookepsilon (tipx)
 17801 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 17802 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 17803 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 17804 % \textrhookopeno (tipx)
 17805 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 17806 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17807 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 17808 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 17809 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 17810 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 17811 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 17812 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 17813 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 17814 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 17815 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 17816 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 17817 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 17818 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 17819 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 17820 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 17821 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 17822 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 17823 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent

17824 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
17825 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
17826 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
17827 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
17828 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
17829 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
17830 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
17831 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17832 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
17833 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17834 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
17835 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17836 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17837 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17838 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17839 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
17840 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17841 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
17842 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17843 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17844 % Emacrongrave
17845 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17846 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17847 % emacrongrave
17848 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17849 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17850 % Emacronacute
17851 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17852 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17853 % emacronacute
17854 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17855 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17856 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17857 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17858 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17859 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17860 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17861 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17862 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17863 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17864 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17865 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17866 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17867 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17868 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
17869 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17870 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
17871 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17872 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17873 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17874 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17875 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17876 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24

17877 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17878 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17879 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17880 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
17881 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17882 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
17883 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17884 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17885 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17886 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17887 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17888 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17889 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17890 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17891 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17892 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17893 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17894 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17895 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17896 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17897 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17898 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17899 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17900 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17901 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17902 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17903 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17904 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17905 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17906 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17907 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17908 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17909 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17910 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17911 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17912 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17913 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17914 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17915 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17916 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17917 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17918 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17919 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17920 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17921 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17922 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17923 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17924 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17925 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17926 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17927 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17928 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17929 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17930 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17931 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent

17932 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17933 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17934 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17935 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17936 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17937 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17938 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17939 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17940 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17941 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17942 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17943 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17944 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17945 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17946 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17947 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17948 % Omacrongrave
17949 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17950 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17951 % omacrongrave
17952 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17953 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17954 % Omacronacute
17955 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17956 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17957 % omacronacute
17958 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17959 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17960 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17961 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17962 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17963 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17964 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17965 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17966 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17967 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17968 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17969 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17970 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17971 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17972 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17973 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17974 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17975 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17976 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17977 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17978 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17979 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17980 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17981 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17982 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17983 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17984 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17985 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17986 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63

17987 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 17988 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 17989 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 17990 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 17991 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 17992 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 17993 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 17994 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 17995 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 17996 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 17997 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 17998 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 17999 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18000 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18001 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18002 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18003 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18004 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18005 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 18006 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18007 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18008 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18009 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18010 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18011 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18012 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18013 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18014 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18015 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18016 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18017 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18018 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18019 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18020 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18021 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18022 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18023 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 18024 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 18025 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 18026 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 18027 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 18028 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 18029 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 18030 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 18031 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 18032 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 18033 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 18034 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 18035 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 18036 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 18037 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent

18038 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
18039 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
18040 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
18041 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
18042 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
18043 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
18044 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
18045 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
18046 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
18047 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
18048 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
18049 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
18050 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
18051 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18052 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
18053 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18054 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
18055 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18056 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
18057 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18058 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
18059 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18060 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
18061 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18062 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
18063 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18064 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
18065 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18066 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
18067 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18068 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
18069 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18070 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18071 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18072 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
18073 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18074 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
18075 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
18076 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
18077 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18078 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
18079 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
18080 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
18081 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
18082 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
18083 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
18084 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
18085 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
18086 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
18087 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
18088 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
18089 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
18090 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
18091 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
18092 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
18093 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow

18094 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 18095 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18096 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18097 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18098 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18099 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18100 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18101 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18102 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
 18103 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18104 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 18105 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18106 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18107 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18108 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18109 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18110 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18111 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18112 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18113 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18114 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18115 % U+2013 EN DASH; endash
 18116 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18117 % U+2014 EM DASH; emdash
 18118 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18119 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18120 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18121 %* \textbardbl -> \textdoublevertline (tipa)
 18122 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18123 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18124 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18125 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18126 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18127 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18128 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18129 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18130 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18131 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18132 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18133 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18134 % U+2020 DAGGER; dagger
 18135 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18136 %* \textdagger -> \dag (LaTeX)
 18137 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18138 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18139 %* \textdaggerdbl -> \ddagger (LaTeX)
 18140 %* \textdaggerdbl -> \ddag (LaTeX)
 18141 % U+2022 BULLET; bullet
 18142 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18143 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18144 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18145 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18146 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18147 %* \textellipsis -> \mathellipsis
 18148 % U+2030 PER MILLE SIGN; perthousand

18149 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18150 % U+2031 PER TEN THOUSAND SIGN
 18151 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18152 % U+2032 PRIME; minute; \prime (MnSymbol)
 18153 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18154 % U+2033 DOUBLE PRIME; \second (mathabx)
 18155 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18156 % U+2034 TRIPLE PRIME; \third (mathabx)
 18157 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18158 % U+2035 REVERSED PRIME; \backprime (AmS)
 18159 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18160 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 18161 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18162 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 18163 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18164 % U+203B REFERENCE MARK; referencemark
 18165 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18166 % U+203D INTERROBANG
 18167 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18168 % U+2044 FRACTION SLASH; fraction
 18169 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18170 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18171 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18172 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18173 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18174 % U+2052 COMMERCIAL MINUS SIGN
 18175 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18176 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18177 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18178 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18179 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18180 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18181 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18182 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18183 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18184 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18185 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18186 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18187 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18188 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18189 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18190 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18191 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18192 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18193 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18194 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18195 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18196 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18197 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18198 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18199 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18200 % U+207B SUPERSCRIPT MINUS
 18201 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B

18202 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18203 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18204 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18205 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18206 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18207 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18208 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18209 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18210 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18211 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18212 % U+2081 SUBSCRIPT ONE; oneinferior
 18213 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18214 % U+2082 SUBSCRIPT TWO; twoinferior
 18215 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18216 % U+2083 SUBSCRIPT THREE; threeinferior
 18217 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18218 % U+2084 SUBSCRIPT FOUR; fourinferior
 18219 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18220 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18221 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18222 % U+2086 SUBSCRIPT SIX; sixinferior
 18223 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18224 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18225 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18226 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18227 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18228 % U+2089 SUBSCRIPT NINE; nineinferior
 18229 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18230 % U+208A SUBSCRIPT PLUS SIGN
 18231 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18232 % U+208B SUBSCRIPT MINUS
 18233 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18234 % U+208C SUBSCRIPT EQUALS SIGN
 18235 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18236 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18237 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18238 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18239 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18240 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18241 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18242 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18243 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18244 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 18245 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18246 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18247 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18248 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18249 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18250 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18251 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18252 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18253 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18254 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18255 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18256 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18257 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18258 % U+2099 LATIN SUBSCRIPT SMALL LETTER N

18259 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18260 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18261 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18262 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18263 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18264 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18265 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18266 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18267 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18268 % U+20A4 LIRA SIGN; afii08941, *lira
 18269 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18270 % U+20A6 NAIRA SIGN
 18271 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18272 % U+20A7 PESETA SIGN; peseta
 18273 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18274 % U+20A9 WON SIGN; won
 18275 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18276 % U+20AB DONG SIGN; dong
 18277 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18278 % U+20AC EURO SIGN; *Euro, euro
 18279 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18280 %* \texteuro -> \EurDig (marvosym)
 18281 %* \texteuro -> \EURdig (marvosym)
 18282 %* \texteuro -> \EurHv (marvosym)
 18283 %* \texteuro -> \EURhv (marvosym)
 18284 %* \texteuro -> \EurCr (marvosym)
 18285 %* \texteuro -> \EURcr (marvosym)
 18286 %* \texteuro -> \EurTm (marvosym)
 18287 %* \texteuro -> \EURtm (marvosym)
 18288 %* \texteuro -> \Eur (marvosym)
 18289 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18290 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18291 %* \textDeleatur -> \Denarius (marvosym)
 18292 % U+20B1 PESO SIGN
 18293 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18294 % U+20B2 GUARANI SIGN
 18295 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18296 % U+2103 DEGREE CELSIUS; centigrade
 18297 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18298 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18299 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18300 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18301 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18302 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18303 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18304 % U+2116 NUMERO SIGN; *afii61352, numero
 18305 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18306 % U+2117 SOUND RECORDING COPYRIGHT
 18307 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18308 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18309 % weierstrass; \wp (LaTeX)
 18310 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118

18311 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18312 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18313 % U+211E PRESCRIPTION TAKE; prescription
 18314 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18315 % U+2120 SERVICE MARK
 18316 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18317 % U+2122 TRADE MARK SIGN; trademark
 18318 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18319 % U+2126 OHM SIGN; Ohm, Omega
 18320 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18321 % U+2127 INVERTED OHM SIGN
 18322 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18323 %* \textmho -> \agemO (wasysym)
 18324 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18325 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18326 % U+212B ANGSTROM SIGN; angstrom
 18327 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18328 % U+212E ESTIMATED SYMBOL; estimated
 18329 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18330 %* \textestimated -> \EstimatedSign (marvosym)
 18331 %* \textestimated -> \Ecommerce (marvosym)
 18332 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18333 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18334 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18335 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18336 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18337 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18338 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18339 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18340 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18341 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18342 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18343 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18344 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18345 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18346 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18347 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18348 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18349 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18350 % U+2150 VULGAR FRACTION ONE SEVENTH
 18351 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18352 % U+2151 VULGAR FRACTION ONE NINTH
 18353 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18354 % U+2152 VULGAR FRACTION ONE TENTH
 18355 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18356 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18357 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18358 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18359 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18360 % U+2155 VULGAR FRACTION ONE FIFTH
 18361 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18362 % U+2156 VULGAR FRACTION TWO FIFTHS
 18363 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18364 % U+2157 VULGAR FRACTION THREE FIFTHS
 18365 \DeclareTextCommand{\textthreelfths}{PU}{\9041\127}% U+2157

18366 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18367 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18368 % U+2159 VULGAR FRACTION ONE SIXTH
 18369 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18370 % U+215A VULGAR FRACTION FIVE SIXTHS
 18371 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18372 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18373 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18374 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18375 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18376 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18377 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18378 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18379 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18380 % U+2184 LATIN SMALL LETTER REVERSED C
 18381 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18382 % U+2189 VULGAR FRACTION ZERO THIRDS
 18383 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18384 % U+2190 LEFTWARDS ARROW; arrowleft
 18385 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18386 % U+2191 UPWARDS ARROW; arrowup
 18387 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18388 % U+2192 RIGHTWARDS ARROW; arrowright
 18389 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18390 %* \textrightarrow -> \MVRightArrow (marvosym)
 18391 %* \textrightarrow -> \MVRightarrow (marvosym)
 18392 % U+2193 DOWNWARDS ARROW; arrowdown
 18393 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18394 %* \textdownarrow -> \MVAArrowDown (marvosym)
 18395 %* \textdownarrow -> \Force (marvosym)
 18396 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18397 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18398 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18399 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18400 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18401 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18402 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18403 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18404 %* \textnearrow -> \textglobrise (tipa)
 18405 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18406 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18407 %* \textsearrow -> \textglobfall (tipa)
 18408 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 18409 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 18410 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
 18411 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
 18412 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
 18413 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
 18414 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
 18415 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
 18416 % \ntwoheadleftarrow (txfonts/pxfonts)
 18417 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
 18418 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
 18419 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
 18420 % U+21A0 RIGHTWARDS TWO HEADED ARROW;


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18421 % \twoheadrightarrow (AmS)
18422 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18423 % \ntwoheadrightarrow (txfonts/pxfonts)
18424 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18425 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
18426 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18427 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18428 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18429 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18430 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18431 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18432 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18433 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18434 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18435 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18436 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18437 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18438 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18439 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18440 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18441 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharrow (AmS)
18442 \DeclareTextCommand{\textnleftrightharrow}{PU}{\9041\256}%* U+21AE
18443 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18444 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18445 %* \textlightning -> \Lightning (marvosym)
18446 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18447 % \dls (mathabx)
18448 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18449 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18450 % \curvearrowleft (AmS)
18451 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18452 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18453 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18454 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18455 % \leftharpoonup (LaTeX)
18456 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18457 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18458 % \leftharpoondown (LaTeX)
18459 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18460 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18461 % \upharpoonright (AmS)
18462 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18463 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18464 % \upharpoonleft (AmS)
18465 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18466 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18467 % \rightharpoonup (LaTeX)
18468 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18469 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18470 % \rightharpoondown (LaTeX)
18471 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18472 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18473 % \downharpoonright (AmS)
18474 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2

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18475 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18476 % \downharpoonleft (AmS)
18477 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18478 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18479 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18480 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18481 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
18482 % \updownarrows (MnSymbol)
18483 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18484 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overright;
18485 % \leftrightarrows (AmS)
18486 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18487 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18488 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18489 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18490 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18491 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18492 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18493 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18494 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18495 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18496 % \leftrightharpoons (AmS);
18497 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18498 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18499 % \rightleftharpoons (LaTeX, AmS)
18500 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18501 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
blstroke;
18502 % \nLeftarrow (AmS)
18503 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18504 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow (AmS)
18505 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18506 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
blstroke;
18507 % \nRightarrow (AmS)
18508 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18509 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18510 % \Leftarrow (LaTeX)
18511 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18512 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18513 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18514 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18515 % \Rightarrow (LaTeX)
18516 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18517 %* \textRightarrow -> \Conclusion (marvosym)
18518 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbl down; \Downarrow (La-
TeX)
18519 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18520 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18521 % \Leftrightarrow (LaTeX)
18522 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18523 %* \textLeftrightarrow -> \Equivalence (marvosym)
18524 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18525 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5

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18526 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
 18527 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
 18528 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
 18529 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
 18530 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
 18531 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
 18532 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
 18533 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
 18534 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
 18535 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
 18536 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
 18537 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
 18538 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
 18539 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
 18540 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
 18541 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
 18542 % U+21E0 LEFTWARDS DASHED ARROW; \dashrightarrow;
 18543 % \dashleftarrow (AmS)
 18544 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\340}%* U+21E0
 18545 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
 18546 % U+21E1 UPWARDS DASHED ARROW; \dashup; \dasheduparrow (Mn-
 Symbol)
 18547 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
 18548 % U+21E2 RIGHTWARDS DASHED ARROW; \dashrightarrow; \dashrightar-
 row (AmS)
 18549 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
 18550 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
 18551 % U+21E3 DOWNWARDS DASHED ARROW; \dashrightarrow; \dasheddownar-
 row (MnSymbol)
 18552 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
 18553 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
 18554 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
 18555 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
 18556 % \downuparrows (MnSymbol)
 18557 \DeclareTextCommand{\texdownuparrows}{PU}{\9041\365}%* U+21F5
 18558 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
 18559 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
 18560 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
 18561 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
 18562 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
 (stmaryrd)
 18563 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

51.2.22 Mathematical Operators: U+2200 to U+22FF

18564 % U+2200 FOR ALL; forall; \forall (LaTeX)
 18565 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
 18566 % U+2201 COMPLEMENT; \complement (AmS)
 18567 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
 18568 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
 18569 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
 18570 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
 18571 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
 18572 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
 18573 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
 18574 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
 18575 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
 18576 %* \textemptyset -> \varnothing (AmS)

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18577 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18578 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18579 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18580 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18581 % U+2208 ELEMENT OF; element; \in (LaTeX)
18582 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18583 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18584 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18585 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18586 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18587 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18588 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18589 %* \textni -> \owns (mathabx)
18590 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18591 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18592 %* \textnotowner -> \notni (txfonts/pxfonts)
18593 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18594 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18595 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18596 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18597 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18598 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18599 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18600 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18601 % U+2212 MINUS SIGN; minus
18602 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18603 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18604 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18605 % U+2214 DOT PLUS; \dotplus (AmS)
18606 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18607 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18608 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18609 % \DividesNot (marvosym)
18610 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18611 % U+2216 SET MINUS; \setminus (LaTeX)
18612 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18613 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18614 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18615 % U+2218 RING OPERATOR; \circ (LaTeX)
18616 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18617 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18618 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18619 % U+221A SQUARE ROOT; radical
18620 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18621 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18622 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18623 %* \textpropto -> \varprop (wasysym)
18624 % U+221E INFINITY; infinity; \infty (LaTeX)
18625 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18626 % U+2220 ANGLE; angle; \angle (LaTeX)
18627 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18628 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18629 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18630 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18631 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18632 %* \textsphericalangle -> \varangle (wasysym)
18633 %* \textsphericalangle -> \Anglesign (marvosym)

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18634 %* \textsphericalangle -> \AngleSign (marvosym)
18635 % U+2223 DIVIDES; divides; \mid (LaTeX)
18636 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18637 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18638 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18639 %* \textnmid -> \notdivides (mathabx)
18640 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18641 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18642 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18643 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18644 %* \textnparallel -> nUpdownline (MnSymbol)
18645 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18646 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18647 % \owedge (stmaryrd)
18648 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18649 %* \textowedge -> \varowedge (stmaryrd)
18650 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18651 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18652 % \ovee (stmaryrd)
18653 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18654 %* \textovee -> \varovee (stmaryrd)
18655 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18656 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18657 % U+222A UNION; union; \cup (LaTeX)
18658 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18659 % U+222B INTEGRAL; integral; \int (LaTeX)
18660 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18661 %* \textint -> \varint (wasysym)
18662 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18663 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18664 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18665 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18666 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18667 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18668 %* \textoint -> \varoint (wasysym)
18669 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18670 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18671 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18672 % \ointclockwise (txfonts/pxfonts)
18673 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18674 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18675 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18676 % U+2234 THEREFORE; therefore; \therefore (AmS)
18677 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18678 %* \texttherefore -> uptherefore (MnSymbol)
18679 % U+2235 BECAUSE; because; \because (AmS)
18680 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18681 %* \textbecause -> \downtherefore (MnSymbol)
18682 % U+2236 RATIO; \vdotdot (MnSymbol)
18683 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18684 % U+2237 PROPORTION; \squaredots (MnSymbol)
18685 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18686 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18687 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18688 %* \textdotminus -> \textdotdiv (mathabx)
18689 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)

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18690 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18691 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18692 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18693 %* \textsim -> \AC (wasysym)
18694 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18695 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18696 % \nbacksim (txfonts/pxfonts)
18697 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18698 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18699 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18700 %* \textwr -> \wreath (MnSymbol)
18701 % U+2241 NOT TILDE; \nsim (AmS)
18702 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18703 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18704 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18705 % \neqsim (MnSymbol)
18706 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18707 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18708 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18709 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18710 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18711 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18712 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18713 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18714 % \ncong (AmS)
18715 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18716 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18717 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18718 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18719 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18720 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18721 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18722 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18723 % \napproxeq (txfonts/pxfonts)
18724 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18725 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18726 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18727 %* \texttriplesim -> \VHF (wasysym)
18728 % \ntriplesim (MnSymbol)
18729 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18730 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18731 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18732 % \nbackcong (MnSymbol)
18733 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18734 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18735 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18736 % \nasymp (txfonts/pxfonts)
18737 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18738 %* \textnasymp -> \notasym (mathabx)
18739 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18740 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18741 % \nBumpeq (txfonts/pxfonts)
18742 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18743 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18744 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18745 % \nbumpeq (txfonts/pxfonts)

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18746 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18747 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18748 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18749 % \ndoteq (MnSymbol)
18750 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18751 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18752 % \doteqdot (AmS)
18753 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18754 %* \textdoteqdot -> \Doteq (MnSymbol)
18755 % \nDoteq (MnSymbol)
18756 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18757 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18758 % \fallingdotseq (AmS)
18759 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
18760 % \nfallingdotseq (MnSymbol)
18761 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18762 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
18763 % \risingdotseq (AmS)
18764 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
18765 % \nrisingdoteq (MnSymbol)
18766 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18767 % U+2254 COLON EQUALS; \colonequals (colonequals)
18768 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18769 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18770 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18771 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18772 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18773 % \neqcirc (MnSymbol)
18774 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18775 % U+2257 RING EQUAL TO; \circeq (AmS)
18776 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18777 % \ncirceq (MnSymbol)
18778 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18779 % U+2259 ESTIMATES; \hateq (MnSymbol)
18780 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18781 %* \texthateq -> \corresponds (mathabx)
18782 %* \texthateq -> \Corresponds (marvosym)
18783 % \nhateq (MnSymbol)
18784 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18785 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18786 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18787 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18788 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18789 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18790 %* \textneq -> \nequal (MnSymbol)
18791 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18792 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18793 %* \textequiv -> \Congruent (marvosym)
18794 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18795 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18796 %* \textnequiv -> \NotCongruent (marvosym)
18797 %* \textnequiv -> \notequiv (mathabx)
18798 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18799 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18800 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264

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18801 %* \textleq -> \LessOrEqual (marvosym)
18802 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
18803 % \ge (LaTeX), \geq (LaTeX)
18804 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18805 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18806 %* \textgeq -> \LargerOrEqual (marvosym)
18807 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
18808 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18809 % \nleqq (txfonts/pxfonts)
18810 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18811 % U+2267 GREATER-THAN OVER EQUAL TO; greaterorequal; \geqq (AmS)
18812 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18813 % \ngeqq (txfonts/pxfonts)
18814 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18815 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18816 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18817 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18818 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18819 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18820 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18821 % \nll (txfonts/pxfonts)
18822 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18823 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18824 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18825 % \ngg (txfonts/pxfonts)
18826 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18827 % U+226C BETWEEN; \between (AmS)
18828 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18829 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18830 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18831 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18832 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18833 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18834 % \nleq (AmS)
18835 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18836 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18837 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18838 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lesssim (AmS)
18839 \DeclareTextCommand{\textlesssim}{PU}{\9042\162}%* U+2272
18840 %* \textlessim -> \apprle (wasysym)
18841 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18842 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18843 %* \textgtrsim -> \apprge (wasysym)
18844 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlesssim (txfonts/pxfonts)
18845 \DeclareTextCommand{\textnlesssim}{PU}{\9042\164}%* U+2274
18846 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
18847 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18848 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18849 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18850 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18851 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18852 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (txfonts/pxfonts)

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18853 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18854 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
      fonts/pxfonts)
18855 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18856 % U+227A PRECEDES; precedes; \prec (LaTeX)
18857 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18858 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18859 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18860 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18861 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18862 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18863 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18864 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18865 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18866 % \nprecsim (txfonts/pxfonts)
18867 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18868 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18869 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18870 % \nsuccsim (txfonts/pxfonts)
18871 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18872 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18873 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18874 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
18875 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18876 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18877 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18878 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18879 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18880 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18881 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18882 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18883 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18884 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18885 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18886 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18887 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18888 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18889 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18890 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18891 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18892 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
      neq (AmS)
18893 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18894 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
18895 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18896 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18897 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18898 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18899 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18900 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18901 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18902 % \nsqsubset (txfonts/pxfonts)
18903 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18904 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18905 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18906 % \nsqsupset (txfonts/pxfonts)

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18907 \DeclareTextCommand{\textnssqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18908 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
18909 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
18910 % \nsqsubseq (txfonts/pxfonts)
18911 \DeclareTextCommand{\textnssqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18912 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18913 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18914 % \nsqsupseteq (txfonts/pxfonts)
18915 \DeclareTextCommand{\textnssqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18916 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18917 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18918 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18919 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18920 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18921 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18922 %* \textoplus -> \varoplus (stmaryrd)
18923 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18924 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18925 %* \textominus -> \varominus (stmaryrd)
18926 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18927 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18928 %* \textotimes -> \varotimes (stmaryrd)
18929 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18930 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18931 %* \textoslash -> \varoslash (stmaryrd)
18932 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18933 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18934 %* \textodot -> \varodot (stmaryrd)
18935 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18936 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18937 %* \textcircledcirc -> \ocirc (mathabx)
18938 %* \textcircledcirc -> \varocircle (stmaryrd)
18939 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18940 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18941 %* \textcircledast -> \varoast (stmaryrd)
18942 %* \textcircledast -> \oasterisk (mathabx)
18943 % U+229D CIRCLED DASH; \circleddash (AmS)
18944 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18945 % U+229E SQUARED PLUS; \boxplus (AmS)
18946 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18947 % U+229F SQUARED MINUS; \boxminus (AmS)
18948 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18949 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18950 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18951 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18952 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18953 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18954 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18955 %* \textvdash -> \rightvdash (MnSymbol)
18956 % U+22A3 LEFT TACK; \dashv (LaTeX)
18957 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18958 %* \textdashv -> \leftvdash (MnSymbol)
18959 % \ndashv (mathabx)
18960 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18961 %* \textndashv -> \nleftvdash (MnSymbol)
18962 % U+22A4 DOWN TACK (=top); \top (LaTeX)
18963 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4

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18964 %* \texttop -> \downvdash (MnSymbol)
18965 % \ndownvdash (MnSymbol)
18966 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18967 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18968 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18969 %* \textbot -> \upvdash (MnSymbol)
18970 % \nupvdash (MnSymbol)
18971 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18972 %* \textnupvdash -> \nperp (MnSymbol)
18973 % U+22A8 TRUE; \vdash (AmS)
18974 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18975 %* \textvDash -> \models (LaTeX)
18976 %* \textvDash -> \rightmodels (MnSymbol)
18977 % U+22A9 FORCES; \Vdash (AmS)
18978 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18979 %* \textVdash -> \rightVdash (MnSymbol)
18980 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18981 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18982 % \nVdash (mathabx)
18983 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18984 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18985 % \VDash (mathabx)
18986 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18987 %* \textVDash -> \rightModels (MnSymbol)
18988 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18989 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18990 %* \textnvdash -> \nrightrvdash (MnSymbol)
18991 % U+22AD NOT TRUE; \nvDash (AmS)
18992 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18993 %* \textnvDash -> \nrightrmodels (MnSymbol)
18994 %* \textnvDash -> \nmodels (MnSymbol)
18995 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18996 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18997 %* \textnVdash -> \nrightrVdash (MnSymbol)
18998 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
STILE; \nVDash (AmS)
18999 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19000 %* \textnVDash -> \nrightrModels (MnSymbol)
19001 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19002 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19003 %* \textlhd -> \lessclosed (MnSymbol)
19004 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19005 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19006 %* \textrhd -> \gtrclosed (MnSymbol)
19007 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19008 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19009 %* \textunlhd -> \leqclosed (MnSymbol)
19010 %* \textunlhd -> \trianglelefteq (MnSymbol)
19011 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
texsym, ...)
19012 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19013 %* \textunrhd -> \geqclosed (MnSymbol)
19014 %* \textunrhd -> \trianglerighteq (MnSymbol)
19015 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19016 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19017 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19018 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7

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19019 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19020 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19021 % U+22BB XOR; \veebar (AmS)
19022 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19023 % U+22BC NAND; \barwedge (mathabx)
19024 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19025 % U+22C6 STAR OPERATOR; \star (LaTeX)
19026 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19027 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19028 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19029 % U+22C8 BOWTIE; \bowtie (LaTeX)
19030 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19031 %* \textbowtie -> \Bowtie (wasysym)
19032 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19033 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19034 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19035 % \rtimes (AmS)
19036 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19037 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19038 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19039 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19040 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19041 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19042 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19043 % \nbacksimeq (txfonts/pxfonts)
19044 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19045 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19046 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19047 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19048 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19049 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19050 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19051 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19052 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19053 % \nSubset (txfonts/pxfonts)
19054 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19055 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19056 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19057 % \nSupset (txfonts/pxfonts)
19058 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19059 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19060 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19061 %* \textCap -> \doublecap (mathabx)
19062 % U+22D3 DOUBLE UNION; \Cup (AmS)
19063 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19064 %* \textCup -> \doublecup (mathabx)
19065 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19066 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19067 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19068 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19069 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19070 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19071 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19072 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19073 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19074 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19075 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;

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19076 % \lesseqgtr (AmS)
19077 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19078 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterqualorless;
19079 % \gtreqless (AmS)
19080 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19081 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19082 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19083 % \ncurlyeqprec (mathabx)
19084 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19085 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19086 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19087 % \ncurlyeqsucc (mathabx)
19088 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19089 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19090 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19091 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19092 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19093 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19094 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19095 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19096 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19097 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19098 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19099 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19100 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19101 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19102 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19103 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19104 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19105 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19106 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19107 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precsim (AmS)
19108 \DeclareTextCommand{\textprecsim}{PU}{\9042\350}%* U+22E8
19109 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
19110 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
19111 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19112 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19113 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19114 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)
19115 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19116 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19117 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19118 % \ntrianglelefteq (AmS)
19119 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19120 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19121 % \ntrianglerighteq (AmS)
19122 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19123 %* \textntrianglerighteq -> \textngeqclosed
19124 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
19125 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19126 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19127 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19128 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)

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19129 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 19130 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 19131 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19132 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19133 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19134 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19135 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19136 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 19137 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 19138 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 19139 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 19140 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 19141 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 19142 % U+231A WATCH; \clock (wasysym)
 19143 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 19144 %* \textclock -> \Clocklogo (marvosym)
 19145 %* \textclock -> \ClockLogo (marvosym)
 19146 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 19147 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 19148 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 19149 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 19150 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 19151 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 19152 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 19153 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 19154 % U+2322 FROWN; \frown (LaTeX)
 19155 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 19156 % U+2323 SMILE; \smile (LaTeX)
 19157 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 19158 % U+2328 KEYBOARD; \Keyboard (marvosym)
 19159 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 19160 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \angle (LaTeX)
 19161 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 19162 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
 19163 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
 19164 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
 19165 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
 19166 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 19167 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 19168 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 19169 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
 19170 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19171 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19172 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19173 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19174 % \notbackslash (wasysym)
 19175 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19176 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
 19177 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19178 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19179 % \APLleftarrowbox (wasysym)
 19180 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19181 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;

19182 % \APLrightrightarrowbox (wasysym)
 19183 \DeclareTextCommand{\textAPLrightrightarrowbox}{PU}{\9043\110}%* U+2348
 19184 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
 19185 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19186 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19187 % \APLdownarrowbox (wasysym)
 19188 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19189 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19190 % \APLinput (wasysym)
 19191 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19192 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19193 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19194 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19195 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19196 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19197 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19198 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19199 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19200 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19201 % \ForwardToIndex (marvosym)
 19202 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19203 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19204 % \RewindToIndex (marvosym)
 19205 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19206 % U+2422 BLANK SYMBOL
 19207 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19208 % U+2423 OPEN BOX; blank
 19209 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19210 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19211 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19212 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19213 % U+2460 CIRCLED DIGIT ONE; onecircle
 19214 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19215 % U+2461 CIRCLED DIGIT TWO; twocircle
 19216 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19217 % U+2462 CIRCLED DIGIT THREE; threecircle
 19218 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19219 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19220 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19221 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19222 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19223 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19224 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19225 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
 19226 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19227 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19228 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19229 % U+2468 CIRCLED DIGIT NINE; ninecircle

19230 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19231 % U+2469 CIRCLED NUMBER TEN; tencircle
 19232 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19233 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19234 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19235 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19236 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19237 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19238 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19239 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19240 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19241 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19242 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19243 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19244 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19245 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19246 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19247 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19248 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19249 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19250 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19251 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19252 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19253 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19254 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19255 % \CircledA (marvosym)
 19256 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19257 %* \textCircledA -> \CleaningA
 19258 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19259 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19260 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19261 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19262 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19263 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19264 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19265 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19266 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19267 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19268 % \CleaningF (marvosym)
 19269 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19270 % \CleaningFF (marvosym)
 19271 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19272 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19273 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19274 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19275 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19276 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19277 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19278 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19279 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19280 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19281 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19282 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19283 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19284 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19285 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19286 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle

19287 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19288 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19289 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19290 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19291 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19292 % \CleaningP (marvosym)
 19293 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19294 % \CleaningPP (marvosym)
 19295 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19296 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19297 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19298 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19299 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19300 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19301 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19302 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19303 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19304 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19305 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19306 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19307 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19308 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19309 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19310 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19311 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19312 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19313 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19314 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19315 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19316 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19317 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19318 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19319 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19320 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19321 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19322 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19323 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19324 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19325 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19326 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19327 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19328 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19329 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19330 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19331 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19332 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19333 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19334 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19335 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19336 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19337 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19338 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19339 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19340 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19341 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19342 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19343 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD

19344 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19345 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19346 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19347 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19348 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19349 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19350 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19351 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19352 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19353 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19354 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19355 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19356 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19357 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19358 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19359 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19360 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19361 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19362 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19363 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19364 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19365 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19366 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19367 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19368 % U+24EA CIRCLED DIGIT ZERO
 19369 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19370 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19371 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19372 %* \textCuttingLine -> \Kutline (marvosym)
 19373 %* \textCuttingLine -> \CutLine (marvosym)
 19374 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19375 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19376 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19377 %* \textUParrow -> \MoveUp (marvosym)
 19378 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19379 % \bigtriangleup (LaTeX)
 19380 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19381 %* \textbigtriangleup -> \APLup (wasysym)
 19382 %* \textbigtriangleup -> \Bleech (marvosym)
 19383 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19384 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19385 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19386 % whiterightpointingtriangle; \triangleright (LaTeX)
 19387 \DeclareTextCommand{\texttrangleright}{PU}{\9045\267}%* U+25B7
 19388 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19389 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19390 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19391 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19392 %* \textDOWNarrow -> \MoveDown (marvosym)
 19393 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
 angle;

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19394 % \bigtriangledown (LaTeX)
19395 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19396 %* \textbigtriangledown -> \APLdown (wasysym)
19397 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19398 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19399 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
restriction);
19400 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19401 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19402 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19403 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19404 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19405 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19406 %* \textdiamond -> \Diamond (wasysym)
19407 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19408 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19409 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19410 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19411 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19412 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19413 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19414 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19415 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19416 % \boxbar (stmaryrd)
19417 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19418 % U+25EF LARGE CIRCLE; largecircle
19419 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19420 %* \textbigcircle -> \varbigcirc (stmaryrd)
19421 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19422 % U+2601 CLOUD; \Cloud (ifsym)
19423 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19424 % U+2605 BLACK STAR; \FiveStar (bding)
19425 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19426 % U+2606 WHITE STAR; \FiveStarOpen (bding)
19427 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19428 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
19429 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19430 %* \textPhone -> \Telefon (marvosym)
19431 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19432 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19433 %* \textboxempty -> \Box (wasysym)
19434 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19435 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19436 %* \textCheckedbox -> \CheckedBox (marvosym)
19437 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19438 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19439 %* \textCrossedbox -> \XBox (wasysym)
19440 %* \textCrossedbox -> \CrossedBox (marvosym)
19441 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19442 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19443 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
19444 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19445 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
19446 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19447 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)

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19448 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19449 %* \textHandLeft -> \rightpointleft (fourier)
19450 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
19451 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19452 %* \textHandRight -> \leftpointright (fourier)
19453 %* \textHandRight -> \PointingHand (marvosym)
19454 %* \textHandRight -> \Pointinghand (marvosym)
19455 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19456 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19457 %* \textRadioactivity -> \Radiation (ifsym)
19458 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19459 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19460 % U+2625 ANKH; \Ankh (marvosym)
19461 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19462 % U+262F YIN YANG; \YinYang (marvosym)
19463 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19464 %* \textYinYang -> \Yinyang (marvosym)
19465 %* \textYinYang -> \YingYang (marvosym)
19466 %* \textYinYang -> \Yingyang (marvosym)
19467 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19468 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19469 %* \textfrownie -> \Frowny (marvosym)
19470 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19471 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19472 %* \textsmiley -> \Smiley (marvosym)
19473 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19474 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19475 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19476 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19477 %* \textsun -> \Sun (marvosym)
19478 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19479 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19480 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19481 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19482 % U+263F MERCURY; \mercury (wasysym)
19483 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19484 %* \textmercury -> \Mercury (marvosym)
19485 % U+2640 FEMALE SIGN; female; \female (wasysym)
19486 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19487 %* \textPUfemale -> \textfemale (tipx)
19488 %* \textPUfemale -> \female (wasysym)
19489 %* \textPUfemale -> \venus (wasysym)
19490 %* \textPUfemale -> \Venus (marvosym)
19491 %* \textPUfemale -> \Female (marvosym)
19492 % U+2641 EARTH; \earth (wasysym)
19493 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19494 %* \textearth -> \Earth (marvosym)
19495 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19496 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19497 %* \textmale -> \mars (wasysym)
19498 %* \textmale -> \Mars (marvosym)
19499 %* \textmale -> \Male (marvosym)
19500 % U+2643 JUPITER; \jupiter (wasysym)
19501 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19502 %* \textjupiter -> \Jupiter (marvosym)
19503 % U+2644 SATURN; \saturn (wasysym)
19504 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644

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19505 %* \texts saturn -> \Saturn (marvosym)
19506 % U+2645 URANUS; \uranus (wasysym)
19507 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19508 %* \texturanus -> \Uranus (marvosym)
19509 % U+2646 NEPTUNE; \neptune (wasysym)
19510 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19511 %* \textneptune -> \Neptune (marvosym)
19512 % U+2647 PLUTO; \pluto (wasysym)
19513 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19514 %* \textpluto -> \Pluto (marvosym)
19515 % U+2648 ARIES; \aries (wasysym)
19516 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19517 %* \textaries -> \Aries (marvosym)
19518 % U+2649 TAURUS; \taurus (wasysym)
19519 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19520 %* \texttaurus -> \Taurus (marvosym)
19521 % U+264A GEMINI; \gemini (wasysym)
19522 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19523 %* \textgemini -> \Gemini (marvosym)
19524 % U+264B CANCER; \cancer (wasysym)
19525 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19526 %* \textcancer -> \Cancer (marvosym)
19527 % U+264C LEO; \leo (wasysym)
19528 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19529 %* \textleo -> \Leo (marvosym)
19530 % U+264D VIRGO; \virgo (wasysym)
19531 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19532 %* \textvirgo -> \Virgo (marvosym)
19533 % U+264E LIBRA; \libra (wasysym)
19534 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19535 %* \textlibra -> \Libra (marvosym)
19536 % U+264F SCORPIO; \scorpio (wasysym)
19537 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19538 %* \textscorpio -> \Scorpio (marvosym)
19539 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19540 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19541 %* \textsagittarius -> \Sagittarius (marvosym)
19542 % U+2651 CAPRICORN; \capricornus (wasysym)
19543 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19544 %* \textcapricornus -> \Capricorn (marvosym)
19545 % U+2652 AQUARIUS; \aquarius (wasysym)
19546 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19547 %* \textaquarius -> \Aquarius (marvosym)
19548 % U+2653 PISCES; \pisces (wasysym)
19549 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19550 %* \textpisces -> \Pisces (marvosym)
19551 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19552 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19553 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19554 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19555 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19556 %* \textheartsuitwhite -> \Heart (marvosym)
19557 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19558 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19559 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19560 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19561 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)

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19562 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19563 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19564 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19565 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19566 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19567 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19568 % U+2666 BLACK DIAMOND SUIT; diamond
19569 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19570 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19571 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19572 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19573 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19574 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19575 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19576 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19577 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19578 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19579 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
19580 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19581 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19582 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19583 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19584 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19585 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19586 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19587 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19588 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19589 %* \textrecycle -> \Recycling (marvosym)
19590 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19591 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19592 % U+2691 BLACK FLAG; \Flag (ifsym)
19593 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19594 %* \textFlag -> \VarFlag (ifsym)
19595 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19596 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19597 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19598 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19599 %* \textdsmilitary -> \textxswup (fourier)
19600 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19601 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19602 % U+2696 SCALES; \dsjuridical (dictsym)
19603 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
19604 % U+2697 ALEMBIC; \dschemical (dictsym)
19605 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
19606 % U+2698 FLOWER; \dsbiological (dictsym)
19607 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
19608 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
19609 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
19610 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19611 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
19612 % U+26A0 WARNING SIGN; \danger (fourier)
19613 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
19614 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19615 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
19616 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
19617 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3

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19618 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19619 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19620 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19621 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19622 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19623 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19624 % U+26AD MARRIAGE SYMBOL
 19625 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19626 % U+26AE DIVORCE SYMBOL
 19627 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19628 % U+26B2 NEUTER; \textunconfemale (tipx)
 19629 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
 19630 %* \textPUunconfemale -> \textunconfemale (tipx)
 19631 % U+26B9 SEXTILE; \hexstar (wasysym)
 19632 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19633 % U+26BD SOCCER BALL; \Football (marvosym)
 19634 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19635 %* \textSoccerBall -> \Football (marvosym)
 19636 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19637 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19638 % U+26C6 RAIN; \Rain (ifsym)
 19639 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19640 % U+26D4 NO ENTRY; \noway (fourier)
 19641 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19642 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19643 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19644 % U+26FA TENT; \Tent (ifsym)
 19645 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19646 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbling)
 19647 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19648 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19649 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19650 % U+2702 BLACK SCISSORS; \ScissorRight (bbling)
 19651 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19652 %* \textScissorRight -> \RightScissors (marvosym)
 19653 %* \textScissorRight -> \Leftscissors (marvosym)
 19654 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbling)
 19655 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19656 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbling)
 19657 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19658 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbling)
 19659 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19660 % U+2707 TAPE DRIVE; \Tape (bbling)
 19661 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19662 % U+2708 AIRPLANE; \Plane (bbling)
 19663 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19664 % U+2709 ENVELOPE; \Envelope (bbling),
 19665 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19666 %* \textEnvelope -> \Letter (marvosym)
 19667 % U+270C VICTORY HAND; \Peace (bbling)
 19668 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19669 % U+270D WRITING HAND; \WritingHand (marvosym)
 19670 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19671 %* \textWritingHand -> \Writinghand (marvosym)

19672 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19673 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19674 % U+270F PENCIL; \PencilRight (bding)
 19675 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19676 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19677 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19678 % U+2711 WHITE NIB; \NibRight (bding)
 19679 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19680 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19681 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19682 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19683 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19684 %* \textCheckmark -> \checkmark (MnSymbol)
 19685 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19686 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19687 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19688 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19689 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19690 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19691 % U+2717 BALLOT X; \XSolidBrush (bding)
 19692 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19693 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19694 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19695 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19696 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19697 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19698 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19699 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19700 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19701 % U+271D LATIN CROSS; \Cross (bding)
 19702 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19703 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19704 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19705 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19706 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19707 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19708 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19709 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19710 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19711 %* \textDavidStar -> \davidstar (wasysym)
 19712 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19713 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19714 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19715 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19716 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19717 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19718 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19719 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19720 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19721 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19722 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19723 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19724 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19725 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19726 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19727 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B

19728 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19729 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19730 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19731 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19732 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19733 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19734 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19735 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19736 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19737 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19738 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19739 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19740 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19741 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19742 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19743 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19744 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19745 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19746 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19747 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19748 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19749 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19750 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19751 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19752 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19753 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19754 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19755 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19756 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19757 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19758 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19759 % \SixFlowerOpenCenter (bding)
 19760 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19761 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19762 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19763 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19764 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19765 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19766 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19767 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19768 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19769 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19770 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19771 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19772 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19773 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19774 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19775 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19776 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19777 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)

19778 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19779 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19780 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19781 % U+2747 SPARKLE; \Sparkle (bding)
 19782 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19783 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19784 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19785 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19786 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19787 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19788 % \EightFlowerPetalRemoved (bding)
 19789 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19790 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19791 % \EightAsterisk (bding)
 19792 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19793 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19794 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19795 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19796 % \SquareShadowBottomRight (bding)
 19797 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19798 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19799 % \SquareShadowTopRight (bding)
 19800 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19801 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19802 % \SquareCastShadowBottomRight (bding)
 19803 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19804 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19805 % \SquareCastShadowTopRight (bding)
 19806 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19807 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 19808 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19809 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 19810 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19811 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 19812 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19813 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 19814 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19815 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19816 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19817 % \notperp (mathabx)
 19818 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19819 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19820 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19821 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19822 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19823 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19824 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19825 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19826 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19827 %* \textlbrackdbl -> \llbracket (stmaryrd)
 19828 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19829 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19830 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19831 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
19832 % \circlearrowleft (AmS)
19833 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
19834 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
19835 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
19836 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
19837 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
19838 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
19839 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
19840 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
19841 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
19842 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
19843 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
19844 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
19845 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
19846 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
19847 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
19848 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
19849 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
19850 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
from (stmaryrd)
19851 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
19852 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
sto (stmaryrd)
19853 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

19854 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
bol)
19855 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
19856 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
bol)
19857 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
19858 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
19859 \DeclareTextCommand{\texthooknwarrow}{PU}{\9051\043}%* U+2923
19860 % U+2924 NORTH EAST ARROW WITH HOOK; \hooknearrow (MnSymbol)
19861 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
19862 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
19863 \DeclareTextCommand{\texthooksearrow}{PU}{\9051\045}%* U+2925
19864 % U+2926 SOUTH WEST ARROW WITH HOOK; \hookswarrow (MnSymbol)
19865 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
19866 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
19867 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
19868 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
19869 % \rcurvearrowne (MnSymbol)
19870 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
19871 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
WARDS;
19872 % \lcurvearrowse (MnSymbol)
19873 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
19874 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
WARDS;
19875 % \lcurvearrowsw (MnSymbol)
19876 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
19877 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
WARDS;

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19878 % \rcurvearrowse (MnSymbol)
19879 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
19880 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
Symbol)
19881 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
19882 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19883 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19884 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19885 % \rcurvearrowdown (MnSymbol)
19886 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
19887 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
19888 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
19889 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
bol)
19890 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
19891 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19892 % \rcurvearrowright (MnSymbol)
19893 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
19894 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
poon (mathabx)
19895 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19896 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
poon (mathabx)
19897 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19898 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19899 % \updownharpoonrightleft (MnSymbol)
19900 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19901 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19902 % \updownharpoonleftright (MnSymbol)
19903 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19904 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19905 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19906 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19907 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19908 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19909 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19910 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
WARDS HARPOON
19911 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19912 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19913 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
19914 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19915 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
19916 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
19917 % \leftbarharpoon (mathabx)
19918 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
19919 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
19920 % LONG DASH; \barleftharpoon (mathabx)
19921 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
19922 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
19923 % LONG DASH; \rightbarharpoon (mathabx)
19924 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
19925 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
19926 % LONG DASH; \barrightharpoon (mathabx)
19927 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D

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19928 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
19929 % WITH BARB RIGHT; \updownharpoons (mathabx)
19930 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
19931 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
WARDS HARPOON
19932 % WITH BARB RIGHT; \downupharpoons (mathabx)
19933 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
19934 % U+297F DOWN FISH TAIL
19935 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19936 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
19937 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
19938 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
19939 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
19940 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
19941 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
19942 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
19943 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
19944 %* \textobar -> \textvarobar (stmaryrd)
19945 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
19946 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
19947 %* \textobslash -> \circledbslash (txfonts/pxfonts)
19948 %* \textobslash -> \obackslash (mathabx)
19949 %* \textobslash -> \varobslash (stmaryrd)
19950 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
19951 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
19952 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
19953 %* \textobot -> \odplus (ulsy)
19954 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
vosym)
19955 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
19956 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
19957 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
19958 %* \textolessthan -> \varolessthan (stmaryrd)
19959 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
19960 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
19961 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
19962 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
19963 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
19964 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
19965 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
19966 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
19967 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
19968 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
19969 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
19970 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
19971 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
19972 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
19973 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
19974 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
19975 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
19976 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
19977 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19978 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19979 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19980 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19981 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19982 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19983 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19984 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 19985 % pxfonts, wasysym)
 19986 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 19987 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 19988 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 19989 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 19990 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 19991 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 19992 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 19993 %* \textminusdot -> \divdot (mathabx)
 19994 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (math-
 abx)
 19995 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 19996 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 19997 % \dtimes (mathdesign)
 19998 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 19999 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20000 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20001 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20002 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20003 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20004 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20005 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20006 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20007 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20008 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20009 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20010 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20011 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20012 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20013 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20014 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20015 %* \textdoublevee -> \merge (stmaryrd)
 20016 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20017 % \doublebarwedge (AmS)
 20018 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20019 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20020 % \veedoublebar (mahtabx)
 20021 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 20022 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20023 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20024 % \neqdot (MnSymbol)
 20025 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20026 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20027 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20028 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20029 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20030 % \nleqslant (txfonts/pxfonts)
 20031 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20032 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20033 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E

20034 % \ngeqslang (txfonts/pxfonts)
 20035 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20036 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20037 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20038 % \nlessapprox (txfonts/pxfonts)
 20039 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20040 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20041 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20042 % \ngtrapprox (txfonts/pxfonts)
 20043 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20044 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20045 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20046 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20047 % \gneq (AmS)
 20048 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20049 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20050 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20051 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20052 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20053 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN;
 20054 % \lesseqgtr (AmS)
 20055 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 20056 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN;
 20057 % \gtreqless (AmS)
 20058 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 20059 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20060 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20061 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20062 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20063 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20064 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20065 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20066 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20067 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-Symbol)
 20068 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20069 % \npreceq (txfonts/pxfonts)
 20070 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20071 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-Symbol)
 20072 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20073 % \nsucceq (txfonts/pxfonts)
 20074 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20075 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \precneq (mathabx)
 20076 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20077 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq (mathabx)
 20078 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20079 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20080 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20081 % \npreceqq (txfonts/pxfonts)
 20082 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20083 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20084 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20085 % \nsucceqq (txfonts/pxfonts)
 20086 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338

20087 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20088 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20089 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20090 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20091 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20092 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20093 % \nprecapprox (txfonts/pxfonts)
 20094 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20095 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20096 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20097 % \nsuccapprox (txfonts/pxfonts)
 20098 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20099 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20100 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20101 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20102 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20103 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20104 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20105 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20106 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20107 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20108 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20109 % \nsupseteqq (mathabx)
 20110 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20111 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20112 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20113 %* \textdashV -> \leftVdash (MnSymbol)
 20114 % \ndashV (mathabx)
 20115 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20116 %* \textndashV -> \nleftVdash (MnSymbol)
 20117 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20118 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20119 %* \textDashv -> \leftmodels (MnSymbol)
 20120 % \nDashv (mathabx)
 20121 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20122 %* \textnDashv -> \nleftmodels (MnSymbol)
 20123 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20124 % \DashV (mathabx)
 20125 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20126 %* \textDashV -> \leftModels (MnSymbol)
 20127 % \nDashV (mathabx)
 20128 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20129 %* \textnDashV -> \nleftModels (MnSymbol)
 20130 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20131 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20132 % \ndownmodels (MnSymbol)
 20133 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20134 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20135 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20136 % \nupmodels (MnSymbol)
 20137 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20138 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20139 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20140 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20141 % \interleave (stmmaryd)

20142 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20143 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20144 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20145 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20146 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20147 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20148 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20149 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20150 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20151 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20152 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20153 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20154 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20155 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20156 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20157 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20158 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20159 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20160 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20161 % \textdownstep (tipa)
 20162 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20163 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20164 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20165 %* \textPUheng -> \textheng (tipx)
 20166 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20167 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20168 %* \textPULhookfour -> \textlhookfour (tipx)
 20169 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20170 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20171 %* \textPUscf -> \textscf (tipx)
 20172 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 20173 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20174 %* \textPUaolig -> \textaoilig (tipx)
 20175 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20176 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20177 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20178 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20179 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20180 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20181 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20182 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20183 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20184 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B

20185 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20186 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20187 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20188 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20189 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20190 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20191 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20192 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20193 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20194 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20195 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20196 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20197 %* \textfullnote -> \Ganz (harmony)
 20198 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20199 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20200 %* \texthalfnote -> \Halb (harmony)
 20201 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20202 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20203 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20204 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20205 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20206 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20207 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20208 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20209 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20210 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20211 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20212 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20213 % U+1F468 MAN; \ManFace (marvosym)
 20214 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20215 % U+1F469 WOMAN; \WomanFace (marvosym)
 20216 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20217 %* \textWomanFace -> \Womanface (marvosym)
 20218 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20219 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20220 %* \textFax -> \Faxmachine (marvosym)
 20221 % U+1F525 FIRE; \Fire (ifsym)
 20222 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20223 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20224 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20225 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20226 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20227 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20228 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20229 \DeclareTextCommand{\SS}{PU}{SS}%
 20230 % \textcopyleft (textcomp)
 20231 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20232 % \ccnc (ccllicenses)
 20233 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20234 % \ccnd (ccllicenses)
 20235 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD

```

20236 % \ccsa (ccllicenses)
20237 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20238 % \Info (marvosym, china2e)
20239 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20240 % \CESign (marvosym)
20241 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20242 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20243 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20244 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20245 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20246 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20247 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20248 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20249 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20250 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20251 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20252 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20253 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20254 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20255 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20256 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20257 <*puvnenc>
20258 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20259 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20260 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20261 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20262 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20263 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20264 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20265 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20266 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20267 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20268 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20269 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20270 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20271 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20272 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
20273 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20274 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20275 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20276 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20277 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}% U+1EB1
20278 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20279 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20280 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20281 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD

```

20282 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20283 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20284 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20285 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20286 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20287 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
 20288 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20289 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20290 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20291 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20292 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20293 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20294 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20295 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20296 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20297 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
 20298 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20299 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20300 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20301 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20302 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
 20303 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20304 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20305 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20306 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20307 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20308 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20309 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20310 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20311 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20312 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}% U+1EDD
 20313 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20314 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20315 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20316 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20317 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 20318 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20319 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20320 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20321 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20322 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}% U+1EEB
 20323 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20324 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20325 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20326 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20327 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 20328 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20329 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20330 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20331 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20332 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}% U+00C0
 20333 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20334 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20335 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20336 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20337 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20338 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2

20339 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20340 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20341 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20342 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20343 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20344 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20345 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20346 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20347 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}% U+00C8
 20348 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20349 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20350 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20351 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20352 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20353 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20354 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20355 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20356 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20357 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}% U+00CC
 20358 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20359 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20360 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20361 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20362 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}% U+00D2
 20363 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20364 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20365 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20366 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20367 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20368 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20369 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20370 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20371 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20372 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}% U+1EDC
 20373 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20374 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20375 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20376 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20377 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
 20378 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20379 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20380 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20381 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20382 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}% U+1EEA
 20383 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
 20384 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
 20385 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
 20386 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 20387 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
 20388 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
 20389 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 20390 </puvnenc>

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

20391 (*puarenc)

20392 % U+0621;afii57409;ARABIC LETTER HAMZA
 20393 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
 20394 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
 20395 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
 20396 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
 20397 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
 20398 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
 20399 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
 20400 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
 20401 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
 20402 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
 20403 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
 20404 % U+0627;afii57415;ARABIC LETTER ALEF
 20405 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 20406 % U+0628;afii57416;ARABIC LETTER BEH
 20407 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 20408 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 20409 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 20410 % U+062A;afii57418;ARABIC LETTER TEH
 20411 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 20412 % U+062B;afii57419;ARABIC LETTER THEH
 20413 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 20414 % U+062C;afii57420;ARABIC LETTER JEEM
 20415 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 20416 % U+062D;afii57421;ARABIC LETTER HAH
 20417 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 20418 % U+062E;afii57422;ARABIC LETTER KHAH
 20419 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20420 % U+062F;afii57423;ARABIC LETTER DAL
 20421 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20422 % U+0630;afii57424;ARABIC LETTER THAL
 20423 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20424 % U+0631;afii57425;ARABIC LETTER REH
 20425 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20426 % U+0632;afii57426;ARABIC LETTER ZAIN
 20427 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20428 % U+0633;afii57427;ARABIC LETTER SEEN
 20429 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20430 % U+0634;afii57428;ARABIC LETTER SHEEN
 20431 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20432 % U+0635;afii57429;ARABIC LETTER SAD
 20433 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20434 % U+0636;afii57430;ARABIC LETTER DAD
 20435 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20436 % U+0637;afii57431;ARABIC LETTER TAH
 20437 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20438 % U+0638;afii57432;ARABIC LETTER ZAH
 20439 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20440 % U+0639;afii57433;ARABIC LETTER AIN
 20441 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20442 % U+063A;afii57434;ARABIC LETTER GHAIN
 20443 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20444 % U+0640;afii57440;ARABIC TATWEEL
 20445 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20446 % U+0641;afii57441;ARABIC LETTER FEH
 20447 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20448 % U+0642;afii57442;ARABIC LETTER QAF

20449 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20450 % U+0643;afii57443;ARABIC LETTER KAF
 20451 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20452 % U+0644;afii57444;ARABIC LETTER LAM
 20453 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20454 % U+0645;afii57445;ARABIC LETTER MEEM
 20455 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20456 % U+0646;afii57446;ARABIC LETTER NOON
 20457 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20458 % U+0647;afii57470;ARABIC LETTER HEH
 20459 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20460 % U+0648;afii57448;ARABIC LETTER WAW
 20461 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20462 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20463 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20464 % U+064A;afii57450;ARABIC LETTER YEH
 20465 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20466 % U+064B;afii57451;ARABIC FATHATAN
 20467 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20468 % U+064C;afii57452;ARABIC DAMMATAN
 20469 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20470 % U+064D;afii57453;ARABIC KASRATAN
 20471 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20472 % U+064E;afii57454;ARABIC FATHA
 20473 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20474 % U+064F;afii57455;ARABIC DAMMA
 20475 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20476 % U+0650;afii57456;ARABIC KASRA
 20477 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20478 % U+0651;afii57457;ARABIC SHADDA
 20479 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20480 % U+0652;afii57458;ARABIC SUKUN
 20481 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20482 % U+067E ARABIC LETTER PEH; afii57506
 20483 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20484 % U+0686 ARABIC LETTER TCHEH; afii57507
 20485 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20486 % U+0698 ARABIC LETTER JEH; afii57508
 20487 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20488 % U+06A9 ARABIC LETTER KEHEH
 20489 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20490 % U+06AF ARABIC LETTER GAF; afii57509
 20491 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20492 % U+06CC ARABIC LETTER FARSI YEH
 20493 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20494 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20495 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20496 % U+200D ZERO WIDTH JOINER; afii301
 20497 \DeclareTextCommand{\noboundary}{PU}{\9040\015}% U+200D

 20498 (/puarenc)
 20499 (*psdextra)
 20500 \Hy@VersionCheck{psdextra.def}
 20501 \newcommand*{\psdmapshortnames}{%
 20502 \let\MVPlus\textMVPlus

20503 \let\MVComma\textMVComma
 20504 \let\MVMinus\textMVMinus
 20505 \let\MVPeriod\textMVPeriod
 20506 \let\MVDivision\textMVDivision
 20507 \let\MVZero\textMVZero
 20508 \let\MVOne\textMVOne
 20509 \let\MVTwo\textMVTwo
 20510 \let\MVThree\textMVThree
 20511 \let\MVFour\textMVFour
 20512 \let\MVFive\textMVFive
 20513 \let\MVSix\textMVSix
 20514 \let\MVSeven\textMVSeven
 20515 \let\MVEight\textMVEight
 20516 \let\MVNine\textMVNine
 20517 \let\MVAt\textMVAt
 20518 \let\copyright\textcopyright
 20519 \let\twosuperior\texttwosuperior
 20520 \let\threesuperior\textthreesuperior
 20521 \let\onesuperior\textonesuperior
 20522 \let\Thorn\textThorn
 20523 \let\thorn\textthorn
 20524 \let\hbar\texthbar
 20525 \let\hausaB\texthausaB
 20526 \let\hausaD\texthausaD
 20527 \let\hausaK\texthausaK
 20528 \let\barl\textbarl
 20529 \let\inve\textinve
 20530 \let\slashc\textslashc
 20531 \let\scripta\textscripta
 20532 \let\openo\textopeno
 20533 \let\rtaild\textrtaild
 20534 \let\reve\textreve
 20535 \let\schwa\textscha
 20536 \let\niepsilon\textniepsilon
 20537 \let\repsilon\textrepsilon
 20538 \let\rhookrepsilon\text\rhookrepsilon
 20539 \let\scriptg\textscriptg
 20540 \let\scg\textscg
 20541 \let\ipagamma\textipagamma
 20542 \let\babygamma\textbabygamma
 20543 \let\bari\textbari
 20544 \let\niiota\textniiota
 20545 \let\sci\textsci
 20546 \let\scn\textscn
 20547 \let\niphi\textniphi
 20548 \let\longleg\textlongleg
 20549 \let\scr\textscr
 20550 \let\invscr\textinvscr
 20551 \let\esh\textesh
 20552 \let\baru\textbaru
 20553 \let\niupsilon\textniupsilon
 20554 \let\scriptv\textscriptv
 20555 \let\turnv\textturnv
 20556 \let\turnw\textturnw
 20557 \let\turny\textturny
 20558 \let\scy\textscy
 20559 \let\yogh\textyogh

20560 `\let\glotstop\textglotstop`
 20561 `\let\revglotstop\textrevglotstop`
 20562 `\let\invglotstop\textinvglotstop`
 20563 `\let\Gamma\textGamma`
 20564 `\let\Delta\textDelta`
 20565 `\let\Theta\textTheta`
 20566 `\let\Lambda\textLambda`
 20567 `\let\Xi\textXi`
 20568 `\let\Pi\textPi`
 20569 `\let\Sigma\textSigma`
 20570 `\let\Upsilon\textUpsilon`
 20571 `\let\Phi\textPhi`
 20572 `\let\Psi\textPsi`
 20573 `\let\Omega\textOmega`
 20574 `\let\alpha\textalpha`
 20575 `\let\beta\textbeta`
 20576 `\let\gamma\textgamma`
 20577 `\let\delta\textdelta`
 20578 `\let\epsilon\textepsilon`
 20579 `\let\zeta\textzeta`
 20580 `\let\eta\texteta`
 20581 `\let\theta\texttheta`
 20582 `\let\iota\textiota`
 20583 `\let\kappa\textkappa`
 20584 `\let\lambda\textlambda`
 20585 `\let\mugreek\textmugreek`
 20586 `\let\nu\textnu`
 20587 `\let\xi\textxi`
 20588 `\let\pi\textpi`
 20589 `\let\rho\textrho`
 20590 `\let\varsigma\textvarsigma`
 20591 `\let\sigma\textsigma`
 20592 `\let\tau\texttau`
 20593 `\let\upsilon\textupsilon`
 20594 `\let\phi\textphi`
 20595 `\let\chi\textchi`
 20596 `\let\psi\textpsi`
 20597 `\let\omega\textomega`
 20598 `\let\scd\textscd`
 20599 `\let\scu\textscu`
 20600 `\let\iinferior\textiinferior`
 20601 `\let\rinferior\textrinferior`
 20602 `\let\uinferior\textuinferior`
 20603 `\let\vinferior\textvinferior`
 20604 `\let\betainferior\textbetainferior`
 20605 `\let\gammainferior\textgammainferior`
 20606 `\let\rhoinferior\textrhoinferior`
 20607 `\let\phiinferior\textphiinferior`
 20608 `\let\chiinferior\textchiinferior`
 20609 `\let\barsci\textbarsci`
 20610 `\let\barp\textbarp`
 20611 `\let\barscu\textbarscu`
 20612 `\let\htrtaild\texthtrtaild`
 20613 `\let\dagger\textdagger`
 20614 `\let\bullet\textbullet`
 20615 `\let\hdotfor\texthdotfor`
 20616 `\let\prime\textprime`

20617 $\backslash\mathrm{let}\backslash\mathrm{second}\backslash\mathrm{textsecond}$
 20618 $\backslash\mathrm{let}\backslash\mathrm{third}\backslash\mathrm{textthird}$
 20619 $\backslash\mathrm{let}\backslash\mathrm{backprime}\backslash\mathrm{textbackprime}$
 20620 $\backslash\mathrm{let}\backslash\mathrm{lefttherefore}\backslash\mathrm{textlefttherefore}$
 20621 $\backslash\mathrm{let}\backslash\mathrm{fourth}\backslash\mathrm{textfourth}$
 20622 $\backslash\mathrm{let}\backslash\mathrm{diamonddots}\backslash\mathrm{textdiamonddots}$
 20623 $\backslash\mathrm{let}\backslash\mathrm{zerosuperior}\backslash\mathrm{textzerosuperior}$
 20624 $\backslash\mathrm{let}\backslash\mathrm{isuperior}\backslash\mathrm{textisuperior}$
 20625 $\backslash\mathrm{let}\backslash\mathrm{foursuperior}\backslash\mathrm{textfoursuperior}$
 20626 $\backslash\mathrm{let}\backslash\mathrm{fivesuperior}\backslash\mathrm{textfivesuperior}$
 20627 $\backslash\mathrm{let}\backslash\mathrm{sixsuperior}\backslash\mathrm{textsixsuperior}$
 20628 $\backslash\mathrm{let}\backslash\mathrm{sevensuperior}\backslash\mathrm{textsevensuperior}$
 20629 $\backslash\mathrm{let}\backslash\mathrm{eightsuperior}\backslash\mathrm{texteightsuperior}$
 20630 $\backslash\mathrm{let}\backslash\mathrm{ninesuperior}\backslash\mathrm{textninesuperior}$
 20631 $\backslash\mathrm{let}\backslash\mathrm{plussuperior}\backslash\mathrm{textplussuperior}$
 20632 $\backslash\mathrm{let}\backslash\mathrm{minussuperior}\backslash\mathrm{textminussuperior}$
 20633 $\backslash\mathrm{let}\backslash\mathrm{equalsuperior}\backslash\mathrm{textequalsuperior}$
 20634 $\backslash\mathrm{let}\backslash\mathrm{parenleftsuperior}\backslash\mathrm{textparenleftsuperior}$
 20635 $\backslash\mathrm{let}\backslash\mathrm{parenrightsuperior}\backslash\mathrm{textparenrightsuperior}$
 20636 $\backslash\mathrm{let}\backslash\mathrm{nsuperior}\backslash\mathrm{textnsuperior}$
 20637 $\backslash\mathrm{let}\backslash\mathrm{zeroinferior}\backslash\mathrm{textzeroinferior}$
 20638 $\backslash\mathrm{let}\backslash\mathrm{oneinferior}\backslash\mathrm{textoneinferior}$
 20639 $\backslash\mathrm{let}\backslash\mathrm{twoinferior}\backslash\mathrm{texttwoinferior}$
 20640 $\backslash\mathrm{let}\backslash\mathrm{threeinferior}\backslash\mathrm{textthreeinferior}$
 20641 $\backslash\mathrm{let}\backslash\mathrm{fourinferior}\backslash\mathrm{textfourinferior}$
 20642 $\backslash\mathrm{let}\backslash\mathrm{fiveinferior}\backslash\mathrm{textfiveinferior}$
 20643 $\backslash\mathrm{let}\backslash\mathrm{sixinferior}\backslash\mathrm{textsixinferior}$
 20644 $\backslash\mathrm{let}\backslash\mathrm{seveninferior}\backslash\mathrm{textseveninferior}$
 20645 $\backslash\mathrm{let}\backslash\mathrm{eightinferior}\backslash\mathrm{texteightinferior}$
 20646 $\backslash\mathrm{let}\backslash\mathrm{nineinferior}\backslash\mathrm{textnineinferior}$
 20647 $\backslash\mathrm{let}\backslash\mathrm{plusinferior}\backslash\mathrm{textplusinferior}$
 20648 $\backslash\mathrm{let}\backslash\mathrm{minusinferior}\backslash\mathrm{textminusinferior}$
 20649 $\backslash\mathrm{let}\backslash\mathrm{equalsinferior}\backslash\mathrm{textequalsinferior}$
 20650 $\backslash\mathrm{let}\backslash\mathrm{parenleftinferior}\backslash\mathrm{textparenleftinferior}$
 20651 $\backslash\mathrm{let}\backslash\mathrm{parenrightinferior}\backslash\mathrm{textparenrightinferior}$
 20652 $\backslash\mathrm{let}\backslash\mathrm{ainferior}\backslash\mathrm{textainferior}$
 20653 $\backslash\mathrm{let}\backslash\mathrm{einferior}\backslash\mathrm{texteinferior}$
 20654 $\backslash\mathrm{let}\backslash\mathrm{oinferior}\backslash\mathrm{textoinferior}$
 20655 $\backslash\mathrm{let}\backslash\mathrm{xinferior}\backslash\mathrm{textxinferior}$
 20656 $\backslash\mathrm{let}\backslash\mathrm{schwainferior}\backslash\mathrm{textschwainferior}$
 20657 $\backslash\mathrm{let}\backslash\mathrm{hinferior}\backslash\mathrm{texthinferior}$
 20658 $\backslash\mathrm{let}\backslash\mathrm{kinferior}\backslash\mathrm{textkinferior}$
 20659 $\backslash\mathrm{let}\backslash\mathrm{linferior}\backslash\mathrm{textlinferior}$
 20660 $\backslash\mathrm{let}\backslash\mathrm{mininferior}\backslash\mathrm{textmininferior}$
 20661 $\backslash\mathrm{let}\backslash\mathrm{nninferior}\backslash\mathrm{textnninferior}$
 20662 $\backslash\mathrm{let}\backslash\mathrm{pinferior}\backslash\mathrm{textpinferior}$
 20663 $\backslash\mathrm{let}\backslash\mathrm{sinferior}\backslash\mathrm{textsinferior}$
 20664 $\backslash\mathrm{let}\backslash\mathrm{tinferior}\backslash\mathrm{texttinferior}$
 20665 $\backslash\mathrm{let}\backslash\mathrm{Deleatur}\backslash\mathrm{textDeleatur}$
 20666 $\backslash\mathrm{let}\backslash\mathrm{hslash}\backslash\mathrm{texthslash}$
 20667 $\backslash\mathrm{let}\backslash\mathrm{Im}\backslash\mathrm{textIm}$
 20668 $\backslash\mathrm{let}\backslash\mathrm{ell}\backslash\mathrm{textell}$
 20669 $\backslash\mathrm{let}\backslash\mathrm{wp}\backslash\mathrm{textwp}$
 20670 $\backslash\mathrm{let}\backslash\mathrm{Re}\backslash\mathrm{textRe}$
 20671 $\backslash\mathrm{let}\backslash\mathrm{mho}\backslash\mathrm{textmho}$
 20672 $\backslash\mathrm{let}\backslash\mathrm{riota}\backslash\mathrm{textriota}$
 20673 $\backslash\mathrm{let}\backslash\mathrm{Finv}\backslash\mathrm{textFinv}$

20674 \let\aleph\textaleph
 20675 \let\beth\textbeth
 20676 \let\gimel\textgimel
 20677 \let\daleth\textdaleth
 20678 \let\xfax\textfax
 20679 \let\Game\textGame
 20680 \let\leftarrow\textleftarrow
 20681 \let\uparrow\textuparrow
 20682 \let\rightarrow\textrightarrow
 20683 \let\downarrow\textdownarrow
 20684 \let\leftrightarrow\textleftrightarrow
 20685 \let\updownarrow\textupdownarrow
 20686 \let\nwarrow\textnwarrow
 20687 \let\nearrow\textnearrow
 20688 \let\searrow\textsearrow
 20689 \let\swarrow\textswarrow
 20690 \let\nleftarrow\textnleftarrow
 20691 \let\nrightarrow\textnrightarrow
 20692 \let\twoheadleftarrow\texttwoheadleftarrow
 20693 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20694 \let\twoheaduparrow\texttwoheaduparrow
 20695 \let\twoheadrightarrow\texttwoheadrightarrow
 20696 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20697 \let\twoheaddownarrow\texttwoheaddownarrow
 20698 \let\leftarrowtail\textleftarrowtail
 20699 \let\rightarrowtail\textrightarrowtail
 20700 \let\mapsto\textmapsto
 20701 \let\hookleftarrow\texthookleftarrow
 20702 \let\hookrightarrow\texthookrightarrow
 20703 \let\looparrowleft\textlooparrowleft
 20704 \let\looparrowright\textlooparrowright
 20705 \let\nleftrightarrow\textnleftrightarrow
 20706 \let\lightning\textlightning
 20707 \let\dlsh\textdlsh
 20708 \let\curvearrowleft\textcurvearrowleft
 20709 \let\curvearrowright\textcurvearrowright
 20710 \let\leftharpoonup\textleftharpoonup
 20711 \let\leftharpoondown\textleftharpoondown
 20712 \let\upharpoonright\textupharpoonright
 20713 \let\upharpoonleft\textupharpoonleft
 20714 \let\rightharpoonup\text\rightharpoonup
 20715 \let\rightharpoondown\text\rightharpoondown
 20716 \let\downharpoonright\textdownharpoonright
 20717 \let\downharpoonleft\textdownharpoonleft
 20718 \let\rightleftarrows\textrightleftarrows
 20719 \let\updownarrows\textupdownarrows
 20720 \let\leftrightarrows\textleftrightarrows
 20721 \let\leftleftarrows\textleftleftarrows
 20722 \let\upuparrows\textupuparrows
 20723 \let\righttrightarrows\textrighttrightarrows
 20724 \let\downdownarrows\textdowndownarrows
 20725 \let\leftrightharpoons\textleftrightharpoons
 20726 \let\rightleftharpoons\textrightleftharpoons
 20727 \let\nLeftarrow\textnLeftarrow
 20728 \let\nLeftrightarrow\textnLeftrightarrow
 20729 \let\nRrightarrow\textnRrightarrow
 20730 \let\Leftarrow\textLeftarrow

20731 $\text{\let\Uparrow\textUparrow}$
 20732 $\text{\let\Rightarrow\textRightarrow}$
 20733 $\text{\let\Downarrow\textDownarrow}$
 20734 $\text{\let\Leftrightarrow\textLeftrightarrow}$
 20735 $\text{\let\Updownarrow\textUpdownarrow}$
 20736 $\text{\let\Nwarrow\textNwarrow}$
 20737 $\text{\let\Nearrow\textNearrow}$
 20738 $\text{\let\SEarrow\textSEarrow}$
 20739 $\text{\let\SEarrow\textSEarrow}$
 20740 $\text{\let\Lleftarrow\textLleftarrow}$
 20741 $\text{\let\Rrightarrow\textRrightarrow}$
 20742 $\text{\let\leftsquigarrow\textleftsquigarrow}$
 20743 $\text{\let\rightsquigarrow\textrightsquigarrow}$
 20744 $\text{\let\dashleftarrow\textdashleftarrow}$
 20745 $\text{\let\dasheduparrow\textdasheduparrow}$
 20746 $\text{\let\dashrightarrow\textdashrightarrow}$
 20747 $\text{\let\dasheddownarrow\textdasheddownarrow}$
 20748 $\text{\let\pointer\textpointer}$
 20749 $\text{\let\downuparrows\textdownuparrows}$
 20750 $\text{\let\leftarrowtriangle\textleftarrowtriangle}$
 20751 $\text{\let\rightarrowtriangle\textrightarrowtriangle}$
 20752 $\text{\let\leftrightarrowtriangle\textleftrightarrowtriangle}$
 20753 $\text{\let\forall\textforall}$
 20754 $\text{\let\complement\textcomplement}$
 20755 $\text{\let\partial\textpartial}$
 20756 $\text{\let\exists\textexists}$
 20757 $\text{\let\nexists\textnexists}$
 20758 $\text{\let\emptyset\textemptyset}$
 20759 $\text{\let\triangle\texttriangle}$
 20760 $\text{\let\nabla\textnabla}$
 20761 \let\in\textin
 20762 $\text{\let\notin\textnotin}$
 20763 $\text{\let\smallin\textsmallin}$
 20764 \let\ni\textni
 20765 $\text{\let\notowner\textnotowner}$
 20766 $\text{\let\smallowns\textsmallowns}$
 20767 $\text{\let\prod\textprod}$
 20768 $\text{\let\amalg\textamalg}$
 20769 \let\sum\textsum
 20770 \let\mp\textmp
 20771 $\text{\let\dotplus\textdotplus}$
 20772 $\text{\let\Divides\textDivides}$
 20773 $\text{\let\DividesNot\textDividesNot}$
 20774 $\text{\let\setminus\textsetminus}$
 20775 \let\ast\textast
 20776 $\text{\let\circ\textcirc}$
 20777 $\text{\let\surd\textsurd}$
 20778 $\text{\let\propto\textpropto}$
 20779 $\text{\let\infty\textinfty}$
 20780 $\text{\let\angle\textangle}$
 20781 $\text{\let\measuredangle\textmeasuredangle}$
 20782 $\text{\let\sphericalangle\textsphericalangle}$
 20783 \let\mid\textmid
 20784 $\text{\let\nmid\textnmid}$
 20785 $\text{\let\parallel\textparallel}$
 20786 $\text{\let\nparallel\textnparallel}$
 20787 $\text{\let\wedge\textwedge}$

20788 $\backslash\text{owedge}$
 20789 $\backslash\text{vee}$
 20790 $\backslash\text{ovee}$
 20791 $\backslash\text{cap}$
 20792 $\backslash\text{cup}$
 20793 $\backslash\text{int}$
 20794 $\backslash\text{iint}$
 20795 $\backslash\text{iiint}$
 20796 $\backslash\text{ooint}$
 20797 $\backslash\text{oiint}$
 20798 $\backslash\text{oointclockwise}$
 20799 $\backslash\text{oointctrclockwise}$
 20800 $\backslash\text{therefore}$
 20801 $\backslash\text{because}$
 20802 $\backslash\text{vdotdot}$
 20803 $\backslash\text{sqaredots}$
 20804 $\backslash\text{dotminus}$
 20805 $\backslash\text{eqcolon}$
 20806 $\backslash\text{sim}$
 20807 $\backslash\text{backsim}$
 20808 $\backslash\text{nbacksim}$
 20809 $\backslash\text{wr}$
 20810 $\backslash\text{nsim}$
 20811 $\backslash\text{eqsim}$
 20812 $\backslash\text{neqsim}$
 20813 $\backslash\text{simeq}$
 20814 $\backslash\text{nsimeq}$
 20815 $\backslash\text{cong}$
 20816 $\backslash\text{ncong}$
 20817 $\backslash\text{approx}$
 20818 $\backslash\text{napprox}$
 20819 $\backslash\text{approxeq}$
 20820 $\backslash\text{napproxeq}$
 20821 $\backslash\text{triplesim}$
 20822 $\backslash\text{ntriplesim}$
 20823 $\backslash\text{backcong}$
 20824 $\backslash\text{nbackcong}$
 20825 $\backslash\text{asyp}$
 20826 $\backslash\text{nasyp}$
 20827 $\backslash\text{Bumpeq}$
 20828 $\backslash\text{nBumpeq}$
 20829 $\backslash\text{bumpeq}$
 20830 $\backslash\text{nbumpeq}$
 20831 $\backslash\text{doteq}$
 20832 $\backslash\text{ndoteq}$
 20833 $\backslash\text{doteqdot}$
 20834 $\backslash\text{nDoteq}$
 20835 $\backslash\text{fallingdoteq}$
 20836 $\backslash\text{nfallingdoteq}$
 20837 $\backslash\text{risingdoteq}$
 20838 $\backslash\text{nrisingdoteq}$
 20839 $\backslash\text{colonequals}$
 20840 $\backslash\text{equalscolon}$
 20841 $\backslash\text{eqcirc}$
 20842 $\backslash\text{neqcirc}$
 20843 $\backslash\text{circeq}$
 20844 $\backslash\text{ncirceq}$

20845 $\backslash\text{let}\backslash\text{hateq}\backslash\text{texthateq}$
 20846 $\backslash\text{let}\backslash\text{nhateq}\backslash\text{textnhateq}$
 20847 $\backslash\text{let}\backslash\text{triangleeq}\backslash\text{texttriangleeq}$
 20848 $\backslash\text{let}\backslash\text{neq}\backslash\text{textneq}$
 20849 $\backslash\text{let}\backslash\text{ne}\backslash\text{textne}$
 20850 $\backslash\text{let}\backslash\text{equiv}\backslash\text{textequiv}$
 20851 $\backslash\text{let}\backslash\text{nequiv}\backslash\text{textnequiv}$
 20852 $\backslash\text{let}\backslash\text{leq}\backslash\text{textleq}$
 20853 $\backslash\text{let}\backslash\text{le}\backslash\text{textle}$
 20854 $\backslash\text{let}\backslash\text{geq}\backslash\text{textgeq}$
 20855 $\backslash\text{let}\backslash\text{ge}\backslash\text{textge}$
 20856 $\backslash\text{let}\backslash\text{leqq}\backslash\text{textleqq}$
 20857 $\backslash\text{let}\backslash\text{nleqq}\backslash\text{textnleqq}$
 20858 $\backslash\text{let}\backslash\text{geqq}\backslash\text{textgeqq}$
 20859 $\backslash\text{let}\backslash\text{ngeqq}\backslash\text{textngeqq}$
 20860 $\backslash\text{let}\backslash\text{lneqq}\backslash\text{textlneqq}$
 20861 $\backslash\text{let}\backslash\text{gneqq}\backslash\text{textgneqq}$
 20862 $\backslash\text{let}\backslash\text{ll}\backslash\text{textll}$
 20863 $\backslash\text{let}\backslash\text{nll}\backslash\text{textnll}$
 20864 $\backslash\text{let}\backslash\text{gg}\backslash\text{textgg}$
 20865 $\backslash\text{let}\backslash\text{ngg}\backslash\text{textngg}$
 20866 $\backslash\text{let}\backslash\text{between}\backslash\text{textbetween}$
 20867 $\backslash\text{let}\backslash\text{nless}\backslash\text{textnless}$
 20868 $\backslash\text{let}\backslash\text{ngtr}\backslash\text{textngtr}$
 20869 $\backslash\text{let}\backslash\text{nleq}\backslash\text{textnleq}$
 20870 $\backslash\text{let}\backslash\text{ngeq}\backslash\text{textngeq}$
 20871 $\backslash\text{let}\backslash\text{lesssim}\backslash\text{textlessim}$
 20872 $\backslash\text{let}\backslash\text{gtrsim}\backslash\text{textgtrsim}$
 20873 $\backslash\text{let}\backslash\text{nlesssim}\backslash\text{textnlessim}$
 20874 $\backslash\text{let}\backslash\text{ngtrsim}\backslash\text{textngtrsim}$
 20875 $\backslash\text{let}\backslash\text{lessgtr}\backslash\text{textlessgtr}$
 20876 $\backslash\text{let}\backslash\text{gtrless}\backslash\text{textgtrless}$
 20877 $\backslash\text{let}\backslash\text{ngtrless}\backslash\text{textngtrless}$
 20878 $\backslash\text{let}\backslash\text{nlessgtr}\backslash\text{textnlessgtr}$
 20879 $\backslash\text{let}\backslash\text{prec}\backslash\text{textprec}$
 20880 $\backslash\text{let}\backslash\text{succ}\backslash\text{textsucc}$
 20881 $\backslash\text{let}\backslash\text{preccurlyeq}\backslash\text{textpreccurlyeq}$
 20882 $\backslash\text{let}\backslash\text{succcurlyeq}\backslash\text{textsucccurlyeq}$
 20883 $\backslash\text{let}\backslash\text{precsim}\backslash\text{textprecsim}$
 20884 $\backslash\text{let}\backslash\text{nprecsim}\backslash\text{textnprecsim}$
 20885 $\backslash\text{let}\backslash\text{succsim}\backslash\text{textsuccsim}$
 20886 $\backslash\text{let}\backslash\text{nsuccsim}\backslash\text{textnsuccsim}$
 20887 $\backslash\text{let}\backslash\text{nprec}\backslash\text{textnprec}$
 20888 $\backslash\text{let}\backslash\text{nsucc}\backslash\text{textnsucc}$
 20889 $\backslash\text{let}\backslash\text{subset}\backslash\text{textsubset}$
 20890 $\backslash\text{let}\backslash\text{supset}\backslash\text{textsupset}$
 20891 $\backslash\text{let}\backslash\text{nsubset}\backslash\text{textnsubset}$
 20892 $\backslash\text{let}\backslash\text{nsupset}\backslash\text{textnsupset}$
 20893 $\backslash\text{let}\backslash\text{subseteq}\backslash\text{textsubseteq}$
 20894 $\backslash\text{let}\backslash\text{supseteq}\backslash\text{textsupseteq}$
 20895 $\backslash\text{let}\backslash\text{nsubseteq}\backslash\text{textnsubseteq}$
 20896 $\backslash\text{let}\backslash\text{nsupseteq}\backslash\text{textnsupseteq}$
 20897 $\backslash\text{let}\backslash\text{subsetneq}\backslash\text{textsubsetneq}$
 20898 $\backslash\text{let}\backslash\text{supsetneq}\backslash\text{textsupsetneq}$
 20899 $\backslash\text{let}\backslash\text{cupdot}\backslash\text{textcupdot}$
 20900 $\backslash\text{let}\backslash\text{cupplus}\backslash\text{textcupplus}$
 20901 $\backslash\text{let}\backslash\text{sqsubset}\backslash\text{textsqssubset}$

20902 $\backslash\mathrm{nsqsubset}\backslash\mathrm{textnsqsubset}$
 20903 $\backslash\mathrm{sqsupset}\backslash\mathrm{textsqsupset}$
 20904 $\backslash\mathrm{nsqsupset}\backslash\mathrm{textnsqsupset}$
 20905 $\backslash\mathrm{sqsubseq}\backslash\mathrm{textsqsubseq}$
 20906 $\backslash\mathrm{nsqsubseq}\backslash\mathrm{textnsqsubseq}$
 20907 $\backslash\mathrm{sqsupseteq}\backslash\mathrm{textsqsupseteq}$
 20908 $\backslash\mathrm{nsqsupseteq}\backslash\mathrm{textnsqsupseteq}$
 20909 $\backslash\mathrm{sqcap}\backslash\mathrm{textsqcap}$
 20910 $\backslash\mathrm{sqcup}\backslash\mathrm{textsqcup}$
 20911 $\backslash\mathrm{oplus}\backslash\mathrm{textoplus}$
 20912 $\backslash\mathrm{ominus}\backslash\mathrm{textominus}$
 20913 $\backslash\mathrm{otimes}\backslash\mathrm{textotimes}$
 20914 $\backslash\mathrm{oslash}\backslash\mathrm{textoslash}$
 20915 $\backslash\mathrm{odot}\backslash\mathrm{textodot}$
 20916 $\backslash\mathrm{circledcirc}\backslash\mathrm{textcircledcirc}$
 20917 $\backslash\mathrm{circledast}\backslash\mathrm{textcircledast}$
 20918 $\backslash\mathrm{circleddash}\backslash\mathrm{textcircleddash}$
 20919 $\backslash\mathrm{boxplus}\backslash\mathrm{textboxplus}$
 20920 $\backslash\mathrm{boxminus}\backslash\mathrm{textboxminus}$
 20921 $\backslash\mathrm{boxtimes}\backslash\mathrm{textboxtimes}$
 20922 $\backslash\mathrm{boxdot}\backslash\mathrm{textboxdot}$
 20923 $\backslash\mathrm{vdash}\backslash\mathrm{textvdash}$
 20924 $\backslash\mathrm{dashv}\backslash\mathrm{texdashv}$
 20925 $\backslash\mathrm{ndashv}\backslash\mathrm{textndashv}$
 20926 $\backslash\mathrm{top}\backslash\mathrm{texttop}$
 20927 $\backslash\mathrm{ndownvdash}\backslash\mathrm{textndownvdash}$
 20928 $\backslash\mathrm{bot}\backslash\mathrm{textbot}$
 20929 $\backslash\mathrm{nupvdash}\backslash\mathrm{textnupvdash}$
 20930 $\backslash\mathrm{vDash}\backslash\mathrm{textvDash}$
 20931 $\backslash\mathrm{Vdash}\backslash\mathrm{textVdash}$
 20932 $\backslash\mathrm{Vvdash}\backslash\mathrm{textVvdash}$
 20933 $\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 20934 $\backslash\mathrm{VDash}\backslash\mathrm{textVDash}$
 20935 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20936 $\backslash\mathrm{nvDash}\backslash\mathrm{textnvDash}$
 20937 $\backslash\mathrm{nVdash}\backslash\mathrm{textnVdash}$
 20938 $\backslash\mathrm{nVDash}\backslash\mathrm{textnVDash}$
 20939 $\backslash\mathrm{lhs}\backslash\mathrm{textrhs}$
 20940 $\backslash\mathrm{rhd}\backslash\mathrm{textrhd}$
 20941 $\backslash\mathrm{unlhd}\backslash\mathrm{textunlhd}$
 20942 $\backslash\mathrm{unrhd}\backslash\mathrm{textunrhd}$
 20943 $\backslash\mathrm{multimapdotbothA}\backslash\mathrm{textmultimapdotbothA}$
 20944 $\backslash\mathrm{multimapdotbothB}\backslash\mathrm{textmultimapdotbothB}$
 20945 $\backslash\mathrm{multimap}\backslash\mathrm{textmultimap}$
 20946 $\backslash\mathrm{veebar}\backslash\mathrm{textveebar}$
 20947 $\backslash\mathrm{barwedge}\backslash\mathrm{textbarwedge}$
 20948 $\backslash\mathrm{star}\backslash\mathrm{textstar}$
 20949 $\backslash\mathrm{divideontimes}\backslash\mathrm{textdivideontimes}$
 20950 $\backslash\mathrm{bowtie}\backslash\mathrm{textbowtie}$
 20951 $\backslash\mathrm{ltimes}\backslash\mathrm{textltimes}$
 20952 $\backslash\mathrm{rtimes}\backslash\mathrm{textrtimes}$
 20953 $\backslash\mathrm{leftthreetimes}\backslash\mathrm{textleftthreetimes}$
 20954 $\backslash\mathrm{rightthreetimes}\backslash\mathrm{textrightthreetimes}$
 20955 $\backslash\mathrm{backsimeq}\backslash\mathrm{textbacksimeq}$
 20956 $\backslash\mathrm{nbacksimeq}\backslash\mathrm{textnbacksimeq}$
 20957 $\backslash\mathrm{curlyvee}\backslash\mathrm{textcurlyvee}$
 20958 $\backslash\mathrm{curlywedge}\backslash\mathrm{textcurlywedge}$

20959 \let\Subset\textSubset
 20960 \let\NSubset\textNSubset
 20961 \let\Supset\textSupset
 20962 \let\NSupset\textNSupset
 20963 \let\Cap\textCap
 20964 \let\Cup\textCup
 20965 \let\pitchfork\textpitchfork
 20966 \let\lessdot\textlessdot
 20967 \let\gtrdot\textgtrdot
 20968 \let\lll\textlll
 20969 \let\ggg\textggg
 20970 \let\lesseqgtr\textlesseqgtr
 20971 \let\gtreqless\textgtreqless
 20972 \let\curlyeqprec\textcurlyeqprec
 20973 \let\ncurlyeqprec\textncurlyeqprec
 20974 \let\curlyeqsucc\textcurlyeqsucc
 20975 \let\ncurlyeqsucc\textncurlyeqsucc
 20976 \let\preccurlyeq\textpreccurlyeq
 20977 \let\nsucccurlyeq\textnsucccurlyeq
 20978 \let\sqsubseteq\textsqsubseteq
 20979 \let\sqsupseteq\textsqsupseteq
 20980 \let\sqsubsetneq\textsqsubsetneq
 20981 \let\sqsupsetneq\textsqsupsetneq
 20982 \let\Insim\textInsim
 20983 \let\Gnsim\textGnsim
 20984 \let\precnsim\textprecnsim
 20985 \let\succnsim\textsuccnsim
 20986 \let\triangleleft\texttriangleleft
 20987 \let\triangleright\texttriangleright
 20988 \let\trianglelefteq\texttrianglelefteq
 20989 \let\trianglerighteq\texttrianglerighteq
 20990 \let\vdots\textvdots
 20991 \let\cdots\textcdots
 20992 \let\udots\textudots
 20993 \let\ddots\textddots
 20994 \let\barin\textbarin
 20995 \let\diameter\textdiameter
 20996 \let\backneg\textbackneg
 20997 \let\wasylounge\textwasylounge
 20998 \let\invbackneg\textinvbackneg
 20999 \let\clock\textclock
 21000 \let\ulcorner\textulcorner
 21001 \let\urcorner\texturcorner
 21002 \let\llcorner\textllcorner
 21003 \let\lrcorner\textlrcorner
 21004 \let\frown\textfrown
 21005 \let\smile\textsmile
 21006 \let\Keyboard\textKeyboard
 21007 \let\lang\textlang
 21008 \let\angle\textangle
 21009 \let\APLinv\textAPLinv
 21010 \let\Tumbler\textTumbler
 21011 \let\notslash\textnotslash
 21012 \let\notbackslash\textnotbackslash
 21013 \let\boxbackslash\textboxbackslash
 21014 \let\APLleftarrowbox\textAPLleftarrowbox
 21015 \let\APLrightarrowbox\textAPLrightarrowbox

21016 \let\APLuparrowbox\textAPLuparrowbox
 21017 \let\APLdownarrowbox\textAPLdownarrowbox
 21018 \let\APLinput\textAPLinput
 21019 \let\Request\textRequest
 21020 \let\Beam\textBeam
 21021 \let\hexagon\texthexagon
 21022 \let\APLbox\textAPLbox
 21023 \let\ForwardToIndex\textForwardToIndex
 21024 \let\RewindToIndex\textRewindToIndex
 21025 \let\bbslash\textbbslash
 21026 \let\CircledA\textCircledA
 21027 \let\CleaningF\textCleaningF
 21028 \let\CleaningFF\textCleaningFF
 21029 \let\CleaningP\textCleaningP
 21030 \let\CleaningPP\textCleaningPP
 21031 \let\CuttingLine\textCuttingLine
 21032 \let\UParrow\textUParrow
 21033 \let\bigtriangleup\textbigtriangleup
 21034 \let\Forward\textForward
 21035 \let\triangleright\texttriangleright
 21036 \let\RHD\textRHD
 21037 \let\DOWNarrow\textDOWNarrow
 21038 \let\bigtriangledown\textbigtriangledown
 21039 \let\Rewind\textRewind
 21040 \let\triangleleft\texttriangleleft
 21041 \let\LHD\textLHD
 21042 \let\diamond\textdiamond
 21043 \let\lozenge\textlozenge
 21044 \let\LEFTCIRCLE\textLEFTCIRCLE
 21045 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21046 \let\openbullet\textopenbullet
 21047 \let\boxbar\textboxbar
 21048 \let\bigcircle\textbigcircle
 21049 \let\Cloud\textCloud
 21050 \let\FiveStar\textFiveStar
 21051 \let\FiveStarOpen\textFiveStarOpen
 21052 \let\Phone\textPhone
 21053 \let\boxempty\textboxempty
 21054 \let\Checkedbox\textCheckedbox
 21055 \let\Crossedbox\textCrossedbox
 21056 \let\Coffeecup\textCoffeecup
 21057 \let\HandCuffLeft\textHandCuffLeft
 21058 \let\HandCuffRight\textHandCuffRight
 21059 \let\HandLeft\textHandLeft
 21060 \let\HandRight\textHandRight
 21061 \let\Radioactivity\textRadioactivity
 21062 \let\Biohazard\textBiohazard
 21063 \let\Ankh\textAnkh
 21064 \let\YinYang\textYinYang
 21065 \let\frownie\textfrownie
 21066 \let\smiley\textsmiley
 21067 \let\blacksmiley\textblacksmiley
 21068 \let\sun\textsun
 21069 \let\leftmoon\textleftmoon
 21070 \let\rightmoon\textrightmoon
 21071 \let\mercury\textmercury
 21072 \let\earth\textearth

21073 \let\male\textmale
 21074 \let\jupiter\textjupiter
 21075 \let\saturn\textsaturn
 21076 \let\uranus\texturanus
 21077 \let\neptune\textneptune
 21078 \let\pluto\textpluto
 21079 \let\aries\textaries
 21080 \let\taurus\texttaurus
 21081 \let\gemini\textgemini
 21082 \let\cancer\textcancer
 21083 \let\leo\textleo
 21084 \let\virgo\textvirgo
 21085 \let\libra\textlibra
 21086 \let\scorpio\textscorpio
 21087 \let\sagittarius\textsagittarius
 21088 \let\capricornus\textcapricornus
 21089 \let\aquarius\textaquarius
 21090 \let\pisces\textpisces
 21091 \let\quarternote\textquarternote
 21092 \let\twonotes\texttwonotes
 21093 \let\sixteenthnote\textsixteenthnote
 21094 \let\flat\textflat
 21095 \let\natural\textnatural
 21096 \let\sharp\textsharp
 21097 \let\recycle\textrecycle
 21098 \let\Wheelchair\textWheelchair
 21099 \let\Flag\textFlag
 21100 \let\MineSign\textMineSign
 21101 \let\ds\textds
 21102 \let\dsmedical\textdsmedical
 21103 \let\dsjuridical\textdsjuridical
 21104 \let\dschemical\textdschemical
 21105 \let\dsbiological\textdsbiological
 21106 \let\dscommercial\textdscommercial
 21107 \let\manstar\textmanstar
 21108 \let\danger\textdanger
 21109 \let\FemaleFemale\textFemaleFemale
 21110 \let\MaleMale\textMaleMale
 21111 \let\FemaleMale\textFemaleMale
 21112 \let\Hermaphrodite\textHermaphrodite
 21113 \let\Neutral\textNeutral
 21114 \let\hexstar\texthexstar
 21115 \let\SunCload\textSunCload
 21116 \let\Rain\textRain
 21117 \let\noway\textnoway
 21118 \let\Mountain\textMountain
 21119 \let\Tent\textTent
 21120 \let\ScissorRight\textScissorRight
 21121 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21122 \let\ScissorHollowRight\textScissorHollowRight
 21123 \let\PhoneHandset\textPhoneHandset
 21124 \let\Tape\textTape
 21125 \let\Plane\textPlane
 21126 \let\Envelope\textEnvelope
 21127 \let\Peace\textPeace
 21128 \let\WritingHand\textWritingHand
 21129 \let\PencilRightDown\textPencilRightDown

21130 \let\PencilRight\textPencilRight
 21131 \let\PencilRightUp\textPencilRightUp
 21132 \let\NibRight\textNibRight
 21133 \let\NibSolidRight\textNibSolidRight
 21134 \let\Checkmark\textCheckmark
 21135 \let\CheckmarkBold\textCheckmarkBold
 21136 \let\XSolid\textXSolid
 21137 \let\XSolidBold\textXSolidBold
 21138 \let\XSolidBrush\textXSolidBrush
 21139 \let\PlusOutline\textPlusOutline
 21140 \let\Plus\textPlus
 21141 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21142 \let\PlusCenterOpen\textPlusCenterOpen
 21143 \let\Cross\textCross
 21144 \let\CrossOpenShadow\textCrossOpenShadow
 21145 \let\CrossOutline\textCrossOutline
 21146 \let\CrossMaltese\textCrossMaltese
 21147 \let\DavidStar\textDavidStar
 21148 \let\FourAsterisk\textFourAsterisk
 21149 \let\JackStar\textJackStar
 21150 \let\JackStarBold\textJackStarBold
 21151 \let\ClowerTips\textClowerTips
 21152 \let\FourStar\textFourStar
 21153 \let\FourStarOpen\textFourStarOpen
 21154 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21155 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21156 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21157 \let\FiveStarOutline\textFiveStarOutline
 21158 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21159 \let\FiveStarConvex\textFiveStarConvex
 21160 \let\FiveStarShadow\textFiveStarShadow
 21161 \let\AsteriskBold\textAsteriskBold
 21162 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21163 \let\EightStarTaper\textEightStarTaper
 21164 \let\EightStarConvex\textEightStarConvex
 21165 \let\SixStar\textSixStar
 21166 \let\EightStar\textEightStar
 21167 \let\EightStarBold\textEightStarBold
 21168 \let\TwelveStar\textTwelveStar
 21169 \let\SixteenStarLight\textSixteenStarLight
 21170 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21171 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21172 \let\Asterisk\textAsterisk
 21173 \let\SixFlowerAlternate\textSixFlowerAlternate
 21174 \let\FiveFlowerPetal\textFiveFlowerPetal
 21175 \let\FiveFlowerOpen\textFiveFlowerOpen
 21176 \let\EightFlowerPetal\textEightFlowerPetal
 21177 \let\SunshineOpenCircled\textSunshineOpenCircled
 21178 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21179 \let\SnowflakeChevron\textSnowflakeChevron
 21180 \let\Snowflake\textSnowflake
 21181 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21182 \let\Sparkle\textSparkle
 21183 \let\SparkleBold\textSparkleBold
 21184 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21185 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21186 \let\EightAsterisk\textEightAsterisk

21187 \let\CircleShadow\textCircleShadow
 21188 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21189 \let\SquareTopRight\textSquareTopRight
 21190 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21191 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21192 \let\DiamandSolid\textDiamandSolid
 21193 \let\RectangleThin\textRectangleThin
 21194 \let\Rectangle\textRectangle
 21195 \let\RectangleBold\textRectangleBold
 21196 \let\perp\textperp
 21197 \let\notperp\textnotperp
 21198 \let\veedot\textveedot
 21199 \let\wedgedot\textwedgedot
 21200 \let\leftspoon\textleftspoon
 21201 \let\lbrackdbl\textlbrackdbl
 21202 \let\rbrackdbl\textrbrackdbl
 21203 \let\circlearrowleft\textcirclearrowleft
 21204 \let\circlearrowright\textcirclearrowright
 21205 \let\longleftarrow\textlongleftarrow
 21206 \let\longrightarrow\textlongrightarrow
 21207 \let\longleftrightarrow\textlongleftrightarrow
 21208 \let\Longleftarrow\textLongleftarrow
 21209 \let\Longrightarrow\textLongrightarrow
 21210 \let\Longleftrightarrow\textLongleftrightarrow
 21211 \let\longmapsto\textlongmapsto
 21212 \let\Longmapsfrom\textLongmapsfrom
 21213 \let\Longmapsto\textLongmapsto
 21214 \let\nwsearrow\textnwsearrow
 21215 \let\neswarrow\textneswarrow
 21216 \let\lhooknwarrow\textlhooknwarrow
 21217 \let\rhooknearrow\textrhoonnearrow
 21218 \let\lhooksearrow\textlhooksearrow
 21219 \let\rhookswarrow\textrhoonswarrow
 21220 \let\leadsto\textleadsto
 21221 \let\rcurvearrowne\textrcurvearrowne
 21222 \let\lcurvearrowse\textlcurvearrowse
 21223 \let\lcurvearrowsw\textlcurvearrowsw
 21224 \let\rcurvearrowse\textrcurvearrowse
 21225 \let\lcurvearrowdown\textlcurvearrowdown
 21226 \let\rcurvearrowdown\textrcurvearrowdown
 21227 \let\rcurvearrowleft\textrcurvearrowleft
 21228 \let\rcurvearrowright\textrcurvearrowright
 21229 \let\leftrightharpoon\textleftrightharpoon
 21230 \let\rightleftharpoon\textrightleftharpoon
 21231 \let\updownharpoonrightleft\textupdownharpoonrightleft
 21232 \let\updownharpoonleftright\textupdownharpoonleftright
 21233 \let\leftleftharpoons\textleftleftharpoons
 21234 \let\upupharpoons\textupupharpoons
 21235 \let\righttrightharpoons\textrighttrightharpoons
 21236 \let\downdownharpoons\textdowndownharpoons
 21237 \let\leftbarharpoon\textleftbarharpoon
 21238 \let\barleftharpoon\textbarleftharpoon
 21239 \let\rightbarharpoon\textrightbarharpoon
 21240 \let\barriightharpoon\textbarriightharpoon
 21241 \let\updownharpoons\textupdownharpoons
 21242 \let\downupharpoons\textdownupharpoons
 21243 \let\moo\textmoo

21244 $\backslash\mathrm{llparentesis}\text{llparentesis}$
 21245 $\backslash\mathrm{rrparentesis}\text{rrparentesis}$
 21246 $\backslash\mathrm{invdiameter}\text{invdiameter}$
 21247 $\backslash\mathrm{obar}\text{toobar}$
 21248 $\backslash\mathrm{obslash}\text{toobslash}$
 21249 $\backslash\mathrm{obot}\text{toobot}$
 21250 $\backslash\mathrm{NoChemicalCleaning}\text{NoChemicalCleaning}$
 21251 $\backslash\mathrm{olessthan}\text{toolessthan}$
 21252 $\backslash\mathrm{ogreaterthan}\text{toglereaterthan}$
 21253 $\backslash\mathrm{boxslash}\text{toboxslash}$
 21254 $\backslash\mathrm{boxbslash}\text{toboxbslash}$
 21255 $\backslash\mathrm{boxast}\text{toboxast}$
 21256 $\backslash\mathrm{boxcircle}\text{toboxcircle}$
 21257 $\backslash\mathrm{boxbox}\text{toboxbox}$
 21258 $\backslash\mathrm{Valve}\text{Valve}$
 21259 $\backslash\mathrm{multimapboth}\text{multimapboth}$
 21260 $\backslash\mathrm{shuffle}\text{toshuffle}$
 21261 $\backslash\mathrm{uplus}\text{toupplus}$
 21262 $\backslash\mathrm{bigdoublewedge}\text{tobigdoublewedge}$
 21263 $\backslash\mathrm{bigdoublevee}\text{tobigdoublevee}$
 21264 $\backslash\mathrm{Join}\text{Join}$
 21265 $\backslash\mathrm{fatsemi}\text{tofatsemi}$
 21266 $\backslash\mathrm{circplus}\text{tocircplus}$
 21267 $\backslash\mathrm{minusdot}\text{to minusdot}$
 21268 $\backslash\mathrm{dottimes}\text{toddottimes}$
 21269 $\backslash\mathrm{dtimes}\text{toddimes}$
 21270 $\backslash\mathrm{odiv}\text{todiv}$
 21271 $\backslash\mathrm{invneg}\text{toinvneg}$
 21272 $\backslash\mathrm{sqdoublecap}\text{totsqdoublecap}$
 21273 $\backslash\mathrm{capdot}\text{tocapdot}$
 21274 $\backslash\mathrm{sqdoublecup}\text{totsqdoublecup}$
 21275 $\backslash\mathrm{doublewedge}\text{toublewedge}$
 21276 $\backslash\mathrm{doublevee}\text{toublevee}$
 21277 $\backslash\mathrm{doublebarwedge}\text{toublebarwedge}$
 21278 $\backslash\mathrm{veedoublebar}\text{toveedoublebar}$
 21279 $\backslash\mathrm{eqdot}\text{toeqdot}$
 21280 $\backslash\mathrm{neqdot}\text{toneqdot}$
 21281 $\backslash\mathrm{coloncolonequals}\text{tocoloncolonequals}$
 21282 $\backslash\mathrm{leqslant}\text{toleqslant}$
 21283 $\backslash\mathrm{nleqslant}\text{tonleqslant}$
 21284 $\backslash\mathrm{geqslant}\text{to geqslant}$
 21285 $\backslash\mathrm{ngeqslant}\text{tongeqslant}$
 21286 $\backslash\mathrm{lessapprox}\text{tolessapprox}$
 21287 $\backslash\mathrm{nlessapprox}\text{tonlessapprox}$
 21288 $\backslash\mathrm{gtrapprox}\text{togtrapprox}$
 21289 $\backslash\mathrm{ngtrapprox}\text{tongtrapprox}$
 21290 $\backslash\mathrm{ineq}\text{toineq}$
 21291 $\backslash\mathrm{gneq}\text{to gneq}$
 21292 $\backslash\mathrm{lnapprox}\text{tolnapprox}$
 21293 $\backslash\mathrm{gnapprox}\text{to gnapprox}$
 21294 $\backslash\mathrm{lesseqqgtr}\text{tolesseqqgtr}$
 21295 $\backslash\mathrm{gtreqqlless}\text{to gtreqqlless}$
 21296 $\backslash\mathrm{eqslantless}\text{toeqslantless}$
 21297 $\backslash\mathrm{eqslantgtr}\text{toeqslantgtr}$
 21298 $\backslash\mathrm{leftslice}\text{toleftslice}$
 21299 $\backslash\mathrm{rightslice}\text{torightslice}$
 21300 $\backslash\mathrm{preceq}\text{topreceq}$

21301 \let\npreceq\textnpreceq
 21302 \let\succeq\textsucceq
 21303 \let\nsucceq\textnsucceq
 21304 \let\precneq\textprecneq
 21305 \let\succneq\textsuccneq
 21306 \let\preceqq\textpreceqq
 21307 \let\npreceqq\textnpreceqq
 21308 \let\succeqq\textsucceqq
 21309 \let\nsucceqq\textnsucceqq
 21310 \let\precneqq\textprecneqq
 21311 \let\succneqq\textsuccneqq
 21312 \let\precapprox\textprecapprox
 21313 \let\nprecapprox\textnprecapprox
 21314 \let\succapprox\textsuccapprox
 21315 \let\nsuccapprox\textnsuccapprox
 21316 \let\precnapprox\textprecnapprox
 21317 \let\succnapprox\textsuccnapprox
 21318 \let\subseteqq\textsubseteqq
 21319 \let\nsubseteqq\textnsubseteqq
 21320 \let\supseteqq\textsupseteqq
 21321 \let\nsupseteqq\textnsupseteqq
 21322 \let\dashV\textdashV
 21323 \let\ndashV\textndashV
 21324 \let\Dashv\textDashv
 21325 \let\ndashv\textndashv
 21326 \let\DashV\textDashV
 21327 \let\ndashV\textndashV
 21328 \let\downmodels\textdownmodels
 21329 \let\ndownmodels\textndownmodels
 21330 \let\upmodels\textupmodels
 21331 \let\nupmodels\textnupmodels
 21332 \let\upspoon\textupspoon
 21333 \let\interleave\textinterleave
 21334 \let\slash\textslash
 21335 \let\pentagon\textpentagon
 21336 \let\varhexagon\textvarhexagon
 21337 \let\jinferior\textjinferior
 21338 \let\slashdiv\textslashdiv
 21339 \let\fivedots\textfivedots
 21340 \let\oo\textoo
 21341 \let\GaPa\textGaPa
 21342 \let\HaPa\textHaPa
 21343 \let\ViPa\textViPa
 21344 \let\AcPa\textAcPa
 21345 \let\SePa\textSePa
 21346 \let\ZwPa\textZwPa
 21347 \let\fullnote\textfullnote
 21348 \let\halfnote\texthalfnote
 21349 \let\Vier\textVier
 21350 \let\Acht\textAcht
 21351 \let\Sech\textSech
 21352 \let\Zwdr\textZwdr
 21353 \let\Mundus\textMundus
 21354 \let\Moon\textMoon
 21355 \let\ManFace\textManFace
 21356 \let\WomanFace\textWomanFace
 21357 \let\Fax\textFax

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21358 \let\Fire\textFire
21359 \let\Bicycle\textBicycle
21360 \let\Gentsroom\textGentsroom
21361 \let\Ladiesroom\textLadiesroom
21362 \let\ccnc\textccnc
21363 \let\ccsa\textccsa
21364 \let\Info\textInfo
21365 \let\CESign\textCESign
21366 \let\neg\textneg
21367 \let\times\texttimes
21368 \let\div\textdiv
21369 \let\pm\textpm
21370 \let\cdot\textcdot
21371 }% \psdmapshortnames
21372 \newcommand*{\psdaliasnames}{%
21373 \let\epsdice\HyPsd@DieFace
21374 \let\fcdice\HyPsd@DieFace
21375 \let\MoonPha\HyPsd@MoonPha
21376 \let\mathdollar\textdollar
21377 \let\EyesDollar\textdollar
21378 \let\binampersand\textampersand
21379 \let\with\textampersand
21380 \let\mathunderscore\textunderscore
21381 \let\textvertline\textbar
21382 \let\mathsterling\textsterling
21383 \let\pounds\textsterling
21384 \let\brokenvert\textbrokenbar
21385 \let\mathsection\textsection
21386 \let\S\textsection
21387 \let\mathparagraph\textparagraph
21388 \let\MultiplicationDot\textperiodcentered
21389 \let\Squaredot\textperiodcentered
21390 \let\vartimes\textmultiply
21391 \let\MVMultiplication\textmultiply
21392 \let\eth\dh
21393 \let\crossd\textcrd
21394 \let\textbard\textcrd
21395 \let\bard\textcrd
21396 \let\textcrh\textthbar
21397 \let\crossh\textthbar
21398 \let\planck\textthbar
21399 \let\eng\ng
21400 \let\engma\ng
21401 \let\crossb\textcrb
21402 \let\textbarb\textcrb
21403 \let\barb\textcrb
21404 \let\Florin\textflorin
21405 \let\hv\texthvligh
21406 \let\hausak\textthk
21407 \let\crossnilambda\textcrlambda
21408 \let\barlambda\textcrlambda
21409 \let\lambdabar\textcrlambda
21410 \let\lambdash\textcrlambda
21411 \let\textnrleg\textPUnrleg
21412 \let\textpipevar\textpipe
21413 \let\textdoublepipevar\textdoublepipe
21414 \let\textdoublebarpipevar\textdoublebarpipe

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21415 \let\textcrg\textgslash
 21416 \let\textdblig\textPUdblig
 21417 \let\textqplig\textPUqplig
 21418 \let\textcentoldstyle\textslashc
 21419 \let\textbarc\textslashc
 21420 \let\inva\textturna
 21421 \let\vara\textscripta
 21422 \let\invscripta\textturnscripta
 21423 \let\rotvara\textturnscripta
 21424 \let\hookb\texthtb
 21425 \let\hausab\texthtb
 21426 \let\varopeno\textopeno
 21427 \let\curlyc\textctc
 21428 \let\taild\textrtaild
 21429 \let\hookd\texthtd
 21430 \let\hausad\texthtd
 21431 \let\er\textrhooschwa
 21432 \let\epsi\textniepsilon
 21433 \let\hookrevespsilon\textrhoosrevespsilon
 21434 \let\closedrevespsilon\textcloserevespsilon
 21435 \let\barj\textbardotlessj
 21436 \let\hookg\texthtg
 21437 \let\varg\textscriptg
 21438 \let\vod\textipagamma
 21439 \let\invh\textturnh
 21440 \let\udesc\textturnh
 21441 \let\hookh\texthth
 21442 \let\voicedh\texthth
 21443 \let\hookheng\texththeng
 21444 \let\ibar\textbari
 21445 \let\vari\textniota
 21446 \let\tildel\textltilde
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21716 </psdextra>

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