

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

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

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

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

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

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

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

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

Source code documentation:

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

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

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

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3 File hycheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

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

```

40 }%
41 }

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

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

\Hy@SetCatcodes

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

\Hy@RestoreCatcodes

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

```

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

```

```

231 \Hy@SetCatcodes

```

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

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

```

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

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

255 \RequirePackage{infwarerr}[2010/04/08]
256 \RequirePackage{keyval}[1997/11/10]
257 \RequirePackage{kvsetkeys}[2007/09/29]
258 \RequirePackage{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@stoppedearly
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@unicodedefalse
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 unmatchd `\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@AppendItalcorr\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@stoppedeasilytrue
4329   \expandafter\Hy@MaybeStopNow
4330 \fi
4331 \Hy@stoppedeasilyfalse

```

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 \@ifpackageloaded{tex4ht}{%
4337   \@ifpackagewith{hyperref}{tex4ht}{%
4338     }{%
4339       \PassOptionsToPackage{tex4ht}{hyperref}%
4340     }%
4341   }{}
4342   \ltx@IfUndefined{HCode}{%
4343     }{%
4344       \@ifpackagewith{hyperref}{tex4ht}{%
4345         }{%

```

```

4346 \PassOptionsToPackage{tex4ht}{hyperref}%
4347 }%
4348 }

```

```

4349 \let\ReadBookmarks\relax
4350 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4351 \def\Hy@xspace@end{}
4352 \ltx@ifundefined{xspaceaddexceptions}{%
4353 \Hy@AtBeginDocument{%
4354 \ltx@ifundefined{xspaceaddexceptions}{%
4355 }{%
4356 \def\Hy@xspace@end{%
4357 \ltx@gobble{end for xspace}%
4358 }%
4359 \xspaceaddexceptions{%
4360 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4361 }%
4362 }%
4363 }%
4364 }{%
4365 \def\Hy@xspace@end{%
4366 \ltx@gobble{end for xspace}%
4367 }%
4368 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4369 }

```

15.2 Option draft

```

4370 \Hy@AtBeginDocument{%
4371 \ifHy@draft
4372 \let\hyper@@anchor\@gobble
4373 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4374 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4375 \def\hyper@anchorend{\Hy@xspace@end}%
4376 \let\hyper@linkstart\@gobbletwo
4377 \def\hyper@linkend{\Hy@xspace@end}%
4378 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4379 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4380 \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4381 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4382 \let\PDF@SetupDoc\@empty
4383 \let\PDF@FinishDoc\@empty
4384 \let\@fifthoffive\@secondoftwo
4385 \let\@secondoffive\@secondoftwo
4386 \let\ReadBookmarks\relax
4387 \let\WriteBookmarks\relax
4388 \Hy@WarningNoLine{Draft mode on}%
4389 \fi
4390 \Hy@DisableOption{draft}%
4391 \Hy@DisableOption{nolinks}%
4392 \Hy@DisableOption{final}%
4393 }

```

15.3 PDF/A

```

4394 \Hy@DisableOption{pdfa}
4395 \ifHy@pdfa
4396   \kvsetkeys{Hyp}{pdfversion=1.4}%
4397   \Hy@DisableOption{pdfversion}%
4398   \def\Hy@Acrobatmenu#1#2{%
4399     \leavevmode
4400     \begingroup
4401     \edef\x{#1}%
4402     \@onelevel@sanitize\x
4403     \ifx\x\Hy@NextPage
4404       \let\y=Y%
4405     \else
4406       \ifx\x\Hy@PrevPage
4407         \let\y=Y%
4408       \else
4409         \ifx\x\Hy@FirstPage
4410           \let\y=Y%
4411         \else
4412           \ifx\x\Hy@LastPage
4413             \let\y=Y%
4414           \else
4415             \let\y=N%
4416           \fi
4417         \fi
4418       \fi
4419     \fi
4420     \expandafter\endgroup
4421     \ifx\y Y%
4422     \else
4423       \Hy@Error{%
4424         PDF/A: Named action ‘#1’ is not permitted%
4425       }\@ehc
4426       {#2}%
4427       \expandafter\@gobble
4428     \fi
4429   }%
4430   \def\Hy@temp#1{%
4431     \expandafter\def\csname Hy@#1\endcsname{#1}%
4432     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4433   }%
4434   \Hy@temp{NextPage}%
4435   \Hy@temp{PrevPage}%
4436   \Hy@temp{FirstPage}%
4437   \Hy@temp{LastPage}%
4438 \else
4439   \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4440 \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.

```

4441 \Hy@nextfalse
4442 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}
4443 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}
4444 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}

```

```

4445 \ifHy@next
4446 \let\texttilde\~%
4447 \fi

4448 \def\Hy@wrapper@babel#1#2{%
4449 \begingroup
4450 \Hy@safe@activetrue
4451 \set@display@protect
4452 \edef\x{#2}%
4453 \@onelevel@sanitize\x
4454 \toks@{#1}%
4455 \edef\x{\endgroup\the\toks@\x}}%
4456 \x
4457 }

4458 \def\Hy@WrapperDef#1{%
4459 \begingroup
4460 \escapechar=\m@ne
4461 \xdef\Hy@gtemp{%
4462 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4463 }%
4464 \endgroup
4465 \edef#1{%
4466 \noexpand\Hy@wrapper@babel
4467 \expandafter\noexpand\Hy@gtemp
4468 }%
4469 \expandafter\def\Hy@gtemp
4470 }

4471 \ifHy@hyperfigures
4472 \Hy@Info{Hyper figures ON}%
4473 \else
4474 \Hy@Info{Hyper figures OFF}%
4475 \fi

4476 \ifHy@nesting
4477 \Hy@Info{Link nesting ON}%
4478 \else
4479 \Hy@Info{Link nesting OFF}%
4480 \fi

4481 \ifHy@hyperindex
4482 \Hy@Info{Hyper index ON}%
4483 \else
4484 \Hy@Info{Hyper index OFF}%
4485 \fi

4486 \ifHy@plainpages
4487 \Hy@Info{Plain pages ON}%
4488 \else
4489 \Hy@Info{Plain pages OFF}%
4490 \fi

4491 \ifHy@backref
4492 \Hy@Info{Backreferencing ON}%
4493 \else
4494 \Hy@Info{Backreferencing OFF}%
4495 \fi

4496 \ifHy@typexml
4497 \Hy@AtEndOfPackage{%
4498 \RequirePackage{color}%
4499 \RequirePackage{nameref}[2012/07/28]%
4500 }%
4501 \fi

```

```

4502 \Hy@DisableOption{typexml}
4503 \ifHy@implicit
4504   \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4505 \else
4506   \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4507   \def\MaybeStopEarly{%
4508     \Hy@Message{Stopped early}%
4509     \Hy@AtBeginDocument{%
4510       \PDF@FinishDoc
4511       \gdef\PDF@FinishDoc{}}%
4512   }%
4513   \endinput
4514 }%
4515 \Hy@AtBeginDocument{%
4516   \let\autoref\ref
4517   \let\autopageref\pageref
4518   \ifx\@pdfpagemode\@empty
4519     \gdef\@pdfpagemode{UseNone}%
4520   \fi
4521   \global\Hy@backreffalse
4522 }%
4523 \Hy@AtEndOfPackage{%
4524   \global\let\ReadBookmarks\relax
4525   \global\let\WriteBookmarks\relax
4526 }%
4527 \fi
4528 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4529 \Hy@AtEndOfPackage{%
4530   \@ifpackageloaded{tex4ht}{%
4531     \def\Hy@driver{htex4ht}%
4532     \Hy@texhttrue
4533   }{}%

```

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.

```

4534   \ifx\Hy@driver\@empty
4535   \else
4536     \def\Hy@temp{hpdftex}%
4537     \ifpdf
4538       \ifx\Hy@driver\Hy@temp
4539       \else
4540         \Hy@WarningNoLine{%
4541           Wrong driver ‘\Hy@driver.def’;\MessageBreak
4542           pdfTeX is running in PDF mode.\MessageBreak
4543           Forcing driver ‘\Hy@temp.def’%
4544         }%
4545         \let\Hy@driver\Hy@temp
4546       \fi
4547     \else
4548       \ifx\Hy@driver\Hy@temp
4549       \Hy@WarningNoLine{%
4550         Wrong driver ‘\Hy@driver.def’;\MessageBreak
4551         pdfTeX is not running in PDF mode.\MessageBreak
4552         Using default driver%
4553       }%

```

```

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

```

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

```

4600 \let\HyOpt@DriverType\ltx@empty
4601 \ifx\HyOpt@CustomDriver\ltx@empty
4602   \ifx\Hy@driver\@empty
4603     \def\HyOpt@DriverType{ (autodetected)}%
4604     \providecommand*{\Hy@defaultdriver}{hypertex}%
4605     \ifpdf
4606       \def\Hy@driver{hpdfetex}%
4607     \else
4608       \ifxetex
4609         \def\Hy@driver{hxtex}%

```

```

4610 \else
4611 \ifvtexhtml
4612 \def\Hy@driver{hvtexhtm}%
4613 \def\MaybeStopEarly{%
4614 \Hy@Message{Stopped early}%
4615 \Hy@AtBeginDocument{%
4616 \PDF@FinishDoc
4617 \gdef\PDF@FinishDoc{}}%
4618 }%
4619 \endinput
4620 }%
4621 \else
4622 \ifvtexpdf
4623 \def\Hy@driver{hvtex}%
4624 \else
4625 \ifvtexps
4626 \def\Hy@driver{hvtex}%
4627 \else
4628 \ifx\HyOpt@DriverFallback\ltx@empty
4629 \let\Hy@driver\Hy@defaultdriver
4630 \def\HyOpt@DriverType{(default)}%
4631 \else
4632 \begingroup
4633 \toks@{\expandafter{\HyOpt@DriverFallback}%
4634 \edef\x{\endgroup
4635 \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4636 }%
4637 \x
4638 \ifx\Hy@driver\ltx@empty
4639 \let\Hy@driver\Hy@defaultdriver
4640 \def\HyOpt@DriverType{(default)}%
4641 \else
4642 \def\HyOpt@DriverType{(fallback)}%
4643 \fi
4644 \fi
4645 \fi
4646 \fi
4647 \fi
4648 \fi
4649 \fi
4650 \ifx\Hy@driver\Hy@defaultdriver
4651 \def\Hy@temp{hdviwind}%
4652 \ifx\Hy@temp\Hy@driver
4653 \kvsetkeys{Hyp}{colorlinks}%
4654 \PassOptionsToPackage{dviwindo}{color}%
4655 \fi
4656 \fi
4657 \fi
4658 \else
4659 \def\HyOpt@DriverType{(custom)}%
4660 \let\Hy@driver\HyOpt@CustomDriver
4661 \fi
4662 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4663 \chardef\Hy@VersionChecked=0 %
4664 \input{\Hy@driver.def}%
4665 \ifcase\Hy@VersionChecked
4666 \Hy@VersionCheck{\Hy@driver.def}%

```



```

4667 \fi
4668 \let\@unprocessedoptions\relax
4669 \Hy@RestoreCatcodes
4670 \Hy@DisableOption{tex4ht}%
4671 \Hy@DisableOption{pdftex}%
4672 \Hy@DisableOption{nativepdf}%
4673 \Hy@DisableOption{dvipdfm}%
4674 \Hy@DisableOption{dvipdfmx}%
4675 \Hy@DisableOption{dvipdfmx-outline-open}%
4676 \Hy@DisableOption{pdfmark}%
4677 \Hy@DisableOption{dvips}%
4678 \Hy@DisableOption{hypertex}%
4679 \Hy@DisableOption{vtex}%
4680 \Hy@DisableOption{vtexpdfmark}%
4681 \Hy@DisableOption{dviwindo}%
4682 \Hy@DisableOption{dvipsone}%
4683 \Hy@DisableOption{textures}%
4684 \Hy@DisableOption{latex2html}%
4685 \Hy@DisableOption{ps2pdf}%
4686 \Hy@DisableOption{xetex}%
4687 \Hy@DisableOption{driverfallback}%
4688 \Hy@DisableOption{customdriver}%
4689 \Hy@DisableOption{pdfversion}%
4690 }

```

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.

```

4691 \newif\ifHy@DvipdfmxOutlineOpen
4692 \ifxetex
4693   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4694   \else
4695     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4696     \Hy@DvipdfmxOutlineOpenttrue
4697   \fi
4698 \fi
4699 \begingroup\expandafter\expandafter\expandafter\endgroup
4700 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4701 \else
4702   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4703     \Hy@DvipdfmxOutlineOpenttrue
4704   \fi
4705 \fi

```

15.4.2 Bookmarks

```

4706 \def\WriteBookmarks{0}
4707 \def\@bookmarkopenstatus#1{%
4708   \ifHy@bookmarksopen

```

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

```

4709   \ifnum#1<\expandafter\@firstofone\expandafter
4710     {\number\@bookmarkopenlevel} % explicit space
4711   \else
4712     -%
4713   \fi
4714 \else
4715   -%

```

```

4716 \fi
4717 }
4718 \ifHy@bookmarks
4719 \Hy@Info{Bookmarks ON}%
4720 \ifx\@pdfpagemode\@empty
4721 \def\@pdfpagemode{UseOutlines}%
4722 \fi
4723 \else
4724 \let\@bookmarkopenstatus\ltx@gobble
4725 \Hy@Info{Bookmarks OFF}%
4726 \Hy@AtEndOfPackage{%
4727 \global\let\ReadBookmarks\relax
4728 \global\let\WriteBookmarks\relax
4729 }%
4730 \ifx\@pdfpagemode\@empty
4731 \def\@pdfpagemode{UseNone}%
4732 \fi
4733 \fi
4734 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4735 \def\Hy@CatcodeWrapper#1{%
4736 \let\Hy@endWrap\ltx@empty
4737 \def\TMP@EnsureCode##1##2{%
4738 \edef\Hy@endWrap{%
4739 \Hy@endWrap
4740 \catcode##1 \the\catcode##1\relax
4741 }%
4742 \catcode##1 ##2\relax
4743 }%
4744 \TMP@EnsureCode{10}{12}% ^^J
4745 \TMP@EnsureCode{33}{12}% !
4746 \TMP@EnsureCode{34}{12}% "
4747 \TMP@EnsureCode{36}{3}% $ (math)
4748 \TMP@EnsureCode{38}{4}% & (alignment)
4749 \TMP@EnsureCode{39}{12}% '
4750 \TMP@EnsureCode{40}{12}% (
4751 \TMP@EnsureCode{41}{12}% )
4752 \TMP@EnsureCode{42}{12}% *
4753 \TMP@EnsureCode{43}{12}% +
4754 \TMP@EnsureCode{44}{12}% ,
4755 \TMP@EnsureCode{45}{12}% -
4756 \TMP@EnsureCode{46}{12}% .
4757 \TMP@EnsureCode{47}{12}% /
4758 \TMP@EnsureCode{58}{12}% :
4759 \TMP@EnsureCode{59}{12}% ;
4760 \TMP@EnsureCode{60}{12}% <
4761 \TMP@EnsureCode{61}{12}% =
4762 \TMP@EnsureCode{62}{12}% >
4763 \TMP@EnsureCode{63}{12}% ?
4764 \TMP@EnsureCode{91}{12}% [
4765 \TMP@EnsureCode{93}{12}% ]
4766 \TMP@EnsureCode{94}{7}% ^ (superscript)
4767 \TMP@EnsureCode{95}{8}% _ (subscript)
4768 \TMP@EnsureCode{96}{12}% '
4769 \TMP@EnsureCode{124}{12}% |
4770 \TMP@EnsureCode{126}{13}% ~ (active)
4771 #1\relax

```

```

4772 \Hy@EndWrap
4773 }

\HyColor@UseColor expects a macro as argument. It contains the color spec-
ification.
4774 \Hy@AtBeginDocument{%
4775   \ifHy@ocgcolorlinks
4776     \kvsetkeys{Hyp}{colorlinks}%
4777     \ifHy@pdfa
4778       \Hy@Warning{%
4779         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4780         using 'colorlinks' instead of 'ocgcolorlinks'%
4781       }%
4782     \Hy@ocgcolorlinksfalse
4783   \fi
4784 \fi
4785 \ifHy@ocgcolorlinks
4786 \else
4787   \Hy@DisableOption{ocgcolorlinks}%
4788 \fi
4789 \ifHy@colorlinks
4790   \def\@pdfborder{0 0 0}%
4791   \let\@pdfborderstyle\@empty
4792   \ifHy@typexml
4793   \else
4794     \Hy@CatcodeWrapper{%
4795       \RequirePackage{color}%
4796     }%
4797   \fi
4798   \def\Hy@colorlink#1{%
4799     \begingroup
4800     \HyColor@UseColor#1%
4801   }%
4802   \def\Hy@endcolorlink{\endgroup}%
4803   \Hy@Info{Link coloring ON}%
4804 \else
4805   \ifHy@frenchlinks
4806     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4807     \def\Hy@endcolorlink{\endgroup}%
4808     \Hy@Info{French linking ON}%
4809   \else
for grouping consistency:
4810     \def\Hy@colorlink#1{\begingroup}%
4811     \def\Hy@endcolorlink{\endgroup}%
4812     \Hy@Info{Link coloring OFF}%
4813   \fi
4814 \fi
4815 \Hy@DisableOption{colorlinks}%
4816 \Hy@DisableOption{frenchlinks}%
4817 \ifHy@texht
4818   \long\def\@firstoffive#1#2#3#4#5{#1}%
4819   \long\def\@secondoffive#1#2#3#4#5{#2}%
4820   \long\def\@thirdoffive#1#2#3#4#5{#3}%
4821   \long\def\@fourthoffive#1#2#3#4#5{#4}%
4822   \long\def\@fifthoffive#1#2#3#4#5{#5}%
4823   \providecommand*\@safe@activetrue{}%
4824   \providecommand*\@safe@activesfalse{}%
4825   \def\T@ref#1{%

```

```

4826 \Hy@safe@activetrue
4827 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4828 \Hy@safe@activesfalse
4829 }%
4830 \def\T@pageref#1{%
4831 \Hy@safe@activetrue
4832 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4833 \Hy@safe@activesfalse
4834 }%
4835 \else
4836 \ifHy@typexml
4837 \else
4838 \Hy@CatcodeWrapper{%
4839 \RequirePackage{nameref}[2012/07/28]%
4840 }%
4841 \fi
4842 \fi
4843 \DeclareRobustCommand\ref{%
4844 \@ifstar\@crefstar\T@ref
4845 }%
4846 \DeclareRobustCommand\pageref{%
4847 \@ifstar\@pagerefstar\T@pageref
4848 }%
4849 % \@ifclassloaded{memoir}{%
4850 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4851 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4852 % }%
4853 % }\ltx@secondoftwo
4854 % {%
4855 % \DeclareRobustCommand*{\nameref}{%
4856 % \@ifstar\@mem@titlerefno link\@mem@titleref
4857 % }%
4858 % }{%
4859 \DeclareRobustCommand*{\nameref}{%
4860 \@ifstar\@namerefstar\T@nameref
4861 }%
4862 % }%
4863 }
4864 \Hy@AtBeginDocument{%
4865 \ifHy@texht
4866 \else
4867 \Hy@CatcodeWrapper\ReadBookmarks
4868 \fi
4869 }
4870 \ifHy@backref
4871 \RequirePackage{backref}%
4872 \else
4873 \let\Hy@backout\@gobble
4874 \fi
4875 \Hy@DisableOption{backref}
4876 \Hy@DisableOption{pagebackref}
4877 \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`.

```

4878 \begingroup
4879 \endlinechar=-1 %
4880 \catcode'\^^A=14 %
4881 \catcode'\^^M\active
4882 \catcode'\%\active
4883 \catcode'\#\active
4884 \catcode'\_\active
4885 \catcode'\$\active
4886 \catcode'\&\active
4887 \gdef\hyper@normalise{^^A
4888   \begingroup
4889   \catcode'\^^M\active
4890   \def^^M{ }^^A
4891   \catcode'\%\active
4892   \let%\@percentchar
4893   \let%\@percentchar
4894   \catcode'\#\active
4895   \def#{\hyper@hash}^^A
4896   \def\#{\hyper@hash}^^A
4897   \@makeother\&^^A
4898   \edef&{\string&}^^A
4899   \edef\&{\string&}^^A
4900   \edef\textunderscore{\string_}^^A
4901   \let\_ \textunderscore
4902   \catcode'\_\active
4903   \let\_ \textunderscore
4904   \let~\hyper@tilde
4905   \let\~\hyper@tilde
4906   \let\textasciitilde\hyper@tilde
4907   \let\\\@backslashchar
4908   \edef$\{ \string$ }^^A
4909   \Hy@safe@activestrue
4910   \hyper@n@rmalise
4911 }^^A
4912 \catcode'\#=6 ^^A
4913 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4914 \gdef\hyper@n@rmalise#1#2{^^A
4915   \def\Hy@tempa{#2}^^A
4916   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4917     \ltx@ReturnAfterElseFi{^^A
4918       \hyper@@normalise{#1}^^A
4919     }^^A
4920   \else
4921     \ltx@ReturnAfterFi{^^A
4922       \hyper@@normalise{#1}{#2}^^A
4923     }^^A
4924   \fi
4925 }^^A
4926 \gdef\hyper@@normalise#1#2{^^A
4927   \edef\Hy@tempa{^^A
4928     \endgroup
4929     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A

```

```

4930 }^^A
4931 \Hy@tempa
4932 }^^A
4933 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4934 #1^^A
4935 \ifx\limits#2\limits
4936 \else
4937 \ltx@ReturnAfterFi{^^A
4938 \Hy@RemovePercentCr #2\@nil
4939 }^^A
4940 \fi
4941 }^^A
4942 \endgroup
4943 \providecommand*\hyper@chars{%
4944 \let\#\hyper@hash
4945 \let\%\@percentchar
4946 \Hy@safe@activetrue
4947 }

4948 \def\hyperlink#1#2{%
4949 \hyper@@link@{#1}{#2}%
4950 }

4951 \def\Hy@VerboseLinkStart#1#2{%
4952 \ifHy@verbose
4953 \begingroup
4954 \Hy@safe@activetrue
4955 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4956 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4957 \xdef\Hy@VerboseGlobalTemp{%
4958 \Hy@VerboseGlobalTemp, %
4959 line \the\inputlineno
4960 }%
4961 \endgroup
4962 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4963 \@onelevel@sanitize\Hy@VerboseLinkInfo
4964 \fi
4965 }

4966 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4967 \def\Hy@VerboseLinkStop{%
4968 \ifHy@verbose
4969 \begingroup
4970 \edef\x{\endgroup
4971 \write\m@ne{%
4972 Package 'hyperref' Info: %
4973 End of reference \Hy@VerboseLinkInfo.%
4974 }%
4975 }%
4976 \x
4977 \fi
4978 }

4979 \def\Hy@VerboseAnchor#1{%
4980 \ifHy@verbose
4981 \begingroup
4982 \Hy@safe@activetrue
4983 \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4984 \endgroup
4985 \fi

```

```

4986 }
4987 \def\Hy@AllowHyphens{%
4988   \relax
4989   \ifhmode
4990     \penalty\@M
4991     \hskip\z@skip
4992   \fi
4993 }
4994 \DeclareRobustCommand*{\href}[1][]{%
4995   \begingroup
4996   \setkeys{href}{#1}%
4997   \@ifnextchar\bgrouph\Hy@href{\hyper@normalise\href@}%
4998 }
4999 \def\Hy@href#{%
5000   \hyper@normalise\href@
5001 }
5002 \begingroup
5003 \catcode'\$=6 %
5004 \catcode'\#=12 %
5005 \gdef\href$1{\expandafter\href@split$1##\}%
5006 \gdef\href@split$1#$2#$3\\$4{%
5007   \hyper@@link{$1}{$2}{$3}{$4}%
5008 }
5009 }%
5010 \endgroup

```

Option ‘page’.

```

5011 \define@key{href}{page}{%
5012   \def\Hy@href@page{#1}%
5013 }
5014 \let\Hy@href@page\@empty
5015 \newcount\c@Hy@tempcnt
5016 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5017 \def\Hy@MakeRemoteAction{%
5018   \ifx\Hy@href@page\@empty
5019     \def\Hy@href@page{0}%
5020   \else
5021     \setcounter{Hy@tempcnt}{\Hy@href@page}%
5022     \ifnum\c@Hy@tempcnt<\@ne
5023       \Hy@Warning{%
5024         Invalid page number (\theHy@tempcnt)\MessageBreak
5025         for remote PDF file.\MessageBreak
5026         Using page 1%
5027       }%
5028       \def\Hy@href@page{0}%
5029     \else
5030       \global\advance\c@Hy@tempcnt\m@ne
5031       \edef\Hy@href@page{\theHy@tempcnt}%
5032     \fi
5033   \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.

```

5034 \ifx\Hy@href@nextactionraw\@empty
5035 \else
5036   \Hy@pdfnewwindowsettrue
5037   \Hy@pdfnewwindowtrue

```

```

5038 \fi
5039 }

```

Option ‘pdfremotestartview’.

```

5040 \define@key{href}{pdfremotestartview}{%
5041   \setkeys{Hyp}{pdfremotestartview={#1}}}%
5042 }

```

Option ‘pdfnewwindow’.

```

5043 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5044 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5045 \newif\ifHy@href@ismap
5046 \define@key{href}{ismap}[true]{%
5047   \ltx@ifundefined{Hy@href@ismap#1}{%
5048     \Hy@Error{%
5049       Invalid value (#1) for key ‘ismap’.\MessageBreak
5050       Permitted values are ‘true’ or ‘false’.\MessageBreak
5051       Ignoring ‘ismap’%
5052     } \@ehc
5053   }{%
5054     \csname Hy@href@ismap#1\endcsname
5055   }%
5056 }

```

Option ‘nextactionraw’.

```

5057 \let\Hy@href@nextactionraw\@empty
5058 \define@key{href}{nextactionraw}{%
5059   \edef\Hy@href@nextactionraw{#1}%
5060   \ifx\Hy@href@nextactionraw\@empty
5061     \else
5062       \Hy@Match\Hy@href@nextactionraw{%
5063         ~(\HyPat@ObjRef/|<<./S[ /.+>>|%
5064         \[( ?\HyPat@ObjRef/|<<./S[ /.+>>)+ ?)]$%
5065       }{%
5066         \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
5067           \Hy@href@nextactionraw\MessageBreak
5068           The action is discarded%
5069       }%
5070     }%
5071   \ifx\Hy@href@nextactionraw\@empty
5072     \else
5073       \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5074   \fi
5075 \fi
5076 }
5077 \def\HyPat@ObjRef/{.+}

```

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

```

5078 \RequirePackage{url}
5079 \let\HyOrg@url\url
5080 \def\Hurl{\begingroup \Url}
5081 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
5082 \def\nolinkurl@#1{\Hurl{#1}}
5083 \DeclareRobustCommand*\url{\hyper@normalise:url@}
5084 \def:url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
5085 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5086 \providecommand\hyper@image[2]{#2}

```



```

5087 \def\hypertarget#1#2{%
5088   \ifHy@nesting
5089     \hyper@@anchor{#1}{#2}%
5090   \else
5091     \hyper@@anchor{#1}{\relax}#2%
5092   \fi
5093 }

```

`\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.

```

5094 \DeclareRobustCommand*\hyperref{%
5095   \ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5096 }
5097 \def\Hy@babelnormalise#1[#2]{%
5098   \begingroup
5099     \Hy@safe@activetrue
5100     \edef\Hy@tempa{%
5101       \endgroup
5102       \noexpand#1[{#2}]%
5103     }%
5104   \Hy@tempa
5105 }
5106 \def\@hyperref{\hyper@normalise\@hyperref}
5107 \def\@hyperref#1#2#3{%
5108   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%
5109   \expandafter\tryhyper@link\ref@one\\{#1}%
5110 }
5111 \def\tryhyper@link#1\\#2{%
5112   \hyper@@link{#2}{#1}%
5113 }
5114 \def\hyperdef{\ifnextchar{\label@hyperdef}\@hyperdef}
5115 \def\@hyperdef#1#2#3{%, category, name, text
5116   \ifx\\#1\\%
5117     \def\Hy@AnchorName{#2}%
5118   \else
5119     \def\Hy@AnchorName{#1.#2}%
5120   \fi
5121   \ifHy@nesting
5122     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5123   \else
5124     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5125   \fi
5126 }

```

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

```

5127 \def\label@hyperref[#1]{%
5128   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5129 }%
5130 \def\label@@hyperref#1#2#3{%
5131   \ifx#1\relax
5132     \protect\G@refundefinedtrue

```

```

5133 \latex@warning{%
5134   Hyper reference ‘#2’ on page \thepage \space undefined%
5135 }%
5136 \begingroup
5137   #3%
5138 \endgroup
5139 \else
5140   \hyper@@link{\expandafter\@fifthoffive#1}%
5141   {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5142 \fi
5143 }
5144 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5145                               % anchor text
5146   \@bsphack
5147   \ifx\\#2\\%
5148     \def\Hy@AnchorName{#3}%
5149   \else
5150     \def\Hy@AnchorName{#2.#3}%
5151   \fi
5152   \if@filesw
5153     \protected@write\@auxout{}{%
5154       \string\newlabel{#1}{\Hy@AnchorName}{#3}}%
5155   }%
5156 \fi
5157 \@esphack
5158 \ifHy@nesting
5159   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5160 \else
5161   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#4}%
5162 \fi
5163 }

```

16.1 Link box support for XeTeX

```

5164 \newdimen\XeTeXLinkMargin
5165 \setlength{\XeTeXLinkMargin}{2pt}
5166 \ifxetex
5167   \font\XeTeXLink@font=pzdr at 1sp\relax
5168   \newcommand*\XeTeXLink@space{%
5169     \begingroup
5170       \XeTeXLink@font
5171       \@xxxii
5172     \endgroup
5173   }%
5174   \newcommand{\XeTeXLinkBox}[1]{%
5175     \begingroup
5176       \leavevmode
5177       \sbox\z@{#1}%
5178     \begingroup
5179       \dimen@=\dp\z@
5180       \advance\dimen@\XeTeXLinkMargin
5181       \setbox\tw@=\llap{%
5182         \hb@xt@\XeTeXLinkMargin{%
5183           \lower\dimen@\hbox{\XeTeXLink@space}%
5184         \hss
5185       }%
5186     }%

```

```

5187     \dp\tw@=\dp\z@
5188     \ht\tw@=\ht\z@
5189     \copy\tw@
5190   \endgroup
5191   \copy\z@
5192   \dimen@=\ht\z@
5193   \advance\dimen@\XeTeXLinkMargin
5194   \setbox\tw@=\rlap{%
5195     \hb@xt@\XeTeXLinkMargin{%
5196       \hss
5197       \raise\dimen@\hbox{\XeTeXLink@space}%
5198     }%
5199   }%
5200   \dp\tw@=\dp\z@
5201   \ht\tw@=\ht\z@
5202   \copy\tw@
5203 \endgroup
5204 }%
5205 \else
5206   \newcommand*\XeTeXLinkBox[1]{%
5207     \begingroup
5208     \leavevmode
5209     \sbox\z@{#1}%
5210     \copy\z@
5211   \endgroup
5212   }%
5213 \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.

```

5214 \def\hyper@link{\let\Hy@reserved@a\relax
5215   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5216 }
5217 % #1: type
5218 % #2: URL
5219 % #3: destination name
5220 % #4: text
5221 \def\hyper@link@[#1]#2#3#4{%
5222   \ltx@ifempty{#4}{% link text
5223     \Hy@Warning{Suppressing empty link}%
5224   }{%
5225     \begingroup
5226     \protected@edef\Hy@tempa{#2}%
5227     \edef\Hy@tempb{#3}%
5228     \ifx\Hy@tempa\ltx@empty
5229       \toks@{%
5230         \endgroup
5231         \hyper@link{#1}%
5232       }%
5233     \else
5234       \toks@{%
5235         \endgroup
5236         \expandafter\hyper@readexternallink#2\{\{#1}%

```

```

5237     }%
5238     \fi
5239     \Hy@safe@activetrue
5240     \Hy@safe@activesfalse
5241     \toks@\expandafter{%
5242       \the\expandafter\toks@
5243       \expandafter{\Hy@tempb}{#4}%
5244     }%
5245     \the\toks@
5246   }%
5247 }

```

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.

```

5248 \def\hyper@readexternallink#1\\#2#3#4{%
5249   \begingroup
5250   \let\\ \relax
5251   \expandafter\endgroup
5252   \expandafter\@hyper@@readexternallink#1\\{#2}{#3}{#4}%
5253 }
5254 \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.

```

5255   \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5256 }

```

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

```

5257 \def\@pdftempwordfile{file}%
5258 \def\@pdftempwordrun{run}%
5259 \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:**

```

5260   \ifx\\#6\\%
5261     \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5262   \else
5263     \ifx\\#4\\%
5264       \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5265     \else

```

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

```

5266 \def\@pdftempa{#4}%
5267 \ifx\@pdftempa\@pdftempwordfile
5268 \@hyper@linkfile#7\{\#3}{\#2}{\#7}%
5269 \else

```

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

```

5270 \ifx\@pdftempa\@pdftempwordrun
5271 \ifHy@pdfa
5272 \Hy@Error{%
5273 PDF/A: Launch action is prohibited%
5274 }\@ehc
5275 \begingroup
5276 \leavevmode
5277 #2%
5278 \endgroup
5279 \else
5280 \@hyper@launch#7\{\#3}{\#2}%
5281 \fi
5282 \else

```

otherwise its a URL

```

5283 \hyper@linkurl{\#3}{\#7\ifx\#2\else\hyper@hash#2\fi}%
5284 \fi
5285 \fi
5286 \fi
5287 \fi
5288 }

```

By default, turn run: into file:

```

5289 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5290 \hyper@linkurl{\#2}{%
5291 \Hy@linkfileprefix
5292 #1%
5293 \ifx\#3\%
5294 \else
5295 \hyper@hash
5296 #3%
5297 \fi
5298 }%
5299 }

```

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

```

5300 \def\@hyper@linkfile file:#1\#2#3#4{%
5301 %file url,link string, name, original uri
5302 \filename@parse{\#1}%
5303 \ifx\filename@ext\relax
5304 \edef\filename@ext{\XR@ext}%
5305 \fi
5306 \def\use@file{\filename@area\filename@base.\filename@ext}%
5307 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5308 \hyper@linkfile{\#2}{\use@file}{\#3}%
5309 }{%
5310 \ifx\@baseurl\empty
5311 \hyper@linkurl{\#2}{%
5312 #4\ifx\#3\else\hyper@hash#3\fi
5313 }%
5314 \else

```

```

5315 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
5316 \fi
5317 }%
5318 }

5319 \def\Hy@IfStringEndsWith#1#2{%
5320 \begingroup
5321 \edef\x{#1}%
5322 \@onelevel@sanitize\x
5323 \edef\x{.\x}%
5324 \edef\y{#2}%
5325 \@onelevel@sanitize\y
5326 \edef\y{.\y}%
5327 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5328 \endgroup
5329 \ifx\relax##2\relax
5330 \expandafter\ltx@secondoftwo
5331 \else
5332 \expandafter\ltx@firstoftwo
5333 \fi
5334 }%
5335 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5336 }

5337 \def\Hy@StringLocalhost{localhost}
5338 \@onelevel@sanitize\Hy@StringLocalhost
5339 \def\Hy@CleanupFile#1{%
5340 \edef#1{#1}%
5341 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5342 }
5343 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5344 \begingroup
5345 \toks@{\endgroup}%
5346 \def\x{#1}%
5347 \ifx\x@empty
5348 \def\x{#2}%
5349 \ifx\x@empty
5350 \toks@{\endgroup\def#5{/#3}}%
5351 \else
5352 \@onelevel@sanitize\x
5353 \ifx\x\Hy@StringLocalhost
5354 \toks@{\endgroup\def#5{/#3}}%
5355 \fi
5356 \fi
5357 \fi
5358 \the\toks@
5359 }

```

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.

```

5360 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5361 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5362 \ifx\\#1\\%

```

```

5363   #2\Hy@Warning{Ignoring empty anchor}%
5364 \else
5365   \def\anchor@spot{#2#3}%
5366   \let\put@me@back\@empty
5367   \ifx\relax#2\relax
5368   \else
5369     \ifHy@nesting
5370     \else
5371       \ifcat a\noexpand#2\relax
5372       \else
5373         \ifcat 0\noexpand#2 \relax
5374         \else
5375           \typeout{Anchor start is not alphanumeric %
5376             on input line\the\inputlineno%
5377           }%
5378           \let\anchor@spot\@empty
5379           \def\put@me@back{#2#3}%
5380         \fi
5381       \fi
5382     \fi
5383   \fi
5384   \ifHy@activeanchor
5385     \anchor@spot
5386   \else
5387     \hyper@anchor{#1}%
5388   \fi
5389   \expandafter\put@me@back
5390 \fi
5391 \let\anchor@spot\@empty
5392 }
5393 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5394 \ifHy@destlabel

\hyper@newdestlabel

5395 \def\hyper@newdestlabel#1#2{%
5396   \begingroup
5397   \Hy@safe@activetrue
5398   \edef\x{\endgroup
5399     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5400   }%
5401   \x
5402 }%

\hyper@destlabel@hook

5403 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5404 \newcommand*\Hy@DestRename[2]{%
5405   \ltx@ifundefined{HyDL!#1}{%
5406     \begingroup
5407     \Hy@safe@activetrue
5408     \edef\dest@name{#1}%
5409     \edef\label@name{#2}%
5410     \hyper@destlabel@hook

```

```

5411 \Hy@IsNotEmpty{dest@name}{%
5412 \Hy@IsNotEmpty{label@name}{%
5413 \global\expandafter
5414 \let\csname HyDL!#1\endcsname\ltx@empty
5415 \if@filesw
5416 \protected@write\@auxout{}{%
5417 \string\hyper@newdestlabel
5418 {#1}%
5419 {\label@name}%
5420 }%
5421 \fi
5422 }%
5423 }%
5424 \endgroup
5425 }{}%
5426 }%

```

\HyperDestRename

```

5427 \newcommand*{\HyperDestRename}[2]{%
5428 \AtBeginDocument{%
5429 \Hy@DestRename{#1}{#2}%
5430 }%
5431 }%
5432 \AtBeginDocument{%
5433 \let\HyperDestRename\Hy@DestRename
5434 }%

```

\Hy@IsNotEmpty

```

5435 \def\Hy@IsNotEmpty#1{%
5436 \ltx@ifundefined{#1}\ltx@gobble{%
5437 \expandafter\ifx\csname#1\endcsname\ltx@empty
5438 \expandafter\ltx@gobble
5439 \else
5440 \expandafter\ltx@firstofone
5441 \fi
5442 }%
5443 }%

5444 \ltx@GlobalAppendToMacro\label@hook{%
5445 \HyperDestRename\@currentHref\label@name
5446 }%

```

\HyperDestLabelReplace

```

5447 \def\HyperDestLabelReplace#1{%
5448 \ltx@ifundefined{HyDL@#1}{%
5449 #1%
5450 }{%
5451 \csname HyDL@#1\endcsname
5452 }%
5453 }%

```

\HyperDestNameFilter

```

5454 \let\HyperDestNameFilter\HyperDestLabelReplace
5455 \else

```

\hyper@newdestlabel

```

5456 \let\hyper@newdestlabel\ltx@gobbletwo

```


`\HyperDestLabelReplace`

```
5457 \let\HyperDestLabelReplace\ltx@firstofone
```

`\HyperDestRename`

```
@gobbletwo
```

```
5458 \fi
```

```
5459 \Hy@DisableOption{destlabel}
```

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

```
5460 \AddLineBeginAux{%
```

```
5461 \string\providecommand\string\hyper@newdestlabel[2]{}%
```

```
5462 }
```

19 Compatibility with the *L^AT_EX2html* package

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

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

```
5463 \let\htmladdimg\hyperimage
```

```
5464 \def\htmladdnormallink#1#2{\href{#2}{#1}}
```

```
5465 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
```

```
5466 \def\htmlref#1#2{% anchor text, label
```

```
5467 \label@hyperref[{#2}]{#1}%
```

```
5468 }
```

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.

```
5469 \def\@@latextohtmlX{%
```

```
5470 \let\hhyperref\hyperref
```

```
5471 \def\hyperref##1##2##3##4{% anchor text for HTML
```

```
5472 % text to print before label in print
```

```
5473 % label
```

```
5474 % post-label text in print
```

```
5475 ##2\ref{##4}##3%
```

```
5476 }%
```

```
5477 }
```

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.

```
5478 \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

```
5479 \def\HyField@NewFlag#1#2{%
5480   \lowercase{\HyField@NewOption{#2}}%
5481   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5482 }
```

\HyField@NewFlagOnly

```
5483 \def\HyField@NewFlagOnly#1#2{%
5484   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5485 }
```

\HyField@NewOption #1: option name

```
5486 \def\HyField@NewOption#1{%
5487   \expandafter\newif\csname ifFld@#1\endcsname
5488   \define@key{Field}{#1}[true]{%
5489     \lowercase{\Field@boolkey{##1}}{#1}%
5490   }%
5491 }
```

\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

```
5492 \def\HyField@NewBitsetFlag#1#2#3#4{%
5493   \begingroup
5494     \count@=#4\relax
5495     \advance\count@\m@ne
5496     \def\x##1{%
5497       \endgroup
5498       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5499       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5500         \expandafter\edef\csname HyField@#3@##1\endcsname{%
5501           (\number#4) #2%
5502         }%
5503       \else
5504         \expandafter\edef\csname HyField@#3@##1\endcsname{%
5505           \csname HyField@#3@##1\endcsname
5506           /#2%
5507         }%
5508       \fi
5509     }%
5510   \expandafter\x\expandafter{\the\count@}%
5511 }
```

```

\HyField@UseFlag The bit set is HyField@#1
5512 \def\HyField@UseFlag#1#2{%
5513 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5514 }

\HyField@@UseFlag
5515 \def\HyField@@UseFlag#1#2{%
5516 \bitsetSetValue{HyField@#2}{%
5517 \csname HyField@#2@#1\endcsname
5518 }{%
5519 \csname ifFld@#1\endcsname 1\else 0\fi
5520 }%
5521 }

\HyField@SetFlag The bit set is HyField@#1
5522 \def\HyField@SetFlag#1#2{%
5523 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5524 }

\HyField@@SetFlag
5525 \def\HyField@@SetFlag#1#2{%
5526 \bitsetSetValue{HyField@#2}{%
5527 \csname HyField@#2@#1\endcsname
5528 }{1}%
5529 }

\HyField@PrintFlags
5530 \def\HyField@PrintFlags#1#2{%
5531 \ifHy@verbose
5532 \begingroup
5533 \let\Hy@temp\@empty
5534 \let\MessageBreak\relax
5535 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5536 \bitsetGetSetBitList{HyField@#1}\do{%
5537 \edef\Hy@temp{%
5538 \Hy@temp
5539 \csname HyField@#1@\x\endcsname\MessageBreak
5540 }%
5541 }%
5542 \edef\x{\endgroup
5543 \noexpand\Hy@Info{%
5544 Field flags: %
5545 \expandafter\ifx\@car#1\@nil S\else/\fi
5546 #1 %
5547 \bitsetGetDec{HyField@#1} %
5548 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5549 \Hy@temp
5550 for #2%
5551 }%
5552 }\x
5553 \fi
5554 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5555 \HyField@NewFlag{Ff}{ReadOnly}{1}
5556 \HyField@NewFlag{Ff}{Required}{2}
5557 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5558 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5559 \HyField@NewFlag{Ff}{Radio}{16}
5560 \HyField@NewFlag{Ff}{Pushbutton}{17}
5561 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5562 \HyField@NewFlag{Ff}{Multiline}{13}
5563 \HyField@NewFlag{Ff}{Password}{14}
5564 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5565 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5566 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5567 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5568 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5569 \HyField@NewFlag{Ff}{Combo}{18}
5570 \HyField@NewFlag{Ff}{Edit}{19}
5571 \HyField@NewFlag{Ff}{Sort}{20}
5572 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5573 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5574 \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.

```

5575 \newif\iffld@popdown
5576 \define@key{Field}{popdown}[true]{%
5577   \lowercase{\Field@boolkey{#1}}{popdown}%
5578 }

```

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.

```

5579 \HyField@NewFlag{F}{Invisible}{1}
5580 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5581 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5582 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5583 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5584 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5585 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5586 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5587 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5588 \ifHy@pdfa
5589   \def\HyField@PDFAFldWarning#1#2{%
5590     \Hy@Warning{%
5591       PDF/A: Annotation flag ‘#1’ must\MessageBreak
5592       be set to ‘#2’%
5593     }%
5594   }%
5595   \Fld@invisiblefalse
5596   \def\Fld@invisibletrue{%

```

```

5597 \HyField@PDFAFFlagWarning{invisible}{false}%
5598 }%
5599 \Fld@hiddenfalse
5600 \def\Fld@hiddenttrue{%
5601 \HyField@PDFAFFlagWarning{hidden}{false}%
5602 }%
5603 \Fld@printtrue
5604 \def\Fld@printfalse{%
5605 \HyField@PDFAFFlagWarning{print}{true}%
5606 }%
5607 \Fld@nozoomtrue
5608 \def\Fld@nozoomfalse{%
5609 \HyField@PDFAFFlagWarning{nozoom}{true}%
5610 }%
5611 \Fld@norotatetrue
5612 \def\Fld@norotatefalse{%
5613 \HyField@PDFAFFlagWarning{norotate}{true}%
5614 }%
5615 \Fld@noviewfalse
5616 \def\Fld@noviewtrue{%
5617 \HyField@PDFAFFlagWarning{noview}{false}%
5618 }%
5619 \fi

```

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

```

5620 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5621 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5622 \HyField@NewFlag{Submit}{GetMethod}{4}
5623 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5624 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5625 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5626 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5627 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5628 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5629 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5630 \HyField@NewFlag{Submit}{ExclFKey}{12}
5631 \HyField@NewFlag{Submit}{EmbedForm}{14}

5632 \define@key{Field}{export}{%
5633 \lowercase{\def\Hy@temp{#1}}%
5634 \@ifundefined{Fld@export@\Hy@temp}{%
5635 \@onelevel@sanitize\Hy@temp
5636 \Hy@Error{%
5637 Unknown export format '\Hy@temp'.\MessageBreak
5638 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5639 }\@ehc
5640 }{%
5641 \let\Fld@export\Hy@temp
5642 }%
5643 }
5644 \def\Fld@export{fdf}
5645 \@namedef{Fld@export@fdf}{0}%
5646 \@namedef{Fld@export@html}{1}%
5647 \@namedef{Fld@export@xfdf}{2}%
5648 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```
5649 \def\HyField@FlagsSubmit{%
5650   \bitsetReset{HyField@Submit}%
5651   \ifcase\@nameuse{Fld@export@\Fld@export} %
5652     % FDF
5653     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5654     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5655     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5656     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5657     \HyField@UseFlag{Submit}{CanonicalFormat}%
5658     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5659     \HyField@UseFlag{Submit}{ExclFKey}%
5660     \HyField@UseFlag{Submit}{EmbedForm}%
5661   \or % HTML
5662     \HyField@SetFlag{Submit}{ExportFormat}%
5663     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5664     \HyField@UseFlag{Submit}{GetMethod}%
5665     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5666     \HyField@UseFlag{Submit}{CanonicalFormat}%
5667   \or % XFDF
5668     \HyField@SetFlag{Submit}{XFDF}%
5669     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5670     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5671     \HyField@UseFlag{Submit}{CanonicalFormat}%
5672   \or % PDF
5673     \HyField@SetFlag{Submit}{SubmitPDF}%
5674     \HyField@UseFlag{Submit}{GetMethod}%
5675   \fi
5676   \HyField@PrintFlags{Submit}{submit button field}%
5677   \bitsetIsEmpty{HyField@Submit}{%
5678     \let\Fld@submitflags\ltx@empty
5679   }{%
5680     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5681   }%
5682 }
```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
5683 \def\HyField@FlagsAnnot#1{%
5684   \bitsetReset{HyField@F}%
5685   \HyField@UseFlag{F}{Invisible}%
5686   \HyField@UseFlag{F}{Hidden}%
5687   \HyField@UseFlag{F}{Print}%
5688   \HyField@UseFlag{F}{NoZoom}%
5689   \HyField@UseFlag{F}{NoRotate}%
5690   \HyField@UseFlag{F}{NoView}%
5691   \HyField@UseFlag{F}{Locked}%
5692   \HyField@UseFlag{F}{ToggleNoView}%
5693   \HyField@UseFlag{F}{LockedContents}%
5694   \HyField@PrintFlags{F}{#1}%
5695   \bitsetIsEmpty{HyField@F}{%
5696     \let\Fld@annotflags\ltx@empty
5697   }{%
5698     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5699   }
```

```

5699 }%
5700 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5701 \def\HyField@FlagsPushButton{%
5702   \HyField@FlagsAnnot{push button field}%
5703   \bitsetReset{HyField@Ff}%
5704   \HyField@UseFlag{Ff}{ReadOnly}%
5705   \HyField@UseFlag{Ff}{Required}%
5706   \HyField@UseFlag{Ff}{NoExport}%
5707   \HyField@SetFlag{Ff}{PushButton}%
5708   \HyField@PrintFlags{Ff}{push button field}%
5709   \bitsetIsEmpty{HyField@Ff}{%
5710     \let\Fld@flags\ltx@empty
5711   }{%
5712     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5713   }%
5714 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5715 \def\HyField@FlagsCheckBox{%
5716   \HyField@FlagsAnnot{check box field}%
5717   \bitsetReset{HyField@Ff}%
5718   \HyField@UseFlag{Ff}{ReadOnly}%
5719   \HyField@UseFlag{Ff}{Required}%
5720   \HyField@UseFlag{Ff}{NoExport}%
5721   \HyField@PrintFlags{Ff}{check box field}%
5722   \bitsetIsEmpty{HyField@Ff}{%
5723     \let\Fld@flags\ltx@empty
5724   }{%
5725     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5726   }%
5727 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5728 \def\HyField@FlagsRadioButton{%
5729   \HyField@FlagsAnnot{radio button field}%
5730   \bitsetReset{HyField@Ff}%
5731   \HyField@UseFlag{Ff}{ReadOnly}%
5732   \HyField@UseFlag{Ff}{Required}%
5733   \HyField@UseFlag{Ff}{NoExport}%
5734   \HyField@UseFlag{Ff}{NoToggleToOff}%
5735   \HyField@SetFlag{Ff}{Radio}%
5736   \HyField@UseFlag{Ff}{RadiosInUnison}%
5737   \HyField@PrintFlags{Ff}{radio button field}%
5738   \bitsetIsEmpty{HyField@Ff}{%
5739     \let\Fld@flags\ltx@empty
5740   }{%
5741     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5742   }%
5743 }

```

20.1.7 Text fields

\HyField@FlagsText

```
5744 \def\HyField@FlagsText{%
5745   \HyField@FlagsAnnot{text field}%
5746   \bitsetReset{HyField@Ff}%
5747   \HyField@UseFlag{Ff}{ReadOnly}%
5748   \HyField@UseFlag{Ff}{Required}%
5749   \HyField@UseFlag{Ff}{NoExport}%
5750   \HyField@UseFlag{Ff}{Multiline}%
5751   \HyField@UseFlag{Ff}{Password}%
5752   \HyField@UseFlag{Ff}{FileSelect}%
5753   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5754   \HyField@UseFlag{Ff}{DoNotScroll}%
5755   \ifFld@comb
5756     \ifcase0\ifFld@multiline
5757       \else\ifFld@password
5758       \else\ifFld@fileselect
5759       \else 1\fi\fi\fi\relax
5760     \Hy@Error{%
5761       Field option ‘comb’ cannot used together with\MessageBreak
5762       ‘multiline’, ‘password’, or ‘fileselect’%
5763     }\@ehc
5764   \else
5765     \HyField@UseFlag{Ff}{Comb}%
5766   \fi
5767 \fi
5768 \HyField@UseFlag{Ff}{RichText}%
5769 \HyField@PrintFlags{Ff}{text field}%
5770 \bitsetIsEmpty{HyField@Ff}{%
5771   \let\Fld@flags\ltx@empty
5772 }{%
5773   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5774 }%
5775 }
```

20.1.8 Choice fields

\HyField@FlagsChoice

```
5776 \def\HyField@FlagsChoice{%
5777   \HyField@FlagsAnnot{choice field}%
5778   \bitsetReset{HyField@Ff}%
5779   \HyField@UseFlag{Ff}{ReadOnly}%
5780   \HyField@UseFlag{Ff}{Required}%
5781   \HyField@UseFlag{Ff}{NoExport}%
5782   \HyField@UseFlag{Ff}{Combo}%
5783   \ifFld@combo
5784     \HyField@UseFlag{Ff}{Edit}%
5785   \fi
5786   \HyField@UseFlag{Ff}{Sort}%
5787   \HyField@UseFlag{Ff}{MultiSelect}%
5788   \ifFld@combo
5789     \ifFld@edit
5790       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5791     \fi
5792   \fi
5793   \HyField@UseFlag{Ff}{CommitOnSelChange}%

```



```

5794 \HyField@PrintFlags{Ff}{choice field}%
5795 \bitsetIsEmpty{HyField@Ff}{%
5796   \let\Fld@flags\ltx@empty
5797 }{%
5798   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5799 }%
5800 }

```

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`.

```

5801 \def\HyField@PDFChoices#1{%
5802   \begingroup
5803   \global\let\Fld@choices\ltx@empty
5804   \let\HyTmp@optlist\ltx@empty
5805   \let\HyTmp@optitem\relax
5806   \count@=0 %
5807   \kv@parse{#1}{%
5808     \Hy@pdfstringdef\kv@key\kv@key
5809     \ifx\kv@value\relax
5810       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
5811         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
5812       \else
5813         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5814       \fi
5815     \else
5816       \Hy@pdfstringdef\kv@value\kv@value
5817       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
5818     \fi
5819     \edef\HyTmp@optlist{%
5820       \HyTmp@optlist
5821       \HyTmp@optitem{\the\count@}{\kv@key}0%
5822     }%
5823     \advance\count@ by 1 %
5824     \@gobbletwo
5825   }%
5826   \xdef\Fld@choices{/Opt[\Fld@choices]}%
5827   \ifFld@multiselect
5828     \HyField@@PDFChoices{DV}\Fld@default
5829     \HyField@@PDFChoices{V}\Fld@value
5830   \else
5831     \ifx\Fld@default\relax
5832     \else
5833       \pdfstringdef\Hy@gtemp\Fld@default
5834       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5835     \fi
5836     \ifx\Fld@value\relax
5837     \else
5838       \pdfstringdef\Hy@gtemp\Fld@value
5839       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5840     \fi
5841   \fi
5842   \endgroup
5843 }

```

\HyField@@PDFChoices

```
5844 \def\HyField@@PDFChoices#1#2{%
5845   \ifx#2\relax
5846   \else
5847     \count@=0 %
5848     \def\HyTmp@optitem##1##2##3{%
5849       \def\HyTmp@key{##2}%
5850       \ifx\HyTmp@key\Hy@gtemp
5851         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5852           \HyTmp@optlist
5853           \HyTmp@optitem{##1}{##2}1%
5854         }%
5855         \let\HyTmp@found=Y%
5856       \else
5857         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5858           \HyTmp@optlist
5859           \HyTmp@optitem{##1}{##2}##3%
5860         }%
5861       \fi
5862     }%
5863     \expandafter\comma@parse\expandafter{#2}{%
5864       \pdfstringdef\Hy@gtemp\comma@entry
5865       \let\HyTmp@found=N %
5866       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5867       \HyTmp@optlist
5868       \ifx\HyTmp@found Y%
5869         \advance\count@ by 1 %
5870       \else
5871         \@onelevel@sanitize\comma@entry
5872         \PackageWarning{hyperref}{%
5873           \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
5874           \MessageBreak
5875           it cannot be found in the choices%
5876         }%
5877       \fi
5878       \@gobble
5879     }%
5880     \def\HyTmp@optitem##1##2##3{%
5881       \ifnum##3=1 %
5882         (##2)%
5883       \fi
5884     }%
5885     \ifcase\count@
5886     \or
5887       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5888     \else
5889       \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5890     \ifx#1V%
5891       \def\HyTmp@optitem##1##2##3{%
5892         \ifnum##3=1 %
5893           \@firstofone{ ##1}%
5894         \fi
5895       }%
5896       \edef\HyTmp@optlist{\HyTmp@optlist}%
5897       \xdef\Fld@choices{%
5898         \Fld@choices
5899         /I[\expandafter\@firstofone\HyTmp@optlist]%

```

```

5900     }%
5901     \fi
5902     \fi
5903     \fi
5904 }

```

20.3 Forms

\HyField@SetKeys

```

5905 \def\HyField@SetKeys{%
5906   \kvsetkeys{Field}%
5907 }

5908 \newif\ifFld@checked
5909 \newif\ifFld@disabled
5910 \Fld@checkedfalse
5911 \Fld@disabledfalse
5912 \newcount\Fld@menulength
5913 \newdimen\Fld@Width
5914 \newdimen\Fld@charsize
5915 \Fld@charsize=10\p@
5916 \def\Fld@maxlen{0}
5917 \def\Fld@align{0}
5918 \def\Fld@color{0 0 0 rg}
5919 \def\Fld@bcolor{1 1 1}
5920 \def\Fld@bordercolor{1 0 0}
5921 \def\Fld@bordersep{1\p@}
5922 \def\Fld@borderwidth{1}
5923 \def\Fld@borderstyle{S}
5924 \def\Fld@cbsymbol{4}
5925 \def\Fld@radiosymbol{H}
5926 \def\Fld@rotation{0}
5927 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5928 \def@endForm{\@endForm}
5929 \newif\ifForm@html
5930 \Form@htmlfalse
5931 \def\Form@boolkey#1#2{%
5932   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5933 }
5934 \define@key{Form}{action}{%
5935   \hyper@normalise\Hy@DefFormAction{#1}%
5936 }
5937 \def\Hy@DefFormAction{\def\Form@action}
5938 \def\enc@html{html}
5939 \define@key{Form}{encoding}{%
5940   \def\Hy@tempa{#1}%
5941   \ifx\Hy@tempa\enc@html
5942     \Form@htmltrue
5943     \def\Fld@export{html}%
5944   \else
5945     \Hy@Warning{%
5946       Form 'encoding' key with \MessageBreak
5947       unknown value '#1'%
5948     }%
5949     \Form@htmlfalse
5950   \fi
5951 }

```

```

5952 \define@key{Form}{method}{%
5953   \lowercase{\def\Hy@temp{#1}}%
5954   \@ifundefined{Form@method@\Hy@temp}{%
5955     \@onelevel@sanitize\Hy@temp
5956     \Hy@Error{%
5957       Unknown method '\Hy@temp'.\MessageBreak
5958       Known values are 'post' and 'get'%
5959     }\@ehc
5960   }{%
5961     \let\Form@method\Hy@temp
5962     \ifcase\@nameuse{Form@method@\Hy@temp} %
5963       \Fld@getmethodfalse
5964     \else
5965       \Fld@getmethodtrue
5966     \fi
5967   }%
5968 }
5969 \def\Form@method{
5970 \namedef{Form@method@post}{0}
5971 \namedef{Form@method@get}{1}

5972 \newif\ifHyField@NeedAppearances
5973 \def\HyField@NeedAppearancesfalse{%
5974   \global\let\ifHyField@NeedAppearances\iffalse
5975 }
5976 \def\HyField@NeedAppearancetrue{%
5977   \global\let\ifHyField@NeedAppearances\iftrue
5978 }
5979 \HyField@NeedAppearancetrue
5980 \define@key{Form}{NeedAppearances}[true]{%
5981   \edef\Hy@tempa{#1}%
5982   \ifx\Hy@tempa\Hy@true
5983     \HyField@NeedAppearancetrue
5984   \else
5985     \ifx\Hy@tempa\Hy@false
5986       \HyField@NeedAppearancesfalse
5987     \else
5988       \Hy@Error{%
5989         Unexpected value '\Hy@tempa'.\MessageBreak
5990         of option 'NeedAppearances' instead of\MessageBreak
5991         'true' or 'false'%
5992       }\@ehc
5993     \fi
5994   \fi
5995 }
5996 \def\Field@boolkey#1#2{%
5997   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5998 }
5999 \ifHy@texht
6000   \newtoks\Field@toks
6001   \Field@toks={ }%
6002   \def\Field@addtoks#1#2{%
6003     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6004     \@processme
6005   }%
6006 \else
6007   \def\Hy@WarnHTMLFieldOption#1{%
6008     \Hy@Warning{%

```

```

6009     HTML field option '#1'\MessageBreak
6010     is ignored%
6011 }%
6012 }%
6013 \fi
6014 \def\Fld@checkequals#1=#2=#3\{%
6015   \def\@currDisplay{#1}%
6016   \ifx\#2\%
6017     \def\@currValue{#1}%
6018   \else
6019     \def\@currValue{#2}%
6020   \fi
6021 }
6022 \define@key{Field}{loc}{%
6023   \def\Fld@loc{#1}%
6024 }
6025 \define@key{Field}{checked}[true]{%
6026   \lowercase{\Field@boolkey{#1}}{checked}%
6027 }
6028 \define@key{Field}{disabled}[true]{%
6029   \lowercase{\Field@boolkey{#1}}{disabled}%
6030 }
6031 \ifHy@texht
6032   \define@key{Field}{accesskey}{%
6033     \Field@addtoks{accesskey}{#1}%
6034   }%
6035   \define@key{Field}{tabkey}{%
6036     \Field@addtoks{tabkey}{#1}%
6037   }%
6038 \else
6039   \define@key{Field}{accesskey}{%
6040     \Hy@WarnHTMLFieldOption{accesskey}%
6041   }%
6042   \define@key{Field}{tabkey}{%
6043     \Hy@WarnHTMLFieldOption{tabkey}%
6044   }%
6045 \fi
6046 \define@key{Field}{name}{%
6047   \def\Fld@name{#1}%
6048 }
6049 \let\Fld@altname\relax
6050 \define@key{Field}{altname}{%
6051   \def\Fld@altname{#1}%
6052 }
6053 \let\Fld@mappingname\relax
6054 \define@key{Field}{mappingname}{%
6055   \def\Fld@mappingname{#1}%
6056 }
6057 \define@key{Field}{width}{%
6058   \def\Fld@width{#1}%
6059   \Field@Width#1\setbox0=\hbox{m}%
6060 }
6061 \define@key{Field}{maxlen}{%
6062   \def\Fld@maxlen{#1}%
6063 }
6064 \define@key{Field}{menulength}{%
6065   \Fld@menulength=#1\relax

```

```

6066 }
6067 \define@key{Field}{height}{%
6068   \def\Fld@height{#1}%
6069 }
6070 \define@key{Field}{charsize}{%
6071   \setlength{\Fld@charsize}{#1}%
6072 }
6073 \define@key{Field}{borderwidth}{%
6074   \Hy@defaultbp\Fld@borderwidth{#1}%
6075 }
6076 \def\Hy@defaultbp#1#2{%
6077   \begingroup
6078     \afterassignment\Hy@defaultbpAux
6079     \dimen@=#2bp\relax{#1}{#2}%
6080 }
6081 \begingroup\expandafter\expandafter\expandafter\endgroup
6082 \expandafter\ifx\csname dimexpr\endcsname\relax
6083   \def\Hy@defaultbpAux#1\relax#2#3{%
6084     \ifx!#1!%
6085       \endgroup
6086       \def#2{#3}%
6087     \else
6088       \dimen@=.99626\dimen@
6089       \edef\x{\endgroup
6090         \def\noexpand#2{%
6091           \strip@pt\dimen@
6092         }%
6093       }\x
6094     \fi
6095   }%
6096 \else
6097   \def\Hy@defaultbpAux#1\relax#2#3{%
6098     \ifx!#1!%
6099       \endgroup
6100       \def#2{#3}%
6101     \else
6102       \edef\x{\endgroup
6103         \def\noexpand#2{%
6104           \strip@pt\dimexpr\dimen@*800/803\relax
6105         }%
6106       }\x
6107     \fi
6108   }%
6109 \fi
6110 \define@key{Field}{borderstyle}{%
6111   \let\Hy@temp\Fld@borderstyle
6112   \def\Fld@borderstyle{#1}%
6113   \Hy@Match\Fld@borderstyle{%
6114     ~[SDBIU]$%
6115   }{}{%
6116     \Hy@Warning{%
6117       Invalid value '@pdfborderstyle'\MessageBreak
6118       for option 'pdfborderstyle'. Valid values:\MessageBreak
6119       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6120       \space\space I (Inset), U (Underline)\MessageBreak
6121       Option setting is ignored%
6122     }%

```

```

6123 \let\Fld@borderstyle\Hy@temp
6124 }%
6125 }
6126 \define@key{Field}{bordersep}{%
6127 \def\Fld@bordersep{#1}%
6128 }
6129 \define@key{Field}{default}{%
6130 \def\Fld@default{#1}%
6131 }
6132 \define@key{Field}{align}{%
6133 \def\Fld@align{#1}%
6134 }
6135 \define@key{Field}{value}{%
6136 \def\Fld@value{#1}%
6137 }
6138 \define@key{Field}{checkboxsymbol}{%
6139 \Fld@DingDef\Fld@cbsymbol{#1}%
6140 }
6141 \define@key{Field}{radiosymbol}{%
6142 \Fld@DingDef\Fld@radiosymbol{#1}%
6143 }
6144 \def\Fld@DingDef#1#2{%
6145 \let\Fld@temp\ltx@empty
6146 \Fld@@@DingDef#2\ding{ }\@nil
6147 \let#1\Fld@temp
6148 }
6149 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6150 \expandafter\def\expandafter\Fld@temp\expandafter{%
6151 \Fld@temp
6152 #1%
6153 }%
6154 \ifx\\#3\\%
6155 \expandafter\@gobble
6156 \else
6157 \begingroup
6158 \lccode'0=#2\relax
6159 \lowercase{\endgroup
6160 \expandafter\def\expandafter\Fld@temp\expandafter{%
6161 \Fld@temp
6162 0%
6163 }%
6164 }%
6165 \expandafter\@firstofone
6166 \fi
6167 {%
6168 \Fld@@@DingDef#3\@nil
6169 }%
6170 }

6171 \define@key{Field}{rotation}{%
6172 \def\Fld@rotation{#1}%
6173 }

6174 \define@key{Field}{backgroundcolor}{%
6175 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6176 }
6177 \define@key{Field}{bordercolor}{%
6178 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6179 }

```

```

6180 \define@key{Field}{color}{%
6181   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6182 }

6183 \let\Fld@onclick@code\ltx@empty
6184 \let\Fld@format@code\ltx@empty
6185 \let\Fld@validate@code\ltx@empty
6186 \let\Fld@calculate@code\ltx@empty
6187 \let\Fld@keystroke@code\ltx@empty
6188 \let\Fld@onfocus@code\ltx@empty
6189 \let\Fld@onblur@code\ltx@empty
6190 \let\Fld@onmousedown@code\ltx@empty
6191 \let\Fld@onmouseup@code\ltx@empty
6192 \let\Fld@onenter@code\ltx@empty
6193 \let\Fld@onexit@code\ltx@empty
6194 \def\Hy@temp#1{%
6195   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6196 }
6197 \def\Hy@@temp#1#2{%
6198   \ifHy@pdfa
6199     \define@key{Field}{#2}{%
6200       \Hy@Error{%
6201         PDF/A: Additional action ‘#2’ is prohibited%
6202       }\@ehc
6203     }%
6204   \else
6205     \define@key{Field}{#2}{%
6206       \def#1{##1}%
6207     }%
6208   \fi
6209 }
6210 \Hy@temp{keystroke}
6211 \Hy@temp{format}
6212 \Hy@temp{validate}
6213 \Hy@temp{calculate}
6214 \Hy@temp{onfocus}
6215 \Hy@temp{onblur}
6216 \Hy@temp{onenter}
6217 \Hy@temp{onexit}
6218 \ifHy@texht
6219   \def\Hy@temp#1{%
6220     \define@key{Field}{#1}{%
6221       \Field@addtoks{#1}{##1}%
6222     }%
6223   }%
6224 \else
6225   \def\Hy@temp#1{%
6226     \define@key{Field}{#1}{%
6227       \Hy@WarnHTMLFieldOption{#1}%
6228     }%
6229   }%
6230 \fi
6231 \Hy@temp{ondblclick}
6232 \Hy@temp{onmousedown}
6233 \Hy@temp{onmouseup}
6234 \Hy@temp{onmouseover}
6235 \Hy@temp{onmousemove}
6236 \Hy@temp{onmouseout}

```



```

6237 \Hy@temp{onkeydown}
6238 \Hy@temp{onkeyup}
6239 \Hy@temp{onselect}
6240 \Hy@temp{onchange}
6241 \Hy@temp{onkeypress}
6242 \ifHy@texht
6243   \define@key{Field}{onclick}{%
6244     \Field@addtoks{onclick}{#1}%
6245   }%
6246 \else
6247   \ifHy@pdfa
6248     \define@key{Field}{onclick}{%
6249       \Hy@Error{%
6250         PDF/A: Action 'onclick' is prohibited%
6251       }\@ehc
6252     }%
6253 \else
6254   \define@key{Field}{onclick}{%
6255     \def\Fld@onclick@code{#1}%
6256   }%
6257 \fi
6258 \fi

6259 \DeclareRobustCommand\TextField{%
6260   \@ifnextchar[{\@TextField}{\@TextField[]}%
6261 }
6262 \DeclareRobustCommand\ChoiceMenu{%
6263   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6264 }
6265 \DeclareRobustCommand\CheckBox{%
6266   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6267 }
6268 \DeclareRobustCommand\PushButton{%
6269   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6270 }
6271 \DeclareRobustCommand\Gauge{%
6272   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6273 }
6274 \DeclareRobustCommand\Submit{%
6275   \@ifnextchar[{\@Submit}{\@Submit[]}%
6276 }
6277 \DeclareRobustCommand\Reset{%
6278   \@ifnextchar[{\@Reset}{\@Reset[]}%
6279 }
6280 \def\LayoutTextField#1#2{% label, field
6281   #1 #2%
6282 }
6283 \def\LayoutChoiceField#1#2{% label, field
6284   #1 #2%
6285 }
6286 \def\LayoutCheckField#1#2{% label, field
6287   #1 #2%
6288 }
6289 \def\LayoutPushButtonField#1{% button
6290   #1%
6291 }
6292 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6293 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}

```

```

6294 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6295 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6296 \def\MakeButtonField#1{%
6297   \sbox0{%
6298     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6299   }%
6300   \@tempdima\ht0 %
6301   \advance\@tempdima by \Fld@borderwidth bp %
6302   \advance\@tempdima by \Fld@borderwidth bp %
6303   \ht0\@tempdima
6304   \@tempdima\dp0 %
6305   \advance\@tempdima by \Fld@borderwidth bp %
6306   \advance\@tempdima by \Fld@borderwidth bp %
6307   \dp0\@tempdima
6308   \box0\relax
6309 }
6310 \def\DefaultHeightofSubmit{14pt}
6311 \def\DefaultWidthofSubmit{2cm}
6312 \def\DefaultHeightofReset{14pt}
6313 \def\DefaultWidthofReset{2cm}
6314 \def\DefaultHeightofCheckBox{\baselineskip}
6315 \def\DefaultWidthofCheckBox{\baselineskip}
6316 \def\DefaultHeightofChoiceMenu{\baselineskip}
6317 \def\DefaultWidthofChoiceMenu{\baselineskip}
6318 \def\DefaultHeightofText{\baselineskip}
6319 \def\DefaultHeightofTextMultiline{4\baselineskip}
6320 \def\DefaultWidthofText{3cm}
6321 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6322 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6323 \def\DefaultOptionsofPushButton{print}
6324 \def\DefaultOptionsofCheckBox{print}
6325 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6326 \def\DefaultOptionsofListBox{print}
6327 \def\DefaultOptionsofComboBox{print,edit,sort}
6328 \def\DefaultOptionsofPopdownBox{print}
6329 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6330 \ifHy@hyperfigures
6331   \Hy@Info{Hyper figures ON}%
6332 \else
6333   \Hy@Info{Hyper figures OFF}%
6334 \fi
6335 \ifHy@nesting
6336   \Hy@Info{Link nesting ON}%
6337 \else
6338   \Hy@Info{Link nesting OFF}%
6339 \fi
6340 \ifHy@hyperindex
6341   \Hy@Info{Hyper index ON}%
6342 \else
6343   \Hy@Info{Hyper index OFF}%
6344 \fi
6345 \ifHy@backref

```

```

6346 \Hy@Info{backreferencing ON}%
6347 \else
6348 \Hy@Info{backreferencing OFF}%
6349 \fi
6350 \ifHy@colorlinks
6351 \Hy@Info{Link coloring ON}%
6352 \else
6353 \Hy@Info{Link coloring OFF}%
6354 \fi
6355 \ifHy@ocgcolorlinks
6356 \Hy@Info{Link coloring with OCG ON}%
6357 \else
6358 \Hy@Info{Link coloring with OCG OFF}%
6359 \fi
6360 \ifHy@pdfa
6361 \Hy@Info{PDF/A mode ON}%
6362 \else
6363 \Hy@Info{PDF/A mode OFF}%
6364 \fi

```

22 Low-level utility macros

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

```

6365 \edef\hyper@hash{\string#}
6366 \edef\hyper@tilde{\string~}
6367 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6368 \def\@currentHref{Doc-Start}
6369 \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.

```

6370 \Hy@AtBeginDocument{%
6371 \Hy@pdfstringtrue
6372 \PDF@SetupDoc
6373 \let\PDF@SetupDoc\@empty
6374 \Hy@DisableOption{pdfpagescrop}%
6375 \Hy@DisableOption{pdfpagemode}%
6376 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6377 \Hy@DisableOption{pdfdirection}%
6378 \Hy@DisableOption{pdfviewarea}%
6379 \Hy@DisableOption{pdfviewclip}%
6380 \Hy@DisableOption{pdfprintarea}%
6381 \Hy@DisableOption{pdfprintclip}%
6382 \Hy@DisableOption{pdfprintscaling}%
6383 \Hy@DisableOption{pdfduplex}%
6384 \Hy@DisableOption{pdfpicktraybypdfsize}%
6385 \Hy@DisableOption{pdfprintpagerange}%
6386 \Hy@DisableOption{pdfnumcopies}%
6387 \Hy@DisableOption{pdfstartview}%
6388 \Hy@DisableOption{pdfstartpage}%
6389 \Hy@DisableOption{pdftoolbar}%
6390 \Hy@DisableOption{pdfmenubar}%
6391 \Hy@DisableOption{pdfwindowui}%
6392 \Hy@DisableOption{pdffitwindow}%
6393 \Hy@DisableOption{pdfcenterwindow}%

```

```

6394 \Hy@DisableOption{pdfdisplaydoctitle}%
6395 \Hy@DisableOption{pdfpagelayout}%
6396 \Hy@DisableOption{pdflang}%
6397 \Hy@DisableOption{baseurl}%
6398 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6399 \Hy@pdfstringfalse
6400 }

Ignore star from referencing macros:
6401 \LetLtxMacro\NoHy@OrgRef\ref
6402 \DeclareRobustCommand*{\ref}{%
6403 \ifstar\NoHy@OrgRef\NoHy@OrgRef
6404 }
6405 \LetLtxMacro\NoHy@OrgPageRef\pageref
6406 \DeclareRobustCommand*{\pageref}{%
6407 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6408 }

```

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.

```

6409 \def\NoHyper{%
6410 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6411 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6412 \global\let\hyper@livelink\hyper@link
6413 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6414 \let\hyper@anchor\ltx@gobble
6415 \let\hyper@anchorstart\ltx@gobble
6416 \def\hyper@anchorend{\Hy@xspace@end}%
6417 \let\hyper@linkstart\ltx@gobbletwo
6418 \def\hyper@linkend{\Hy@xspace@end}%
6419 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6420 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6421 \let\Hy@backout\@gobble
6422 }
6423 \def\stop@hyper{%
6424 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6425 \let\Hy@backout\@gobble
6426 \let\hyper@@anchor\ltx@gobble
6427 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6428 \let\hyper@anchor\ltx@gobble
6429 \let\hyper@anchorstart\ltx@gobble
6430 \def\hyper@anchorend{\Hy@xspace@end}%
6431 \let\hyper@linkstart\ltx@gobbletwo
6432 \def\hyper@linkend{\Hy@xspace@end}%
6433 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6434 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6435 }
6436 \def\endNoHyper{%
6437 \global\let\hyper@link\hyper@livelink
6438 }
6439 \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:

```
6440 \*nohyperref
6441 \RequirePackage{letltxmacro}[2008/06/13]
6442 \let\hyper@@anchor\@gobble
6443 \def\hyper@link#1#2#3{#3}%
6444 \let\hyper@anchorstart\@gobble
6445 \let\hyper@anchorend\@empty
6446 \let\hyper@linkstart\@gobbletwo
6447 \let\hyper@linkend\@empty
6448 \def\hyper@linkurl#1#2{#1}%
6449 \def\hyper@linkfile#1#2#3{#1}%
6450 \def\hyper@link@{#1}#2#3{#1}%
6451 \let\PDF@SetupDoc\@empty
6452 \let\PDF@FinishDoc\@empty
6453 \def\nohyperpage#1{#1}
```

Some top-level commands:

```
6454 \def\Acrobatmenu#1#2{\leavevmode#2}
6455 \let\pdfstringdefDisableCommands\@gobbletwo
6456 \let\texorpdfstring\@firstoftwo
6457 \let\pdfbookmark\@undefined
6458 \newcommand\pdfbookmark[3]{}
6459 \let\phantomsection\@empty
6460 \let\hypersetup\@gobble
6461 \let\hyperbaseurl\@gobble
6462 \newcommand*{\href}[3]{}
6463 \let\hyperdef\@gobbletwo
6464 \let\hyperlink\@gobble
6465 \let\hypertarget\@gobble
6466 \def\hyperref{%
6467   \@ifnextchar{\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6468 }
6469 \long\def\@gobbleopt[#1]{}
6470 \let\hyperpage\@empty
```

Ignore star from referencing macros:

```
6471 \LetLtxMacro\NoHy@OrgRef\ref
6472 \DeclareRobustCommand*\ref{%
6473   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6474 }
6475 \LetLtxMacro\NoHy@OrgPageRef\pageref
6476 \DeclareRobustCommand*\pageref{%
6477   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6478 }
6479 \</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}`

```
6480 \*package\
6481 \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.

```
6482 \if@files\
6483 \ifHy@typexml\
6484 \immediate\closeout\@mainaux\
6485 \immediate\openout\@mainaux\jobname.aux\relax\
6486 \immediate\write\@auxout{<relaxxml>\relax}%\
6487 \fi\
6488 \immediate\write\@auxout{%\
6489 \string\providecommand\string\HyperFirstAtBeginDocument{%\
6490 \string\AtBeginDocument}^^J%\
6491 \string\HyperFirstAtBeginDocument{%\
6492 \string\ifx\string\hyper@anchor\string\@undefined^^J%\
6493 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%\
6494 \string\gdef\string\contentsline%\
6495 \string#1\string#2\string#3\string#4{%\
6496 \string\oldcontentsline%\
6497 {\string#1}{\string#2}{\string#3}}^^J%\
6498 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%\
6499 \string\gdef\string\newlabel\string#1\string#2{%\
6500 \string\newlabelxx{\string#1}\string#2}^^J%\
6501 \string\gdef\string\newlabelxx%\
6502 \string#1\string#2\string#3\string#4\string#5\string#6{%\
6503 \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.

```
6504 \string\AtEndDocument{%\
6505 \string\ifx\string\hyper@anchor\string\@undefined^^J%\
6506 \string\let\string\contentsline\string\oldcontentsline^^J%\
6507 \string\let\string\newlabel\string\oldnewlabel^^J%\
6508 \string\fi%\
6509 }^^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.

```
6510 \string\fi%\
6511 }^^J%\
6512 \string\global\string\let\string\hyper@last\relax^^J%\
6513 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%\
6514 }%\
6515 \fi\
6516 \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.

```
6517 \ifx\hyper@last\@undefined\
6518 \def\@starttoc#1{%\
6519 \begingroup\
6520 \makeatletter\
```

```

6521 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6522 \IfFileExists{\jobname.#1}{%
6523 \Hy@WarningNoLine{%
6524 old #1 file detected, not used; run LaTeX again%
6525 }%
6526 }}%
6527 \if@filesw
6528 \expandafter\newwrite\csname tf@#1\endcsname
6529 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6530 \fi
6531 \@nobreakfalse
6532 \endgroup
6533 }%
6534 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}}%
6535 \fi
6536 }

```

26 Title strings

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

```

6537 \ifHy@pdfusetitle
6538 \let\HyOrg@title\title
6539 \let\HyOrg@author\author
6540 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6541 \def\Hy@scanopttitle[#1]{%
6542 \gdef\Hy@title{#1}%
6543 \HyOrg@title{#1}%
6544 }%
6545 \def\Hy@scantitle#1{%
6546 \gdef\Hy@title{#1}%
6547 \HyOrg@title{#1}%
6548 }%
6549 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6550 \def\Hy@scanoptauthor[#1]{%
6551 \gdef\Hy@author{#1}%
6552 \HyOrg@author{#1}%
6553 }%
6554 \def\Hy@scanauthor#1{%
6555 \gdef\Hy@author{#1}%
6556 \HyOrg@author{#1}%
6557 }%

```

The case, that `or` 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.

```

6558 \begingroup
6559 \def\process@me#1\@nil#2{%
6560 \expandafter\let\expandafter\x\csname @#2\endcsname
6561 \edef\y{\expandafter\strip@prefix\meaning\x}%
6562 \def\c##1#1##2\@nil{%
6563 \ifx\\##1\\%
6564 \else
6565 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6566 \expandafter{\x}%
6567 \fi

```

```

6568 }%
6569 \expandafter\c\y\relax#1\@nil
6570 }%
6571 \expandafter\process@me\string\@latex@\@nil{title}%
6572 \expandafter\process@me\string\@latex@\@nil{author}%
6573 \endgroup
6574 \fi
6575 \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.

```

6576 \def\Hy@UseMaketitleString#1{%
6577 \ltx@ifundefined{Hy@#1}{-}%
6578 \begingroup
6579 \let\Hy@saved@hook\pdfstringdefPreHook
6580 \pdfstringdefDisableCommands{%
6581 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6582 \let\newline\\%
6583 }%
6584 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6585 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6586 \csname Hy@#1\endcsname\@empty
6587 }%
6588 \fi
6589 \global\let\pdfstringdefPreHook\Hy@saved@hook
6590 \endgroup
6591 }%
6592 }
6593 \def\Hy@newline@title#1{ #1}
6594 \def\Hy@newline@author#1{, #1}
6595 \def\Hy@UseMaketitleInfos{%
6596 \Hy@UseMaketitleString{title}%
6597 \Hy@UseMaketitleString{author}%
6598 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6599 \RequirePackage{atbegshi}[2007/09/09]
6600 \let\Hy@EveryPageHook\ltx@empty
6601 \let\Hy@EveryPageBoxHook\ltx@empty
6602 \let\Hy@FirstPageHook\ltx@empty
6603 \AtBeginShipout{%
6604 \Hy@EveryPageHook
6605 \ifx\Hy@EveryPageBoxHook\ltx@empty

```



```

6606 \else
6607   \setbox\AtBeginShipoutBox=\vbox{%
6608     \offinterlineskip
6609     \Hy@EveryPageBoxHook
6610     \box\AtBeginShipoutBox
6611   }%
6612 \fi
6613 }
6614 \ltx@iffileloaded{hpdf.tex}{%
6615   \AtBeginShipout{%
6616     \Hy@FirstPageHook
6617     \global\let\Hy@FirstPageHook\ltx@empty
6618   }%
6619 }{%
6620   \AtBeginShipoutFirst{%
6621     \Hy@FirstPageHook
6622   }%
6623 }
6624 \g@addto@macro\Hy@FirstPageHook{%
6625   \PDF@FinishDoc
6626   \global\let\PDF@FinishDoc\ltx@empty
6627 }

```

28.1 PDF /PageLabels

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

```

6628 \ifHy@pdfpagelabels
6629   \begingroup\expandafter\expandafter\expandafter\endgroup
6630   \expandafter\ifx\csname thepage\endcsname\relax
6631     \Hy@pdfpagelabelsfalse
6632     \Hy@WarningNoLine{%
6633       Option ‘pdfpagelabels’ is turned off\MessageBreak
6634       because \string\thepage\space is undefined%
6635     }%
6636     \csname fi\endcsname
6637     \csname iffalse\expandafter\endcsname
6638   \fi

```

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

```

6639 \def\thispdfpagelabel#1{%
6640   \gdef\HyPL@thisLabel{#1}%
6641 }%
6642 \global\let\HyPL@thisLabel\relax

```

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

```

6643 \let\HyPL@Labels\ltx@empty

```

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

```

6644 \newcount\Hy@abspage
6645 \Hy@abspage=0 %

```

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

```

6646 \def\HyPL@LastType{init}%
6647 \def\HyPL@LastNumber{0}%
6648 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6649 \def\HyPL@arabic{D}%
6650 \def\HyPL@Roman{R}%
6651 \def\HyPL@roman{r}%
6652 \def\HyPL@Alph{A}%
6653 \def\HyPL@alph{a}%

6654 \let\HyPL@SlidesSetPage\ltx@empty
6655 \ltx@ifclassloaded{slides}{%
6656   \def\HyPL@SlidesSetPage{%
6657     \advance\c@page\ltx@one
6658     \ifnum\value{page}>\ltx@one
6659       \protected@edef\HyPL@SlidesOptionalPage{%
6660         \Hy@SlidesFormatOptionalPage{thepage}%
6661       }%
6662     \else
6663       \let\HyPL@SlidesOptionalPage\ltx@empty
6664     \fi
6665     \advance\c@page-\ltx@one
6666     \def\HyPL@page{%
6667       \csname the\Hy@SlidesPage\endcsname
6668       \HyPL@SlidesOptionalPage
6669     }%
6670   }%
6671 }{}%
```

`\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.

```

6672 \def\HyPL@EveryPage{%
6673   \begingroup
6674   \ifx\HyPL@thisLabel\relax
6675     \let\HyPL@page\thepage
6676     \HyPL@SlidesSetPage
6677   \else
6678     \let\HyPL@page\HyPL@thisLabel
6679     \global\let\HyPL@thisLabel\relax
6680   \fi
6681   \let\HyPL@Type\relax
6682   \ifnum\c@page>0 %
6683     \ifx\HyPL@SlidesSetPage\ltx@empty
6684       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6685     \fi
6686   \fi
6687   \let\Hy@temp Y%
6688   \ifx\HyPL@Type\HyPL@LastType
6689   \else
6690     \let\Hy@temp N%
6691   \fi
6692   \ifx\HyPL@Type\relax
6693     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6694   \else
6695     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6696   \fi
6697   \ifx\HyPL@Prefix\HyPL@LastPrefix
6698   \else
6699     \let\Hy@temp N%
6700   \fi
6701   \if Y\Hy@temp
```

```

6702 \advance\c@page by -1 %
6703 \ifnum\HyPL@LastNumber=\the\c@page\relax
6704 \else
6705 \let\Hy@temp N%
6706 \fi
6707 \Hy@StepCount\c@page
6708 \fi
6709 \if N\Hy@temp
6710 \ifx\HyPL@Type\relax
6711 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6712 \else
6713 \HyPL@StorePageLabel{%
6714 \ifx\HyPL@Prefix\@empty
6715 \else
6716 /P(\HyPL@Prefix)%
6717 \fi
6718 /S/\csname HyPL\HyPL@Type\endcsname
6719 \ifnum\the\c@page=1 %
6720 \else
6721 \space/St \the\c@page
6722 \fi
6723 }%
6724 \fi
6725 \fi
6726 \xdef\HyPL@LastNumber{\the\c@page}%
6727 \global\let\HyPL@LastType\HyPL@Type
6728 \global\let\HyPL@LastPrefix\HyPL@Prefix
6729 \endgroup
6730 \Hy@GlobalStepCount\Hy@abspage
6731 }%

```

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

```

6732 \def\HyPL@CheckThePage#1\@nil{%
6733 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6734 }%

```

`\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`.

```

6735 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6736 \def\Hy@tempa{#4}%
6737 \def\Hy@tempb{\csname\endcsname\c@page}%
6738 \ifx\Hy@tempa\Hy@tempb
6739 \expandafter\ifx\csname HyPL#3\endcsname\relax
6740 \else
6741 \def\HyPL@Type{#3}%
6742 \def\HyPL@Prefix{#2}%
6743 \fi
6744 \else
6745 \begingroup
6746 \let\Hy@next\endgroup
6747 \let\HyPL@found\@undefined
6748 \def\arabic{\HyPL@Format{arabic}}%
6749 \def\Roman{\HyPL@Format{Roman}}%
6750 \def\roman{\HyPL@Format{roman}}%

```

```

6751 \def\Alph{\HyPL@Format{Alph}}%
6752 \def\alph{\HyPL@Format{alph}}%
6753 \protected@edef\Hy@temp{#1}%
6754 \ifx\HyPL@found\relax
6755 \toks@{\expandafter{\Hy@temp}}%
6756 \edef\Hy@next{\endgroup
6757 \noexpand\HyPL@@@CheckThePage\the\toks@
6758 \noexpand\HyPL@found\relax\noexpand\@nil
6759 }%
6760 \fi
6761 \Hy@next
6762 \fi
6763 }%

```

`\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`.

```

6764 \def\HyPL@Format#1#2{%
6765 \ifx\HyPL@found\@undefined
6766 \expandafter\ifx\csname c@#2\endcsname\c@page
6767 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6768 \else
6769 \expandafter\noexpand\csname#1\endcsname{#2}%
6770 \fi
6771 \else
6772 \expandafter\noexpand\csname#1\endcsname{#2}%
6773 \fi
6774 }%

```

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

```

6775 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6776 \def\Hy@tempa{#3}%
6777 \def\Hy@tempb{\HyPL@found\relax}%
6778 \ifx\Hy@tempa\Hy@tempb
6779 \def\HyPL@Type{#2}%
6780 \def\HyPL@Prefix{#1}%
6781 \fi
6782 }%

```

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

```

6783 \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`.

```

6784 \def\HyPL@Useless{0<</S/D>>}%
6785 \@onelevel@sanitize\HyPL@Useless

```

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

```

6786 \def\HyPL@SetPageLabels{%
6787 \@onelevel@sanitize\HyPL@Labels
6788 \ifx\HyPL@Labels\@empty
6789 \else
6790 \ifx\HyPL@Labels\HyPL@Useless

```

```

6791 \else
6792 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>>}%
6793 \fi
6794 \fi
6795 }%

6796 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6797 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
6798 \Hy@DisableOption{pdfpagelabels}
6799 \endpackage

```

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
6800 \ifpdf
6801 \pdf@ifdraftmode{%
6802 \let\Hy@PutCatalog\ltx@gobble
6803 }{%
6804 \let\Hy@PutCatalog\pdfcatalog
6805 }
6806 \end{ifpdf}

```

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.

```

6807 \ifvtex
6808 \providecommand*\XR@ext{pdf}
6809 \edef\Hy@VTeXversion{%
6810 \ifx\VTeXversion\@undefined
6811 \z@
6812 \else
6813 \ifx\VTeXversion\relax
6814 \z@
6815 \else
6816 \VTeXversion
6817 \fi
6818 \fi
6819 }
6820 \begin{group}
6821 \ifnum\Hy@VTeXversion<660 %
6822 \gdef\Hy@PutCatalog#1{%
6823 \Hy@WarningNoLine{%
6824 VTeX 6.59g or above required for pdfpagelabels%
6825 }%
6826 }%
6827 \else
6828 \gdef\Hy@PutCatalog#1{%
6829 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6830 }%
6831 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%

```

```

6832 \ifx\|#2\%
6833 \else
6834 \immediate\special{!pdfpagelabels #2}%
6835 \fi
6836 }%
6837 \fi
6838 \endgroup
6839 \</vtex>

6840 \< *pdftex | vtex>

```

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

```

6841 \ifHy@pdfpagelabels
6842 \def\HyPL@StorePageLabel#1{%
6843 \toks@\expandafter{\HyPL@Labels}%
6844 \xdef\HyPL@Labels{%
6845 \the\toks@
6846 \the\Hy@abspage<<#1>>%
6847 }%
6848 }%

```

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.

```

6849 \RequirePackage{atveryend}[2009/12/07]%
6850 \AtVeryEndDocument{%
6851 \HyPL@SetPageLabels
6852 }%

6853 \fi
6854 \</pdftex | vtex>

```

28.1.2 xetex

```

6855 \< *xetex>
6856 \HyPsd@LoadUnicode
6857 \Hy@unicodetrue
6858 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6859 \else
6860 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6861 \fi
6862 \HyPsd@LoadStringEnc
6863 \define@key{Hyp}{unicode}[true]{%
6864 \Hy@boolkey{unicode}{#1}%
6865 \ifHy@unicode
6866 \else
6867 \Hy@Warning{%
6868 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
6869 option setting 'unicode=false'%
6870 }%
6871 \Hy@unicodetrue
6872 \fi
6873 }
6874 \define@key{Hyp}{pdfencoding}{%
6875 \edef\HyPsd@temp{#1}%
6876 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6877 \let\HyPsd@pdfencoding\HyPsd@temp
6878 \else

```

```

6879 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6880 \let\HyPsd@pdfencoding\HyPsd@temp
6881 \else
6882 \Hy@Warning{%
6883 XeTeX driver only supports\MessageBreak
6884 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6885 setting 'pdfencoding=\HyPsd@temp'%
6886 }%
6887 \fi
6888 \fi
6889 }
6890 \let\HyXeTeX@CheckUnicode\relax
6891 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

6892 \<*pdfmarkbase>
6893 \begingroup
6894 \@ifundefined{headerps@out}{\}%
6895 \toks@\expandafter{\Hy@FirstPageHook}%
6896 \xdef\Hy@FirstPageHook{%
6897 \noexpand\headerps@out{%
6898 systemdict /pdfmark known%
6899 {%
6900 userdict /?pdfmark systemdict /exec get put%
6901 }{%
6902 userdict /?pdfmark systemdict /pop get put %
6903 userdict /pdfmark systemdict /cleartomark get put%
6904 }%
6905 ifelse%
6906 }%
6907 \the\toks@
6908 }%
6909 }%
6910 \endgroup
6911 \</pdfmarkbase>

\Hy@PutCatalog
6912 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
6913 \<*pdfmarkbase>
6914 \def\Hy@PutCatalog#1{%
6915 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6916 }
6917 \</pdfmarkbase>

6918 \<*pdfmarkbase | dvipdfm | xetex>
6919 \ifHy@pdfpagelabels

```

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

```

6920 \def\HyPL@StorePageLabel#1{%
6921 \if@filesw
6922 \begingroup
6923 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6924 \immediate\write\@mainaux{%
6925 \string\HyPL@Entry{\Hy@tempa}%
6926 }%
6927 \endgroup
6928 \fi
6929 }%

```

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.

```

6930 \Hy@AtBeginDocument{%
6931   \if@files
6932     \immediate\write\@mainaux{%
6933       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6934     }%
6935   \fi
6936   \ifx\HyPL@Labels\@empty
6937     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6938   \else
6939     \HyPL@SetPageLabels
6940   \fi
6941   \let\HyPL@Entry\@gobble
6942 }%
```

`\HyPL@Entry`

```

6943 \def\HyPL@Entry#1{%
6944   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6945     \HyPL@Labels
6946     #1%
6947   }%
6948 }%

6949 \fi
6950 </pdfmarkbase | dvipdfm | xetex>

6951 <*package>

6952 \ifx\MaybeStopEarly\relax
6953 \else
6954   \Hy@stoppedearlytrue
6955   \expandafter\MaybeStopEarly
6956 \fi
6957 \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

```

6958 \def\Hy@CounterExists#1{%
6959   \begingroup\expandafter\expandafter\expandafter\endgroup
6960   \expandafter\ifx\csname c@#1\endcsname\relax
6961     \expandafter\@gobble
6962   \else
6963     \begingroup\expandafter\expandafter\expandafter\endgroup
6964     \expandafter\ifx\csname the#1\endcsname\relax
6965       \expandafter\expandafter\expandafter\@gobble
6966     \else
6967       \expandafter\expandafter\expandafter\@firstofone
6968     \fi
6969   \fi
6970 }
6971 \Hy@CounterExists{section}{%
6972   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6973 }
6974 \Hy@CounterExists{part}{%
6975   \providecommand\theHpart{\arabic{part}}}%
6976 }
6977 \ltx@ifundefined{thechapter}{%
6978   \providecommand\theHsection   {\arabic{section}}}%
6979   \providecommand\theHfigure    {\arabic{figure}}}%
6980   \providecommand\theHtable     {\arabic{table}}}%
6981 }{%
6982   \providecommand\theHchapter   {\arabic{chapter}}}%
6983   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
6984   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
6985   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
6986 }
6987 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6988 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6989 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
6990 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6991 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6992 \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.

6993 \let\H@item\item
6994 \newcounter{Item}
6995 \def\theHItem{\arabic{Item}}
6996 \def\item{%
6997   \@hyper@itemfalse
6998   \if@nmbrlist\@hyper@itemtrue\fi
6999   \H@item
7000 }

7001 \providecommand\theHenumi   {\theHItem}
7002 \providecommand\theHenumii  {\theHItem}
7003 \providecommand\theHenumiii {\theHItem}
7004 \providecommand\theHenumiv  {\theHItem}
7005 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7006 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7007 \@ifundefined{theHHmpfootnote}{%
7008   \let\theHHmpfootnote\theHHfootnote
7009 }{}

```

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.

```
7010 \let\H@refstepcounter\refstepcounter
7011 \edef\name@of@eq{equation}%
7012 \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.

```
7013 \newif\if@hyper@item
7014 \newif\if@skiphyperref
7015 \@hyper@itemfalse
7016 \@skiphyperreffalse
7017 \def\refstepcounter#1{%
7018   \ifHy@pdfstring
7019   \else
7020     \H@refstepcounter{#1}%
7021     \edef\This@name{#1}%
7022     \ifx\This@name\name@of@slide
7023     \else
7024       \if@skiphyperref
7025       \else
7026         \if@hyper@item
7027         \stepcounter{Item}%
7028         \hyper@refstepcounter{Item}%
7029         \@hyper@itemfalse
7030       \else
7031         \hyper@refstepcounter{#1}%
7032       \fi
7033     \fi
7034   \fi
7035 \fi
7036 }
7037 \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.

```
7038 \@ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
7039 \def\hyper@refstepcounter#1{%
7040   \edef\This@name{#1}%
7041   \ifx\This@name\name@of@eq
7042     \@ifundefined{theHequation}{%
7043       \make@stripped@name{\theequation}%
7044       \let\theHequation\newname
7045     }{}%
7046   \fi
7047   \HyCnt@ProvideTheHCounter{#1}%
7048   \hyper@makecurrent{#1}%
7049   \ifmeasuring@
7050   \else
7051     \Hy@raisedlink{%
7052       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7053     }%
7054   \fi
7055 }
```

```

7054 \fi
7055 }

```

`\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`, L^AT_EX 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 L^AT_EX’, substring search `\in@` can be used.

```

7056 \def\HyCnt@ProvideTheHCounter#1{%
7057   \@ifundefined{theH#1}{%
7058     \expandafter\def\csname theH#1\endcsname{%
7059       \def\Hy@temp{\@elt{#1}}%
7060       \ltx@onelevel@sanitize\Hy@temp
7061       \let\HyOrg@elt\@elt
7062       \edef\@elt{%
7063         \noexpand\HyCnt@LookForParentCounter
7064         \expandafter\noexpand\csname theH#1\endcsname
7065       }%
7066       \cl@ckpt
7067       \let\@elt\HyOrg@elt
7068       \expandafter
7069       \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
7070       \expandafter{%
7071         \expandafter\@arabic\csname c@#1\endcsname
7072       }%
7073     }{%
7074   }

```

`\Hy@LookForParentCounter`

```

7075 \def\HyCnt@LookForParentCounter#1#2{%
7076   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7077   \ltx@ifundefined{cl@#2}{%
7078     }{%
7079     \ltx@onelevel@sanitize\Hy@temp@A
7080     \edef\Hy@temp@A{%
7081       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7082     }\Hy@temp@A
7083     \ifin@
7084       \ltx@ifundefined{theH#2}{%
7085         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7086         \expandafter{%
7087           \expandafter\@arabic\csname c@#2\endcsname.%
7088         }%
7089       }{%
7090         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7091         \expandafter{%
7092           \csname theH#2\endcsname.%
7093         }%
7094       }%
7095     \fi
7096   }%
7097 }

```

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.

```

7098 \begingroup\expandafter\expandafter\expandafter\endgroup
7099 \expandafter\ifx\csname chapter\endcsname\relax
7100 \def\Hy@chapterstring{section}%
7101 \else
7102 \def\Hy@chapterstring{chapter}%
7103 \fi
7104 \def\Hy@appendixstring{appendix}
7105 \def\Hy@chapapp{\Hy@chapterstring}
7106 \ltx@ifundefined{appendix}{%
7107 }{%
7108 \let\HyOrg@appendix\appendix
7109 \def\Hy@AlphNoErr#1{%
7110 \ifnum\value{#1}>26 %
7111 Alph\number\value{#1}%
7112 \else
7113 \ifnum\value{#1}<1 %
7114 Alph\number\value{#1}%
7115 \else
7116 \Alph{#1}%
7117 \fi
7118 \fi
7119 }%
7120 \def\appendix{%
7121 \ltx@ifundefined{chapter}{%
7122 \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7123 }{%
7124 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7125 }%
7126 \xdef\Hy@chapapp{\Hy@appendixstring}%
7127 \HyOrg@appendix
7128 }%
7129 }

```

\Hy@Test@alph

```

7130 \def\Hy@Test@alph#1{%
7131 \ifcase#1\or
7132 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7133 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7134 u\or v\or w\or x\or y\or z%
7135 \else
7136 \@ctrerr
7137 \fi
7138 }

```

\Hy@Test@Alph

```

7139 \def\Hy@Test@Alph#1{%
7140 \ifcase#1\or
7141 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7142 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7143 U\or V\or W\or X\or Y\or Z%
7144 \else
7145 \@ctrerr
7146 \fi

```

7147 }

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

```
7148 \def\hyper@makecurrent#1{%
7149   \begingroup
7150   \Hy@safe@activetrue
7151   \edef\Hy@param{#1}%
7152   \ifx\Hy@param\Hy@chapterstring
7153     \let\Hy@param\Hy@chapapp
7154   \fi
7155   \ifHy@hypertextnames
7156     \let\@number\@firstofone
7157     \def\@fnsymbol##1{fnsymbol\number##1}%
7158     \def\@arabic##1{\number##1}%
7159     \ifx\@alph\Hy@Test@alph
7160       \else
7161         \def\@alph{alph\number}%
7162       \fi
7163     \ifx\@Alph\Hy@Test@Alph
7164       \else
7165         \def\@Alph{Alph\number}%
7166       \fi
7167     \ifHy@naturalnames
7168       \let\textlatin\@firstofone
7169       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7170     \else
7171       \xdef\HyperGlobalCurrentHref{%
7172         \csname
7173           the%
7174           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7175           #1%
7176         \endcsname
7177       }%
7178     \fi
7179     \xdef\HyperGlobalCurrentHref{%
7180       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7181     }%
7182   \else
7183     \Hy@GlobalStepCount\Hy@linkcounter
7184     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7185   \fi
7186 \endgroup
7187 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7188 \ifHy@localanchorname
7189   \let\@currentHref\HyperLocalCurrentHref
7190 \else
7191   \global\let\@currentHref\HyperGlobalCurrentHref
7192 \fi
7193 }
```

\Hy@MakeCurrentHref

```
7194 \def\Hy@MakeCurrentHref#1{%
7195   \edef\HyperLocalCurrentHref{#1}%
7196   \@onelevel@sanitize\HyperLocalCurrentHref
7197   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7198   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7199 }
```

```

7199 \ifHy@localanchorname
7200   \let\@currentHref\HyperLocalCurrentHref
7201 \else
7202   \global\let\@currentHref\HyperGlobalCurrentHref
7203 \fi
7204 }

```

`\Hy@MakeCurrentHrefAuto`

```

7205 \def\Hy@MakeCurrentHrefAuto#1{%
7206   \Hy@GlobalStepCount\Hy@linkcounter
7207   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7208 }

```

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

```

7209 \def\@currentHlabel{\@currentHref}

7210 \@ifpackageloaded{fancyvrb}{%
7211   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
7212     \def\FV@StepLineNo{%
7213       \FV@SetLineNo
7214       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7215       \FV@StepLineNo
7216     }%
7217   }%
7218 }{}

```

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`

```

7219 \Hy@AtBeginDocument{%
7220   \@ifclassloaded{revtex4}{%
7221     \@namedef{ver@lastpage.sty}{1994/06/25}%
7222   }{}%
7223   \@ifpackageloaded{lastpage}{%
7224     \ifHy@pageanchor
7225     \else
7226       \Hy@WarningNoLine{%
7227         The \string\pageref{LastPage} link doesn't work\MessageBreak
7228         with disabled option 'pageanchor'%
7229       }%
7230     \fi
7231     \def\lastpage@putlabel{%
7232       \addtocounter{page}{-1}%
7233       \if@files
7234         \begingroup
7235         \let\@number\@firstofone
7236         \ifHy@pageanchor
7237           \ifHy@hypertextnames

```

```

7238     \ifHy@plainpages
7239     \def\Hy@temp{\arabic{page}}%
7240     \else
7241     \Hy@unicodedefalse
7242     \pdfstringdef\Hy@temp{\thepage}%
7243     \fi
7244     \else
7245     \def\Hy@temp{\the\Hy@pagecounter}%
7246     \fi
7247     \fi
7248     \immediate\write\@auxout{%
7249     \string\newlabel
7250     {LastPage}{\thepage}}%
7251     \ifHy@pageanchor page.\Hy@temp\fi}%
7252   }%
7253 \endgroup
7254 \fi
7255 \addtocounter{page}{1}%
7256 }%
7257 \@ifclassloaded{revtex4}{%
7258 \begingroup
7259 \toks@{\expandafter\lastpage@putlabel}%
7260 \edef\x{\endgroup
7261 \def\noexpand\lastpage@putlabel{%
7262 \noexpand\stepcounter{page}%
7263 \the\toks@
7264 \noexpand\addtocounter{page}\noexpand\m@ne
7265 }%
7266 }%
7267 \x
7268 }{}%
7269 }{}%
7270 }
7271 \</package>
7272 \< *check>
7273 \checkpackage{lastpage}[1994/06/25]
7274 \checkcommand\def\lastpage@putlabel{%
7275 \addtocounter{page}{-1}%
7276 \immediate\write\@auxout{%
7277 \string\newlabel{LastPage}{\thepage}}%
7278 }%
7279 \addtocounter{page}{1}%
7280 }
7281 \</check>
7282 \< *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.

```

7283 \def\hypergetref#1{\getrefbykeydefault{#1}{}}
7284 \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:

```
7285 \@ifpackageloaded{titlesec}{%
7286   \def\ttl@Hy@steplink#1{%
7287     \Hy@MakeCurrentHrefAuto{#1*}%
7288     \edef\ttl@Hy@saveanchor{%
7289       \noexpand\Hy@raisedlink{%
7290         \noexpand\hyper@anchorstart{\@currentHref}%
7291         \noexpand\hyper@anchorend
7292       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7293       \noexpand\ttl@Hy@PatchSaveWrite
7294     }%
7295   }%
7296 }%
7297 \def\ttl@Hy@PatchSaveWrite{%
7298   \begingroup
7299   \toks@{\expandafter{\ttl@savewrite}}%
7300   \edef\x{\endgroup
7301     \def\noexpand\ttl@savewrite{%
7302       \let\noexpand\@currentHref
7303       \noexpand\ttl@Hy@SavedCurrentHref
7304       \the\toks@
7305     }%
7306   }%
7307   \x
7308 }%
7309 \def\ttl@Hy@refstepcounter#1{%
7310   \let\ttl@b\Hy@raisedlink
7311   \def\Hy@raisedlink##1{%
7312     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7313   }%
7314   \refstepcounter{#1}%
7315   \let\Hy@raisedlink\ttl@b
7316 }%
7317 }
```

Package titletoc support:

```
7318 \@ifpackageloaded{titletoc}{%
7319   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7320 }
```

33 Package varioref support

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

```
7321 \def\Hy@varioref@undefined{??}{?}{-}{-}{-}
7322 \@ifpackageloaded{varioref}{%
7323   \def\vref@pagenum#1#2{%
7324     \@ifundefined{r@#2}{%
7325       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7326     }{}%
7327     \edef#1{\getpagerefnumber{#2}}%
7328   }%
7329 }
```


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

```

7330 \def\Hy@varioref@refstepcounter#1{%
7331   \stepcounter{#1}%
7332   \protected@edef\@currentlabel{%
7333     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7334   }%
7335 }
7336 \AtBeginDocument{%
7337   \ifx\refstepcounter\Hy@varioref@refstepcounter
7338     \let\H@refstepcounter\refstepcounter
7339     \let\refstepcounter\Hy@saved@refstepcounter
7340   \fi
7341 }
```

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

```

7342 \@ifpackageloaded{longtable}{%
7343   \begingroup
7344   \def\y{\LT@array}%
7345   \@ifundefined{scr@LT@array}{%
7346     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7347   }}{\def\y{\scr@LT@array}}%
7348   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7349     \expandafter\endgroup
7350     \expandafter\def\y[##1]##2{%
7351       \H@refstepcounter{#1}%
7352       \hyper@makecurrent{table}%
7353       \let\Hy@LT@currentHref\@currentHref
7354       #2\@sharp###4%
7355     }%
7356   }%
7357   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
```

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

```

7358 \begingroup
7359 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7360   \endgroup
7361   \def\LT@start{%
7362     #1%
7363     \ifvoid\LT@foot#2\fi
7364     \let\@currentHref\Hy@LT@currentHref
7365     \Hy@raisedlink{%
7366       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7367     }%
7368     #3%
7369   }%
7370 }%
7371 \expandafter\x\LT@start\@nil
7372 }
```

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.

```

7373 \let\new@refstepcounter\refstepcounter
7374 \let\H@equation\equation
7375 \let\H@endequation\endequation

7376 \@ifpackageloaded{amsmath}{%
7377   \long\def\Hy@temp{%
7378     \incr@eqnum
7379     \mathdisplay@push
7380     \st@rredfalse \global\@eqnswtrue
7381     \mathdisplay{equation}%
7382   }%
7383   \ifx\Hy@temp\equation
7384     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7385       \csname iftrue\endcsname
7386   \else
7387     \long\def\equation{%
7388       \mathdisplay@push
7389       \st@rredfalse \global\@eqnswtrue
7390       \mathdisplay{equation}%
7391       \incr@eqnum
7392     }%
7393   \fi
7394 \fi
7395 }{%
7396 \def\equation{%
7397   \let\refstepcounter\H@refstepcounter
7398   \H@equation
7399   \@ifundefined{theHequation}{%
7400     \make@stripped@name{\theequation}%
7401     \let\theHequation\newname
7402   }{%
7403     \hyper@makecurrent{equation}%

```

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

```

7404   \mathopen{%
7405     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7406   }%
7407   \let\refstepcounter\new@refstepcounter
7408 }%
7409 \def\endequation{%
7410   \ifx\Hy@raisedlink\ltx@empty
7411     \hyper@anchorend
7412   \else
7413     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7414   \fi
7415   \H@endequation
7416 }%
7417 }

```

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.

```

7418 \newif\if@eqnstar
7419 \@eqnstarfalse
7420 \let\H@eqnarray\eqnarray
7421 \let\H@endeqnarray\endeqnarray
7422 \def\eqnarray{%
7423   \let\Hy@reserved@a\relax
7424   \def\@currentHref{%
7425     \H@eqnarray
7426     \if@eqnstar
7427     \else
7428       \ifx\@currentHref\%
7429       \else
7430         \ifundefined{theHequation}{%
7431           \make@stripped@name{\theequation}%
7432           \let\theHequation\newname
7433         }{%
7434           \hyper@makecurrent{equation}%
7435           \mathopen{%
7436             \Hy@raisedlink{%
7437               \hyper@anchorstart{\@currentHref}\hyper@anchorend
7438             }%
7439           }%
7440         \fi
7441       \fi
7442     }
7443   \def\endeqnarray{%
7444     \H@endeqnarray
7445   }

```

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.

```

7446 \@namedef{eqnarray*}{%
7447   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7448 }
7449 \@namedef{endeqnarray*}{%
7450   \nonumber\endeqnarray\@eqnstarfalse
7451 }

```

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

```

7452 \ltx@ifundefined{subeqnarray}{%
7453   \let\H@subeqnarray\subeqnarray
7454   \let\H@endsubeqnarray\endsubeqnarray
7455   \def\subeqnarray{%
7456     \let\Hy@reserved@a\relax
7457     \H@subeqnarray
7458     \@ifundefined{theHequation}{%
7459       \make@stripped@name{\theequation}%
7460       \let\theHequation\newname
7461     }{%
7462       \hyper@makecurrent{equation}%
7463       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7464     }%
7465   \def\endsubeqnarray{%

```

```

7466 \H@endsubeqnarray
7467 }%
7468 \providecommand\theHsubequation{\theHequation\alph{subequation}}}%
7469 }

```

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

```

7470 \def\make@stripped@name#1{%
7471 \begingroup
7472 \escapechar\m@ne
7473 \global\let\newname\@empty
7474 \protected@edef\Hy@tempa{#1}%
7475 \edef\@tempb{%
7476 \noexpand\@tfor\noexpand\Hy@tempa:=%
7477 \expandafter\strip@prefix\meaning\Hy@tempa
7478 }%
7479 \@tempb\do{%
7480 \if{\Hy@tempa\else
7481 \if}\Hy@tempa\else
7482 \xdef\newname{\newname\Hy@tempa}%
7483 \fi
7484 \fi
7485 }%
7486 \endgroup
7487 }

```

Support for amsmath's subequations:

```

7488 \begingroup\expandafter\expandafter\expandafter\endgroup
7489 \expandafter\ifx\csname subequations\endcsname\relax
7490 \else
7491 \let\HyOrg@subequations\subequations
7492 \def\subequations{%
7493 \stepcounter{equation}%
7494 \protected@edef\theHparentequation{%
7495 \ifundefined{theHequation}\theequation\theHequation
7496 }%
7497 \addtocounter{equation}{-1}%
7498 \HyOrg@subequations
7499 \def\theHequation{\theHparentequation\alph{equation}}}%
7500 \ignorespaces
7501 }%
7502 \fi

```

Support for package `amsthm` (Daniel Müllner):

```

7503 \@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

7504 \def\Hy@temp#1#2#3{%
7505 \ifhmode\unskip\unskip\par\fi
7506 \normalfont
7507 \trivlist
7508 \let\thmheadnl\relax
7509 \let\thm@swap\@gobble
7510 \let\thm@indent\indent % indent
7511 \thm@headfont{\scshape}% heading font small caps

```

```

7512 \thm@notefont{\fontseries\mddefault\upshape}%
7513 \thm@headpunct{.}% add period after heading
7514 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7515 \thm@space@setup
7516 #1% style overrides
7517 \@topsep \thm@preskip % used by thm head
7518 \@topsepadd \thm@postskip % used by \@endparenv
7519 \def\@tempa{#2}\ifx\@empty\@tempa
7520 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7521 \else
7522 \refstepcounter{#2}%
7523 \def\@tempa{%
7524 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7525 }%
7526 \fi
7527 \@tempa
7528 }%
7529 \ifx\Hy@temp\@thm
7530 \def\@thm#1#2#3{%
7531 \ifhmode
7532 \unskip\unskip\par
7533 \fi
7534 \normalfont
7535 \trivlist
7536 \let\thmheadnl\relax
7537 \let\thm@swap\@gobble
7538 \let\thm@indent\indent % indent
7539 \thm@headfont{\scshape}% heading font small caps
7540 \thm@notefont{\fontseries\mddefault\upshape}%
7541 \thm@headpunct{.}% add period after heading
7542 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7543 \thm@space@setup
7544 #1% style overrides
7545 \@topsep \thm@preskip % used by thm head
7546 \@topsepadd \thm@postskip % used by \@endparenv
7547 \def\dth@counter{#2}%
7548 \ifx\@empty\dth@counter
7549 \def\@tempa{%
7550 \@oparg{\@begintheorem{#3}{}}{}}%
7551 }%
7552 \else
7553 \H@refstepcounter{#2}%
7554 \hyper@makecurrent{#2}%
7555 \let\Hy@dth@currentHref\@currentHref
7556 \def\@tempa{%
7557 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7558 }%
7559 \fi
7560 \@tempa
7561 }%
7562 \else
7563 \def\@thm#1#2#3{%
7564 \ifhmode
7565 \unskip\unskip\par
7566 \fi
7567 \normalfont
7568 \trivlist

```

```

7569 \let\thmheadnl\relax
7570 \let\thm@swap\@gobble
7571 \thm@notefont{\fontseries\mddefault\upshape}%
7572 \thm@headpunct{.}% add period after heading
7573 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7574 \thm@space@setup
7575 #1% style overrides
7576 \@topsep \thm@preskip % used by thm head
7577 \@topsepadd \thm@postskip % used by \@endparenv
7578 \def\dth@counter{#2}%
7579 \ifx\@empty\dth@counter
7580 \def\@tempa{%
7581 \@oparg{\@begintheorem{#3}{}}{}%
7582 }%
7583 \else
7584 \H@refstepcounter{#2}%
7585 \hyper@makecurrent{#2}%
7586 \let\Hy@dth@currentHref\@currentHref
7587 \def\@tempa{%
7588 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7589 }%
7590 \fi
7591 \@tempa
7592 }%
7593 \fi
7594 \dth@everypar={%
7595 \@minipagefalse
7596 \global\@newlistfalse
7597 \@noparitemfalse
7598 \if@inlabel
7599 \global\@inlabelfalse
7600 \begingroup
7601 \setbox\z@\lastbox
7602 \ifvoid\z@
7603 \kern-\itemindent
7604 \fi
7605 \endgroup
7606 \ifx\@empty\dth@counter
7607 \else
7608 \Hy@raisedlink{%
7609 \hyper@anchorstart{%
7610 \ifundefined{Hy@dth@currentHref}%
7611 \@currentHref\Hy@dth@currentHref
7612 }\hyper@anchorend
7613 }%
7614 \fi
7615 \unhbox\@labels
7616 \fi
7617 \if@nobreak
7618 \@nobreakfalse \clubpenalty\@M
7619 \else
7620 \clubpenalty\@clubpenalty \everypar{}%
7621 \fi
7622 }%
7623 }{}

```

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.

```

7624 \ifHy@hyperfootnotes
7625   \newcounter{Hfootnote}%
7626   \let\H@@@footnotetext\@footnotetext
7627   \let\H@@@footnotemark\@footnotemark
7628   \def\@xfootnotenext[#1]{%
7629     \begingroup
7630       \csname c@\@mpfn\endcsname #1\relax
7631       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7632     \endgroup
7633     \ifx\@footnotetext\@mpfootnotetext
7634       \expandafter\H@@@mpfootnotetext
7635     \else
7636       \expandafter\H@@@footnotetext
7637     \fi
7638   }%
7639   \def\@xfootnotemark[#1]{%
7640     \begingroup
7641       \c@footnote #1\relax
7642       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7643     \endgroup
7644     \H@@@footnotemark
7645   }%
7646   \let\H@@@mpfootnotetext\@mpfootnotetext
7647   \long\def\@mpfootnotetext#1{%
7648     \H@@@mpfootnotetext{%
7649       \ifHy@nesting
7650         \expandafter\ltx@firstoftwo
7651       \else
7652         \expandafter\ltx@secondoftwo
7653       \fi
7654     }%
7655     \expandafter\hyper@@@anchor\expandafter{%
7656       \Hy@footnote@currentHref
7657     }{#1}%
7658   }{%
7659     \Hy@raisedlink{%
7660       \expandafter\hyper@@@anchor\expandafter{%
7661         \Hy@footnote@currentHref
7662       }{\relax}%
7663     }#1%
7664   }%
7665   }%
7666 }%
7667 \long\def\@footnotetext#1{%
7668   \H@@@footnotetext{%
7669     \ifHy@nesting
7670       \expandafter\ltx@firstoftwo
7671     \else
7672       \expandafter\ltx@secondoftwo
7673     \fi

```

```

7674 {%
7675   \expandafter\hyper@@anchor\expandafter{%
7676     \Hy@footnote@currentHref
7677   }{#1}%
7678 }{%
7679   \Hy@raisedlink{%
7680     \expandafter\hyper@@anchor\expandafter{%
7681       \Hy@footnote@currentHref
7682     }\relax}%
7683 }%
7684 \let\@currentHref\Hy@footnote@currentHref
7685 \let\@currentlabelname\@empty
7686 #1%
7687 }%
7688 }%
7689 }%

```

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.

```

7690 \def\@footnotemark{%
7691   \leavevmode
7692   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7693   \stepcounter{Hfootnote}%
7694   \global\let\Hy@saved@currentHref\@currentHref
7695   \hyper@makecurrent{Hfootnote}%
7696   \global\let\Hy@footnote@currentHref\@currentHref
7697   \global\let\@currentHref\Hy@saved@currentHref
7698   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7699   \@makefnmark
7700   \hyper@linkend
7701   \ifhmode\spacefactor\@x@sf\fi
7702   \relax
7703 }%

```

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

```

7704 \@ifpackageloaded{tabularx}{%
7705   \let\HyOrg@TX@endtabularx\TX@endtabularx
7706   \def\Hy@tabularx@hook{%
7707     \let\@footnotetext\H@@footnotetext
7708     \let\@footnotemark\H@@footnotemark
7709     \let\@mpfootnotetext\H@@mpfootnotetext
7710   }%
7711   \begingroup
7712     \toks@\expandafter{\TX@endtabularx}%
7713     \xdef\Hy@gtemp{%
7714       \noexpand\Hy@tabularx@hook
7715       \the\toks@
7716     }%
7717   \endgroup
7718   \let\TX@endtabularx\Hy@gtemp
7719 }{}%

```

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

```

7720 \ifpackageloaded{longtable}{%
7721   \CheckCommand*{\LT@p@ftntext}[1]{%
7722     \edef\@tempa{%
7723       \the\LT@p@ftn
7724       \noexpand\footnotetext[\the\c@footnote]%
7725     }%
7726     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7727   }%
7728   \long\def\LT@p@ftntext#1{%
7729     \edef\@tempa{%
7730       \the\LT@p@ftn
7731       \begingroup
7732         \noexpand\c@footnote=\the\c@footnote\relax
7733         \noexpand\protected@xdef\noexpand\@thefnmark{%
7734           \noexpand\thempfn
7735         }%
7736         \noexpand\Hy@LT@footnotetext{%
7737           \Hy@footnote@currentHref
7738         }%
7739       }%
7740       \global\LT@p@ftn\expandafter{%
7741         \@tempa{#1}%
7742       }\endgroup
7743     }%
7744   }%
7745   \long\def\Hy@LT@footnotetext#1#2{%
7746     \H@@@footnotetext{%
7747       \ifHy@nesting
7748         \hyper@@@anchor{#1}{#2}%
7749       \else
7750         \Hy@raisedlink{%
7751           \hyper@@@anchor{#1}{\relax}%
7752         }%
7753         \def\@currentHref{#1}%
7754         \let\@currentlabelname\@empty
7755         #2%
7756       \fi
7757     }%
7758   }%
7759 }{}%
```

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

```

7760 \ifpackageloaded{fancyvrb}{%
7761   \def\V@@@footnotetext{%
7762     \insert\footins\bgroup
7763     \csname reset@font\endcsname
7764     \footnotesize
7765     \interlinepenalty\interfootnotelinepenalty
7766     \splittopskip\footnotesep
7767     \splitmaxdepth\dp\strutbox
7768     \floatingpenalty \@MM
7769     \hsize\columnwidth
7770     \@parboxrestore
7771     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7772     \@makefnmark{}%
7773     \rule{\z@}{\footnotesep}%

```

```

7774 \bgroup
7775 \aftergroup\V@@@footnotetext
7776 \Hy@raisedlink{%
7777   \expandafter\hyper@@anchor\expandafter{%
7778     \Hy@footnote@currentHref
7779   }\relax}%
7780 }%
7781 \let\@currentHref\Hy@footnote@currentHref
7782 \let\@currentlabelname\@empty
7783 \ignorespaces
7784 }%
7785 }{}%

```

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

```

7786 \def\Hy@temp#1{%
7787   \begingroup
7788     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7789   \endgroup
7790   \@footnotemark
7791 }%
7792 \ifx\Hy@temp\footref
7793   \def\footref#1{%
7794     \begingroup
7795       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7796     \endgroup
7797     \H@@@footnotemark
7798   }%
7799 \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.

```

7800 \let\HyOrg@maketitle\maketitle
7801 \def\maketitle{%
7802   \let\Hy@saved@footnotemark\@footnotemark
7803   \let\Hy@saved@footnotetext\@footnotetext
7804   \let\@footnotemark\H@@@footnotemark
7805   \let\@footnotetext\H@@@footnotetext
7806   \@ifnextchar[\Hy@maketitle@optarg{% ]
7807     \HyOrg@maketitle
7808     \Hy@maketitle@end
7809   }%
7810 }%
7811 \def\Hy@maketitle@optarg[#1]{%
7812   \HyOrg@maketitle[{#1}]%
7813   \Hy@maketitle@end
7814 }%
7815 \def\Hy@maketitle@end{%
7816   \ifx\@footnotemark\H@@@footnotemark
7817     \let\@footnotemark\Hy@saved@footnotemark
7818   \fi
7819   \ifx\@footnotetext\H@@@footnotetext
7820     \let\@footnotetext\Hy@saved@footnotetext
7821   \fi
7822 }%

```

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

```

7823 \def\realfootnote{%
7824   \ifnextchar[\@xfootnote{%
7825     \stepcounter{\@mpfn}%
7826     \protected@xdef\@thefnmark{\thempfn}%
7827     \H@@footnotemark\H@@footnotetext
7828   }%
7829 }%

7830 \fi
7831 \Hy@DisableOption{hyperfootnotes}

7832 \</package>
7833 \< *check>
7834 \checklatex
7835 \checkcommand\def\@xfootnotenext[#1]{%
7836   \begingroup
7837   \csname c@\@mpfn\endcsname #1\relax
7838   \unrestored@protected@xdef\@thefnmark{\thempfn}%
7839   \endgroup
7840   \@footnotetext
7841 }
7842 \checkcommand\def\@xfootnotemark[#1]{%
7843   \begingroup
7844   \c@footnote #1\relax
7845   \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7846   \endgroup
7847   \@footnotemark
7848 }
7849 \checkcommand\def\@footnotemark{%
7850   \leavevmode
7851   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7852   \@makefnmark
7853   \ifhmode\spacefactor\@x@sf\fi
7854   \relax
7855 }
7856 \</check>
7857 \< *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.

```

7858 \def\caption{%
7859   \ifx\@capytype\@undefined
7860     \@latex@error{\noexpand\caption outside float}\@ehd
7861     \expandafter\@gobble
7862   \else
7863     \H@refstepcounter\@capytype
7864     \let\Hy@tempa\@caption
7865     \@ifundefined{float@caption}{%
7866       }{%
7867         \expandafter\ifx\csname @float@c@\@capytype\endcsname
7868           \float@caption
7869         \let\Hy@tempa\Hy@float@caption
7870       }
7871     }%
7872     \expandafter\@firstofone

```

```

7873 \fi
7874 {\@dblarg{\Hy@tempa\@captype}}%
7875 }
7876 \long\def\@caption#1[#2]#3{%
7877 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7878 \csname iftrue\endcsname
7879 \global\let\@currentHref\hc@currentHref
7880 \else
7881 \hyper@makecurrent{\@captype}%
7882 \fi
7883 \@ifundefined{NR@gettitle}{%
7884 \def\@currentlabelname{#2}%
7885 }{%
7886 \NR@gettitle{#2}%
7887 }%
7888 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7889 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7890 }%
7891 \begingroup
7892 \@parboxrestore
7893 \if@minipage
7894 \setminipage
7895 \fi
7896 \normalsize
7897 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7898 \csname iftrue\endcsname
7899 \global\@capstartfalse
7900 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7901 \else
7902 \@makecaption{\csname fnum@#1\endcsname}{%
7903 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7904 \ifHy@nesting
7905 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7906 \else
7907 \Hy@raisedlink{%
7908 \expandafter\hyper@@anchor\expandafter{%
7909 \@currentHref
7910 }\relax}%
7911 }%
7912 #3%
7913 \fi
7914 }%
7915 \fi
7916 \par
7917 \endgroup
7918 }

```

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’.

```

7919 \let\Hy@float@caption\@caption
7920 \newcommand{\HyNew@float@makebox}[1]{%
7921 \HyOrg@float@makebox{%
7922 #1\relax

```

```

7923 \ifx\Hy@float@currentHref\@undefined
7924 \else
7925 \expandafter\hyper@anchor\expandafter{%
7926 \Hy@float@currentHref
7927 }{\relax}%
7928 \global\let\Hy@float@currentHref\@undefined
7929 \fi
7930 }%
7931 }%
7932 \@ifpackageloaded{float}{%
7933 \def\Hy@float@caption{%
7934 \ifx\Hy@float@currentHref\@undefined
7935 \hyper@makecurrent{\@cuptype}%
7936 \global\let\Hy@float@currentHref\@currentHref
7937 \else
7938 \let\@currentHref\Hy@float@currentHref
7939 \fi
7940 \float@caption
7941 }%
7942 \let\HyOrg@float@makebox\float@makebox
7943 \let\float@makebox\HyNew@float@makebox
7944 }{}

7945 \</package>
7946 \< *check>
7947 \checklatex[1999/06/01 - 2000/06/01]
7948 \checkcommand\def\caption{%
7949 \ifx\@cuptype\@undefined
7950 \@latex@error{\noexpand\caption outside float}\@ehd
7951 \expandafter\@gobble
7952 \else
7953 \refstepcounter\@cuptype
7954 \expandafter\@firstofone
7955 \fi
7956 {\@dblarg{\@caption\@cuptype}}}%
7957 }
7958 \checkcommand\long\def\@caption#1[#2]#3{%
7959 \par
7960 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7961 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7962 }%
7963 \begingroup
7964 \@parboxrestore
7965 \if@minipage
7966 \@setminipage
7967 \fi
7968 \normalsize
7969 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7970 \endgroup
7971 }
7972 \</check>
7973 \< *package>

```

38 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly

into the .aux file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, lets make an attempt to get *natbib* right, because thats a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

7974 \def\hyper@natlinkstart#1{%
7975   \Hy@backout{#1}%
7976   \hyper@linkstart{cite}{cite.#1}%
7977   \def\hyper@nat@current{#1}%
7978 }
7979 \def\hyper@natlinkend{%
7980   \hyper@linkend
7981 }
7982 \def\hyper@natlinkbreak#1#2{%
7983   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7984 }
7985 \def\hyper@natanchorstart#1{%
7986   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7987 }
7988 \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.

```

7989 \ltx@ifundefined{NAT@parse}{%
7990   \providecommand*\@extra@binfo{}%
7991   \providecommand*\@extra@b@citeb{}%
7992   \def\bibcite#1#2{%
7993     \@newl@bel{b}{#1\@extra@binfo}{%
7994       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7995     }%
7996   }%
7997   \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.”.

```

7998 \let\Hy@bibcite\bibcite
7999 \begingroup
8000   \@ifundefined{bbl@cite@choice}{}{%
8001     \g@addto@macro\bbl@cite@choice{%
8002       \let\bibcite\Hy@bibcite
8003     }%
8004   }%
8005 \endgroup

```

`\@BIBLABEL` is working around a ‘feature’ of RevTeX.

```

8006 \providecommand*\@BIBLABEL{\@biblabel}%
8007 \def\@bibitem[#1]#2{%
8008   \@skiphypreftrue
8009   \H@item[%
8010     \ifx\Hy@raisedlink\@empty
8011       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8012       \@BIBLABEL{#1}%
8013     \hyper@anchorend
8014   \else
8015     \Hy@raisedlink{%

```

```

8016     \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8017     }%
8018     \@BIBLABEL{#1}%
8019     \fi
8020     \hfill
8021   ]%
8022   \@skiphyperreffalse
8023   \if@filesw
8024     \begingroup
8025     \let\protect\noexpand
8026     \immediate\write\@auxout{%
8027       \string\bibcite{#2}{#1}%
8028     }%
8029     \endgroup
8030   \fi
8031   \ignorespaces
8032 }%

```

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

```

8033 \def\@bibitem#1{%
8034   \@skiphyperrefftrue\H@item\@skiphyperreffalse
8035   \Hy@raisedlink{%
8036     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8037   }%
8038   \if@filesw
8039     \begingroup
8040     \let\protect\noexpand
8041     \immediate\write\@auxout{%
8042       \string\bibcite{#1}{\the\value{\@listctr}}}%
8043     }%
8044     \endgroup
8045   \fi
8046   \ignorespaces
8047 }%
8048 }{}

8049 \</package>
8050 \<*check>
8051 \checklatex
8052 \checkcommand\def\@lbibitem[#1]#2{%
8053   \item[\@biblabel{#1}\hfill]%
8054   \if@filesw
8055     {%
8056       \let\protect\noexpand
8057       \immediate\write\@auxout{%
8058         \string\bibcite{#2}{#1}%
8059       }%
8060     }%
8061   \fi
8062   \ignorespaces
8063 }
8064 \checkcommand\def\@bibitem#1{%
8065   \item
8066   \if@filesw
8067     \immediate\write\@auxout{%
8068       \string\bibcite{#1}{\the\value{\@listctr}}}%
8069   }%

```

```

8070 \fi
8071 \ignorespaces
8072 }
8073 </check>
8074 <*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.

```

8075 \ifclassloaded{revtex}{%
8076 \Hy@Info{*** compatibility with revtex **** }%
8077 \def\revtex@checking#1#2{%
8078 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8079 \expandafter\def\csname b@#1\endcsname{#2}%
8080 \@SetMaxRnhefLabel{#1}%
8081 \expandafter\let\csname b@#1\endcsname\T@temp
8082 }%

```

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

```

8083 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8084 \providecommand*\@extra@b@citeb{}%
8085 \def\CITEX[#1]#2{%
8086 \let\@citea\@empty
8087 \leavevmode
8088 \unskip
8089 $\{ %
8090 \scriptstyle
8091 \@CITE{%
8092 \@for\@citeb:=#2\do{%
8093 \@citea
8094 \def\@citea{,\penalty\@m\ }%
8095 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8096 \if@filesw
8097 \immediate\write\@auxout{\string\citation{\@citeb}}%
8098 \fi
8099 \@ifundefined{b@\@citeb\extra@b@citeb}{%
8100 \mbox{\reset@font\bfseries ?}%
8101 \G@refundefinedtrue
8102 \@latex@warning{%
8103 Citation ‘\@citeb’ on page \thepage \space undefined%
8104 }%
8105 }{%
8106 {\csname b@\@citeb\@extra@b@citeb\endcsname}%
8107 }%
8108 }%
8109 }{#1}%
8110 }$%
8111 }%

```

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.

```

8112 \def\@citex[#1]#2{%
8113 \let\@citea\@empty
8114 \@cite{%
8115 \@for\@citeb:=#2\do{%
8116 \@citea
8117 \def\@citea{,\penalty\@m\ }%

```



```

8118 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8119 \if@filesw
8120 \immediate\write\@auxout{\string\citation{\@citeb}}}%
8121 \fi
8122 \ifundefined{b@\@citeb\@extra@b@citeb}{%
8123 \mbox{\reset@font\bfseries ?}%
8124 \G@refundefinedtrue
8125 \@latex@warning{%
8126 Citation '\@citeb' on page \thepage \space undefined%
8127 }%
8128 }{%
8129 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8130 }%
8131 }%
8132 }{#1}%
8133 }%
8134 }{}

```

38.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to `\begin{document}`, because if `harvard.sty` is loaded and `html.sty` is present and detects `pdfTeX`, then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

8135 \ifpackageloaded{harvard}{%
8136 \Hy@AtBeginDocument{%
8137 \Hy@Info{*** compatibility with harvard **** }%
8138 \Hy@raiselinksfalse
8139 \def\harvardcite#1#2#3#4{%
8140 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
8141 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
8142 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
8143 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8144 }%
8145 \def\HAR@citetoaux#1{%
8146 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8147 \ifHy@backref
8148 \ifx\@empty\@currentlabel
8149 \else
8150 \@bsphack
8151 \if@filesw
8152 \protected@write\@auxout{}{%
8153 \string\@writefile{brf}{%
8154 \string\backcite{#1}{%
8155 {\thepage}{\@currentlabel}{\@currentHref}%
8156 }%
8157 }%
8158 }%
8159 \fi
8160 \@esphack
8161 \fi
8162 \fi
8163 }%

```

```

8164 \def\harvarditem{%
8165   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}}%
8166 }%
8167 \def\@harvarditem[#1]#2#3#4#5\par{%
8168   \item[]%
8169   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8170   \if@filesw
8171     \begingroup
8172       \def\protect##1{\string ##1\space}%
8173       \ifthenelse{\equal{#1}{\null}}{%
8174         {\def\next{{#4}{#2}{#2}{#3}}}%
8175         {\def\next{{#4}{#2}{#1}{#3}}}%
8176       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8177     \endgroup
8178   \fi
8179   \protect\hspace*{-\labelwidth}%
8180   \protect\hspace*{-\labelsep}%
8181   \ignorespaces
8182   #5%
8183   \ifHy@backref
8184     \newblock
8185     \backref{\csname br@#4\endcsname}%
8186   \fi
8187   \par
8188 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkcitations will fail every time and always will appear the “Changed labels” warning. So we have to redefine \Har@checkcitations:

```

8189 \long\def\HAR@checkcitations#1#2#3#4{%
8190   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8191   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8192     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8193     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8194       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8195       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8196       \else
8197         \@tempswatrue
8198       \fi
8199     \else
8200       \@tempswatrue
8201     \fi
8202   \else
8203     \@tempswatrue
8204   \fi
8205 }%
8206 }%
8207 }{}

```

38.2 Package chicago

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

```

8208 \@ifpackageloaded{chicago}{%

```

\citeN

```

8209 \def\citeN{%

```

```

8210 \def\@citeseppen{-1000}%
8211 \def\@cite##1##2{##1}%
8212 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8213 \@citedata@opt
8214 }%

\shortciteN
8215 \def\shortciteN{%
8216 \def\@citeseppen{-1000}%
8217 \def\@cite##1##2{##1}%
8218 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8219 \@citedata@opt
8220 }%

\@citedata@opt
8221 \def\@citedata@opt{%
8222 \let\@cite@opt\@empty
8223 \@ifnextchar [{%
8224 \@tempswatrue
8225 \@citedatax@opt
8226 }{%
8227 \@tempswafalse
8228 \@citedatax[]%
8229 }%
8230 }%

\@citedatax@opt
8231 \def\@citedatax@opt[#1]{%
8232 \def\@cite@opt{, #1}%
8233 \@citedatax[{#1}]%
8234 }%

8235 }{}

```

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.

```

8236 \ltx@ifclassloaded{slides}{%
8237 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8238 \def\Hy@PageAnchorSlidesPlain{%
8239 \advance\c@page\ltx@one
8240 \edef\Hy@TempPageAnchor{%
8241 \noexpand\hyper@@anchor{%
8242 page.\the\c@slide.\the\c@overlay.\the\c@note%
8243 \ifnum\c@page=\ltx@one
8244 \else
8245 .\the\c@page
8246 \fi
8247 }%
8248 }%
8249 \advance\c@page-\ltx@one

```

```

8250 }%
8251 \def\Hy@PageAnchorSlide{%
8252   \advance\c@page\ltx@one
8253   \ifnum\c@page>\ltx@one
8254     \ltx@ifundefined{theHpage}{%
8255       \protected@edef\Hy@TheSlideOptionalPage{%
8256         \Hy@SlidesFormatOptionalPage{theHpage}%
8257       }%
8258     }{%
8259       \protected@edef\Hy@TheSlideOptionalPage{%
8260         \Hy@SlidesFormatOptionalPage{theHpage}%
8261       }%
8262     }%
8263   \else
8264     \def\Hy@TheSlideOptionalPage{}%
8265   \fi
8266   \advance\c@page-\ltx@one
8267   \pdfstringdef\@the@H@page{%
8268     \csname
8269       the%
8270       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8271       \Hy@SlidesPage
8272     \endcsname
8273     \Hy@TheSlideOptionalPage
8274   }%
8275   \ltx@gobblethree
8276 }%
8277 \def\Hy@SlidesPage{slide}%
8278 \g@addto@macro\slide{%
8279   \def\Hy@SlidesPage{slide}%
8280 }%
8281 \g@addto@macro\overlay{%
8282   \def\Hy@SlidesPage{overlay}%
8283 }%
8284 \g@addto@macro\note{%
8285   \def\Hy@SlidesPage{note}%
8286 }%
8287 }{%
8288   \def\Hy@PageAnchorSlidesPlain{}%
8289   \def\Hy@PageAnchorSlide{}%
8290 }
8291 \def\Hy@EveryPageAnchor{%
8292   \Hy@DistillerDestFix
8293   \ifHy@pageanchor
8294     \ifHy@hypertextnames
8295       \ifHy@plainpages
8296         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8297         \Hy@PageAnchorSlidesPlain
8298       \else
8299         \begingroup
8300           \let\@number\@firstofone
8301           \Hy@unicodedefalse
8302           \Hy@PageAnchorSlide
8303           \pdfstringdef\@the@H@page{\the@H@page}%
8304         \endgroup
8305         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8306         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%

```

```

8307 \fi
8308 \else
8309 \Hy@GlobalStepCount\Hy@pagecounter
8310 \def\Hy@TempPageAnchor{%
8311 \hyper@@anchor{page.\the\Hy@pagecounter}%
8312 }%
8313 \fi
8314 \vbox to 0pt{%
8315 \kern\voffset
8316 \kern\topmargin
8317 \kern-1bp\relax
8318 \hbox to 0pt{%
8319 \kern\hoffset
8320 \kern\ifodd\value{page}%
8321 \oddsidemargin
8322 \else
8323 \evensidemargin
8324 \fi
8325 \kern-1bp\relax
8326 \Hy@TempPageAnchor\relax
8327 \hss
8328 }%
8329 \vss
8330 }%
8331 \fi
8332 }
8333 \g@addto@macro\Hy@EveryPageBoxHook{%
8334 \Hy@EveryPageAnchor
8335 }

```

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.

```

8336 \def\addcontentsline#1#2#3{% toc extension, type, tag
8337 \begingroup
8338 \let\label\@gobble
8339 \ifx\@currentHref\@empty
8340 \Hy@Warning{%
8341 No destination for bookmark of \string\addcontentsline,%
8342 \MessageBreak destination is added%
8343 }%
8344 \phantomsection
8345 \fi
8346 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8347 \begingroup
8348 \def\Hy@tempa{#1}%
8349 \ifx\Hy@tempa\Hy@bookmarkstype
8350 \Hy@WarningNoLine{%
8351 bookmark level for unknown #2 defaults to 0%
8352 }%
8353 \else
8354 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8355 \fi
8356 \endgroup

```

```

8357 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8358 \fi
8359 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8360 \Hy@writebookmark{\csname the#2\endcsname}%
8361 {#3}%
8362 {\@currentHref}%
8363 {\Hy@toplevel}%
8364 {#1}%
8365 \ifHy@verbose
8366 \begingroup
8367 \def\Hy@tempa{#3}%
8368 \@onelevel@sanitize\Hy@tempa
8369 \let\temp@online\on@line
8370 \let\on@line\@empty
8371 \Hy@Info{%
8372 bookmark\temp@online:\MessageBreak
8373 thecounter {\csname the#2\endcsname}\MessageBreak
8374 text {\Hy@tempa}\MessageBreak
8375 reference {\@currentHref}\MessageBreak
8376 toplevel {\Hy@toplevel}\MessageBreak
8377 type {#1}%
8378 }%
8379 \endgroup
8380 \fi
8381 \addtocontents{#1}{%
8382 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
8383 }%
8384 \endgroup
8385 }

```

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

```

8386 \def\contentsline#1#2#3#4{%
8387 \begingroup
8388 \Hy@safe@activestrue
8389 \edef\x{\endgroup
8390 \def\noexpand\Hy@tocdestname{#4}%
8391 }\x
8392 \ifx\Hy@tocdestname\ltx@empty
8393 \csname l@#1\endcsname{#2}{#3}%
8394 \else
8395 \ifcase\Hy@linktoc % none
8396 \csname l@#1\endcsname{#2}{#3}%
8397 \or % section
8398 \csname l@#1\endcsname{%
8399 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8400 }{#3}%
8401 \or % page
8402 \def\Hy@temp{#3}%
8403 \ifx\Hy@temp\ltx@empty
8404 \csname l@#1\endcsname{#2}{#3}%
8405 \else
8406 \csname l@#1\endcsname{{#2}}{%
8407 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8408 }%
8409 \fi
8410 \else % all

```

```

8411 \def\Hy@temp{#3}%
8412 \ifx\Hy@temp\ltx@empty
8413 \csname l@#1\endcsname{%
8414 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8415 }{}%
8416 \else
8417 \csname l@#1\endcsname{%
8418 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8419 }{}%
8420 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8421 }%
8422 \fi
8423 \fi
8424 \fi
8425 }

8426 \end{package}
8427 \end{check}
8428 \checklatex
8429 \checkcommand\def\addcontentsline#1#2#3{%
8430 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
8431 }
8432 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8433 \end{check}
8434 \end{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.

```

8435 \let\H@definecounter\@definecounter
8436 \def\@definecounter#1{%
8437 \H@definecounter{#1}%
8438 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8439 }

```

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.

```

8440 \let\H@newctr\@newctr
8441 \def\@newctr#1[#2]{%
8442 \H@newctr#1[#2]%
8443 \expandafter\gdef\csname theH#1\endcsname{%
8444 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}}%
8445 }%
8446 }

```

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.

```

8447 \@ifpackageloaded{amsmath}{%

```

```

8448 \def\Hy@make@anchor{%
8449   \Hy@MakeCurrentHrefAuto{AMS}%
8450   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8451 }%
8452 \def\Hy@make@df@tag@@#1{%
8453   \gdef\df@tag{%
8454     \maketag@@@{\Hy@make@anchor#1}%
8455     \def\@currentlabel{#1}%
8456   }%
8457 }%
8458 \def\Hy@make@df@tag@@@#1{%
8459   \gdef\df@tag{%
8460     \tagform@{\Hy@make@anchor#1}%
8461     \toks@{\Exp{\p@equation{#1}}}%
8462     \edef\@currentlabel{the\toks@}%
8463   }%
8464 }%
8465 \let\HyOrg@make@df@tag@@\make@df@tag@@
8466 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8467 \let\make@df@tag@@\Hy@make@df@tag@@
8468 \let\make@df@tag@@@\Hy@make@df@tag@@@
8469 }{}

```

Only play with `\seteqlebal` if we are using pdf_{tex}. Other drivers cause problems; requested by Michael Downes (AMS).

```

8470 \@ifpackagewith{hyperref}{pdftex}{%
8471   \let\H@seteqlabel\@seteqlabel
8472   \def\@seteqlabel#1{%
8473     \H@seteqlabel{#1}%
8474     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8475     \Hy@raisedlink{%
8476       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8477     }%
8478   }%
8479 }{}

```

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.

```

8480 \let\HyOrg@addtoreset\@addtoreset
8481 \def\@addtoreset#1#2{%
8482   \HyOrg@addtoreset{#1}{#2}%
8483   \expandafter\xdef\csname theH#1\endcsname{%
8484     \expandafter\noexpand
8485     \csname the\@ifundefined{theH#2}{H#2}\endcsname

```



```

8486 .\noexpand\the\noexpand\value{#1}%
8487 }%
8488 }

```

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

```

8489 \</package>
8490 \< *check>
8491 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8492 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8493   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8494     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8495       \@addtoreset{#2}{#3}%
8496       \@xp\xdef\csname the#2\endcsname{%
8497         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8498       }%
8499     }%
8500   }%
8501 }%
8502 \</check>
8503 \< *package>
8504 \@ifpackageloaded{amsmath}{%
8505   \@ifpackagelater{amsmath}{1999/12/14}{%
8506     \renewcommand*{\numberwithin}[3][\arabic]{%
8507       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8508         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8509           \HyOrg@addtoreset{#2}{#3}%
8510           \@xp\xdef\csname the#2\endcsname{%
8511             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8512           }%
8513           \@xp\xdef\csname theH#2\endcsname{%
8514             \@xp\@nx
8515             \csname the\@ifundefined{theH#3}{H#3\endcsname
8516               .\@nx#1{#2}%
8517             }%
8518           }%
8519         }%
8520       }%
8521     }{%
8522       \Hy@WarningNoLine{%
8523         \string\numberwithin\space of package ‘amsmath’ %
8524         only fixed\MessageBreak
8525         for version 2000/06/06 v2.12 or newer%
8526       }%
8527     }%
8528 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8529 \ifHy@hyperfigures
8530   \let\Hy@Gin@setfile\Gin@setfile
8531   \def\Gin@setfile#1#2#3{%
8532     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8533   }%
8534 \fi

```

8535 \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.

```

8536 \ifHy@hyperindex
8537   \def\HyInd@ParenLeft{({}%
8538   \def\HyInd@ParenRight{)}}%
8539   \def\hyperindexformat#1#2{%
8540     \let\HyOrg@hyperpage\hyperpage
8541     \let\hyperpage\@firstofone
8542     #1{\HyOrg@hyperpage{#2}}}%
8543     \let\hyperpage\HyOrg@hyperpage
8544   }%
8545   \Hy@nextfalse
8546   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8547   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8548   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8549   \begingroup
8550   \lccode'\|=\expandafter'\HyInd@EncapChar\relax
8551   \lccode'\|/\|=\|\\relax
8552   \lowercase{\endgroup
8553   \ifHy@next
8554     \let\HyInd@org@wrindex\@wrindex
8555     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\\}%
8556     \def\HyInd@@wrindex#1#2|#3|#4\\{%
8557       \ifx\\#3\\%
8558         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8559       \else
8560         \HyInd@@@wrindex{#1}{#2}#3\\%
8561       \fi
8562     }%
8563     \def\HyInd@@@wrindex#1#2#3#4\\{%
8564       \def\Hy@temp@A{#3}%
8565       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8566         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8567       \relax
8568       \HyInd@org@wrindex{#1}{%
8569         #2|hyperindexformat{/#3#4}%
8570       }%
8571     \else
8572       \ifx\\#4\\%
8573         \ifx\Hy@temp@A\HyInd@ParenRight
8574           \HyInd@org@wrindex{#1}{#2|#3}%
8575         \else
8576           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8577         \fi

```

```

8578     \else
8579         \HyInd@org@wrindex{#1}{%
8580             #2|#3hyperindexformat{/#4}%
8581         }%
8582     \fi
8583 \fi
8584 }%
8585 \else
8586     \def\@wrindex#1{\@wrindex#1||\}%
8587     \def\@wrindex#1|#2|#3\{\%
8588         \if@filesw
8589             \ifx\#2\%
8590                 \protected@write\@indexfile{%
8591                     \string\indexentry{#1|hyperpage}{\thepage}%
8592                 }%
8593             \else
8594                 \HyInd@@@wrindex{#1}#2\%
8595             \fi
8596         \fi
8597     \endgroup
8598     \@esphack
8599 }%
8600 \def\HyInd@@@wrindex#1#2#3\{\%
8601     \def\Hy@temp@A{#2}%
8602     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8603         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8604         \relax
8605     \protected@write\@indexfile{%
8606         \string\indexentry{%
8607             #1|hyperindexformat{/#2#3}%
8608         }{\thepage}%
8609     }%
8610 \else
8611     \ifx\#3\%
8612         \ifx\Hy@temp@A\HyInd@ParenRight
8613             \protected@write\@indexfile{%
8614                 \string\indexentry{#1|#2}{\thepage}%
8615             }%
8616         \else
8617             \protected@write\@indexfile{%
8618                 \string\indexentry{#1|#2hyperpage}{\thepage}%
8619             }%
8620         \fi
8621     \else
8622         \protected@write\@indexfile{%
8623             \string\indexentry{%
8624                 #1|#2hyperindexformat{/#3}%
8625             }{\thepage}%
8626         }%
8627     \fi
8628 \fi
8629 }%
8630 \fi
8631 }%
8632 \fi
8633 \Hy@DisableOption{hyperindex}
8634 \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.

```
8635 \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.

```
8636 \def\hyperpage#1{%
8637   \HyInd@hyperpage#1\nohyperpage{}\@nil
8638 }
8639 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8640   \HyInd@@hyperpage{#1}%
8641   #2%
8642   \def\Hy@temp{#3}%
8643   \ifx\Hy@temp\@empty
8644   \else
8645     \tx@ReturnAfterFi{%
8646       \HyInd@hyperpage#3\@nil
8647     }%
8648   \fi
8649 }
8650 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8651 \def\@hyperpage#1--#2--#3\{%
8652   \ifx\#2\%
8653     \@commahyperpage{#1}%
8654   \else
8655     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8656   \fi
8657 }
8658 \def\@commahyperpage#1{\@commahyperpage#1, \}
8659 \def\@commahyperpage#1, #2,#3\{%
8660   \ifx\#2\%
8661     \HyInd@pagelink{#1}%
8662   \else
8663     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8664   \fi
8665 }
```

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

```
8666 \def\HyInd@pagelink#1{%
8667   \begingroup
8668   \toks@={}%
8669   \HyInd@removespaces#1 \@nil
8670   \endgroup
8671 }
8672 \def\HyInd@removespaces#1 #2\@nil{%
8673   \toks@=\expandafter{\the\toks@#1}%
8674   \ifx\#2\%
8675     \edef\x{\the\toks@}%
8676     \ifx\x\@empty
8677     \else
8678       \hyperlink{page.\the\toks@}{\the\toks@}%
8679     \fi
8680   \else
8681     \tx@ReturnAfterFi{%
8682       \HyInd@removespaces#2\@nil
8683     }%
```

```

8684 \fi
8685 }

```

45 Compatibility with foiltex

```

8686 \@ifclassloaded{foils}{%
8687 \providecommand*\ext@table{lot}%
8688 \providecommand*\ext@figure{lof}%
8689 }{}

```

46 Compatibility with seminar slide package

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

```

8690 \@ifclassloaded{seminar}{%
8691 \Hy@seminarslidestrue
8692 \providecommand\theHslide{\arabic{slide}}%
8693 }{%
8694 \Hy@seminarslidesfalse
8695 }
8696 \@ifpackageloaded{slidesec}{%
8697 \providecommand\theHslidesection {\arabic{slidesection}}%
8698 \providecommand\theHslidesubsection{%
8699 \theHslidesection.\arabic{slidesubsection}}%
8700 }%
8701 \def\slide@heading[#1]#2{%
8702 \H@refstepcounter{slidesection}%
8703 \@addtoreset{slidesubsection}{slidesection}%
8704 \addtocontents{los}{%
8705 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8706 {\@SCTR}{\slideheading.\theslidesection}}%
8707 }%
8708 \def\Hy@tempa{#2}%
8709 \ifx\Hy@tempa\@empty
8710 \else
8711 {%
8712 \edef\@currentlabel{%
8713 \csname p@slidesection\endcsname\theslidesection
8714 }%
8715 \makeslideheading{#2}%
8716 }%
8717 \fi
8718 \gdef\theslideheading{#1}%
8719 \gdef\theslidesubheading{}%
8720 \ifHy@bookmarksnumbered
8721 \def\Hy@slidetitle{\theslidesection\space #1}%
8722 \else
8723 \def\Hy@slidetitle{#1}%
8724 \fi
8725 \ifHy@hypertextnames
8726 \ifHy@naturalnames
8727 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8728 \Hy@writebookmark
8729 {\theslidesection}%
8730 {\Hy@slidetitle}%
8731 {slideheading.\theslidesection}%

```

```

8732         {1}%
8733         {toc}%
8734     \else
8735         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8736         \Hy@writebookmark
8737             {\theslidesection}%
8738             {\Hy@slidetitle}%
8739             {slideheading.\theHslidesection}%
8740             {1}%
8741             {toc}%
8742     \fi
8743 \else
8744     \Hy@GlobalStepCount\Hy@linkcounter
8745     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8746     \Hy@writebookmark
8747         {\theslidesection}%
8748         {\Hy@slidetitle}%
8749         {slideheading.\the\Hy@linkcounter}%
8750         {1}%
8751         {toc}%
8752 \fi
8753 }%
8754 \def\slide@subheading[#1]#2{%
8755     \H@refstepcounter{slidesubsection}%
8756     \addtocontents{los}{%
8757         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8758         {\@SCTR}{slideheading.\theslidesubsection}%
8759     }%
8760     \def\Hy@tempa{#2}%
8761     \ifx\Hy@tempa\@empty
8762     \else
8763         {%
8764             \edef\@currentlabel{%
8765                 \csname p@slidesubsection\endcsname\theslidesubsection
8766             }%
8767             \makeslidesubheading{#2}%
8768         }%
8769     \fi
8770     \gdef\theslidesubheading{#1}%
8771     \ifHy@bookmarksnumbered
8772         \def\Hy@slidetitle{\theslidesubsection\space #1}%
8773     \else
8774         \def\Hy@slidetitle{#1}%
8775     \fi
8776     \ifHy@hypertextnames
8777     \ifHy@naturalnames
8778         \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8779         \Hy@writebookmark
8780             {\theslidesubsection}%
8781             {\Hy@slidetitle}%
8782             {slideheading.\theslidesubsection}%
8783             {2}%
8784             {toc}%
8785     \else
8786         \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8787         \Hy@writebookmark
8788             {\theslidesubsection}%

```

```

8789      {\Hy@slidetitle}%
8790      {slideheading.\theHslidesubsection}%
8791      {2}%
8792      {toc}%
8793  \fi
8794  \else
8795    \Hy@GlobalStepCount\Hy@linkcounter
8796    \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8797    \Hy@writebookmark
8798    {\theslidesubsection}%
8799    {\Hy@slidetitle}%
8800    {slideheading.\the\Hy@linkcounter}%
8801    {1}%
8802    {toc}%
8803  \fi
8804 }%
8805 \providecommand*{\listslidenam}{List of Slides}%
8806 \def\listofslides{%
8807   \section*{%
8808     \listslidenam
8809     \@mkboth{%
8810       \expandafter\MakeUppercase\listslidenam
8811     }{%
8812       \expandafter\MakeUppercase\listslidenam
8813     }%
8814   }%
8815   \def\l@slide##1##2##3##4{%
8816     \slide@undottedcline{%
8817       \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
8818     }{%
8819   }%
8820   \let\l@subslide\l@slide
8821   \@startlos
8822 }%
8823 \def\slide@contents{%
8824   \def\l@slide##1##2##3##4{%
8825     \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8826   }%
8827   \let\l@subslide\@gobblefour
8828   \@startlos
8829 }%
8830 \def\Slide@contents{%
8831   \def\l@slide##1##2##3##4{%
8832     \ifcase\lslide@flag
8833       \message{##1 ** \the\c@slidesection}%
8834       \ifnum##1>\c@slidesection
8835         \def\lslide@flag{1}%
8836         {%
8837           \large
8838           \slide@ccline{%
8839             \slidenumberline{$\Rightarrow\bullet$}%
8840             {\hyperlink{##4}{##2}}}%
8841           }{##3}%
8842         }%
8843       \else
8844         {%
8845           \large

```

```

8846         \slide@cline{%
8847         \slidenumberline{$\surd\;\bullet$}%
8848         {\hyperlink{##4}{##2}}}%
8849     }{##3}%
8850 }%
8851 \fi
8852 \or
8853 \def\lslide@flag{2}%
8854 {%
8855     \large
8856     \slide@cline{%
8857     \slidenumberline{$\bullet$}%
8858     {\hyperlink{##4}{##2}}}%
8859     }{##3}%
8860 }%
8861 \or
8862 {%
8863     \large
8864     \slide@cline{%
8865     \slidenumberline{$\bullet$}%
8866     {\hyperlink{##4}{##2}}}%
8867     }{##3}%
8868 }%
8869 \fi
8870 }%
8871 \def\l@subslide##1##2##3##4{%
8872     \ifnum\lslide@flag=1 %
8873     \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
8874     \fi
8875 }%
8876 \def\lslide@flag{0}%
8877 \@startlos
8878 }%
8879 }{}

```

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.)

```

8880 \ifHy@texht
8881   \expandafter\endinput
8882 \fi
8883 \let\real@setref\@setref
8884 \def\@setref#1#2#3{% csname, extract group, refname
8885   \ifx#1\relax
8886     \protect\G@refundefinedtrue
8887     \nfss@text{\reset@font\bfseries ??}%
8888     \@latex@warning{%
8889       Reference ‘#3’ on page \thepage \space undefined%
8890     }%
8891   \else
8892     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8893   \fi
8894 }

```

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

```

8895 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8896   \begingroup

```



```

8897 \toks0={\hyper@@link{#5}{#4}}%
8898 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8899 \edef\x{\endgroup
8900 \the\toks0 {\the\toks1 }%
8901 }%
8902 \x
8903 }
8904 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8905 \ifx#1\relax
8906 \protect\G@refundefinedtrue
8907 \nfss@text{\reset@font\bfseries ??}%
8908 \@latex@warning{%
8909 Reference ‘#3’ on page \thepage \space undefined%
8910 }%
8911 \else
8912 \protect\hyper@@link
8913 {\expandafter\@fifthoffive#1}%
8914 {page.\expandafter\@secondoffive#1}%
8915 {\expandafter\@secondoffive#1}%
8916 \fi
8917 }

8918 \</package>
8919 \<*check>
8920 \checklatex
8921 \checkcommand\def\@setref#1#2#3{%
8922 \ifx#1\relax
8923 \protect\G@refundefinedtrue
8924 \nfss@text{\reset@font\bfseries ??}%
8925 \@latex@warning{%
8926 Reference ‘#3’ on page \thepage\space undefined%
8927 }%
8928 \else
8929 \expandafter#2#1\null
8930 \fi
8931 }
8932 \</check>
8933 \<*package>

```

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

```

8934 \def\HyRef@StarSetRef#1{%
8935 \begingroup
8936 \Hy@safe@activetrue
8937 \edef\x{#1}%
8938 \@onelevel@sanitize\x
8939 \edef\x{\endgroup
8940 \noexpand\HyRef@@StarSetRef
8941 \expandafter\noexpand\csname r@\x\endcsname{\x}}%
8942 }%
8943 \x
8944 }
8945 \def\HyRef@@StarSetRef#1#2#3{%
8946 \ifx#1\@undefined
8947 \let#1\relax
8948 \fi
8949 \real@setref#1#3{#2}%
8950 }

```

```

8951 \def\@refstar#1{%
8952   \HyRef@StarSetRef{#1}\@firstoffive
8953 }
8954 \def\@pagerefstar#1{%
8955   \HyRef@StarSetRef{#1}\@secondoffive
8956 }
8957 \def\@namerefstar#1{%
8958   \HyRef@StarSetRef{#1}\@thirdoffive
8959 }
8960 \Hy@AtBeginDocument{%
8961   \@ifpackageloaded{varioref}{%
8962     \def\@Refstar#1{%
8963       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8964     }%
8965     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8966       \MakeUppercase#1%
8967     }%
8968     \DeclareRobustCommand*\@Ref{%
8969       \@ifstar\@Refstar\HyRef@Ref
8970     }%
8971     \def\HyRef@Ref#1{%
8972       \hyperref[{#1}]{\@Ref*{#1}}%
8973     }%
8974     \def\Vr@f#1{%
8975       \leavevmode\unskip\vref@space
8976       \hyperref[{#1}]{%
8977         \@Ref*{#1}%
8978         \let\vref@space\nobreakspace
8979         \@vpageref[\unskip]{#1}%
8980       }%
8981     }%
8982     \def\vr@f#1{%
8983       \leavevmode\unskip\vref@space
8984       \begingroup
8985       \let\T@pageref\@pagerefstar
8986       \hyperref[{#1}]{%
8987         \@ref*{#1}%
8988         \vpageref[\unskip]{#1}%
8989       }%
8990       \endgroup
8991     }%
8992   }{%
8993 }
8994 \DeclareRobustCommand*\@autopageref{%
8995   \@ifstar{%
8996     \HyRef@autopagerefname\pageref*%
8997   }\HyRef@autopageref
8998 }
8999 \def\HyRef@autopageref#1{%
9000   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9001 }
9002 \def\HyRef@autopagerefname{%
9003   \ltx@ifundefined{pageautorefname}{%
9004     \ltx@ifundefined{pagename}{%
9005       \Hy@Warning{No autoref name for 'page'}%
9006     }{%
9007       \pagename\nobreakspace

```

```

9008 }%
9009 }{%
9010 \pageautorefname\nobreakspace
9011 }%
9012 }

```

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

```

9013 \DeclareRobustCommand*{\autoref}{%
9014 \leavevmode
9015 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9016 }
9017 \def\HyRef@autoref#1#2{%
9018 \begingroup
9019 \Hy@safe@activestrue
9020 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9021 \endgroup
9022 }
9023 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9024 \HyRef@ShowKeysRef{#2}%
9025 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9026 \edef\HyRef@thisref{%
9027 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9028 }%
9029 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9030 \Hy@safe@activesfalse
9031 #3{%
9032 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9033 }{%
9034 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9035 }{%
9036 \HyRef@currentHtag
9037 \expandafter\@firstoffive#1\@empty\@empty\@empty
9038 \null
9039 }%
9040 \else
9041 \protect\G@refundefinedtrue
9042 \nfss@text{\reset@font\bfseries ??}%
9043 \@latex@warning{%
9044 Reference ‘#2’ on page \thepage\space undefined%
9045 }%
9046 \fi
9047 }
9048 \def\HyRef@testreftype#1.#2\.{%
9049 \ltx@ifundefined{#1autorefname}{%
9050 \ltx@ifundefined{#1name}{%
9051 \HyRef@StripStar#1\.*\@nil{#1}%
9052 \ltx@ifundefined{\HyRef@name autorefname}{%
9053 \ltx@ifundefined{\HyRef@name name}{%
9054 \def\HyRef@currentHtag{%
9055 \Hy@Warning{No autoref name for ‘#1’}%
9056 }{%
9057 \edef\HyRef@currentHtag{%
9058 \expandafter\noexpand\csname\HyRef@name name\endcsname
9059 \noexpand~%
9060 }%
9061 }%
9062 }{%

```

```

9063 \edef\HyRef@currentHtag{%
9064 \expandafter\noexpand
9065 \csname\HyRef@name\autorefname\endcsname
9066 \noexpand~%
9067 }%
9068 }%
9069 }{%
9070 \edef\HyRef@currentHtag{%
9071 \expandafter\noexpand\csname#1name\endcsname
9072 \noexpand~%
9073 }%
9074 }%
9075 }{%
9076 \edef\HyRef@currentHtag{%
9077 \expandafter\noexpand\csname#1\autorefname\endcsname
9078 \noexpand~%
9079 }%
9080 }%
9081 }
9082 \def\HyRef@StripStar#1*\#2\@nil#3{%
9083 \def\HyRef@name{#2}%
9084 \ifx\HyRef@name\HyRef@CaseStar
9085 \def\HyRef@name{#1}%
9086 \else
9087 \def\HyRef@name{#3}%
9088 \fi
9089 }
9090 \def\HyRef@CaseStar{*\\}
9091 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9092 \let\HyRef@ShowKeysRef\@gobble
9093 \def\HyRef@ShowKeysInit{%
9094 \begingroup\expandafter\expandafter\expandafter\endgroup
9095 \expandafter\ifx\csname SK@@label\endcsname\relax
9096 \else
9097 \ifx\SK@ref\@empty
9098 \else
9099 \def\HyRef@ShowKeysRef{%
9100 \SK@\SK@\ref
9101 }%
9102 \fi
9103 \fi
9104 }
9105 \@ifpackageloaded{showkeys}{%
9106 \HyRef@ShowKeysInit
9107 }{%
9108 \Hy@AtBeginDocument{%
9109 \@ifpackageloaded{showkeys}{%
9110 \HyRef@ShowKeysInit
9111 }{}%
9112 }%
9113 }

```

Defaults for the names that \autoref uses.

```

9114 \providecommand*{\AMSautorefname{\equationautorefname}

```

```

9115 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9116 \providecommand*\Itemautorefname{\itemautorefname}
9117 \providecommand*\itemautorefname{item}
9118 \providecommand*\equationautorefname{Equation}
9119 \providecommand*\footnoteautorefname{footnote}
9120 \providecommand*\itemautorefname{item}
9121 \providecommand*\figureautorefname{Figure}
9122 \providecommand*\tableautorefname{Table}
9123 \providecommand*\partautorefname{Part}
9124 \providecommand*\appendixautorefname{Appendix}
9125 \providecommand*\chapterautorefname{chapter}
9126 \providecommand*\sectionautorefname{section}
9127 \providecommand*\subsectionautorefname{subsection}
9128 \providecommand*\subsubsectionautorefname{subsubsection}
9129 \providecommand*\paragraphautorefname{paragraph}
9130 \providecommand*\subparagraphautorefname{subparagraph}
9131 \providecommand*\FancyVerbLineautorefname{line}
9132 \providecommand*\theoremautorefname{Theorem}
9133 \providecommand*\pageautorefname{page}
9134 \endpackage

```

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_TE_X offers `\pdfescapestring`.

```

9135 (*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
9136 \begingroup\expandafter\expandafter\expandafter\endgroup
9137 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9138   \begingroup
9139     \catcode'\|=0 %
9140     \@makeother\| %
9141     |@firstofone{|endgroup
9142     |def|Hy@pstringdef#1#2{%
9143       |begingroup
9144         |edef~{|string~}%
9145         |xdef|Hy@gtemp{#2}%
9146       |endgroup
9147       |let#1|Hy@gtemp
9148       |@onelevel@sanitize#1%
9149       |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
9150       |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9151       |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9152     }%
9153     |def|Hy@ExchangeBackslash#1/#2|@nil{%
9154       #1%
9155       |ifx|\#2|\| %
9156       |else
9157         \| %
9158       |ltx@ReturnAfterFi{%

```

```

9159      |Hy@ExchangeBackslash#2|@nil
9160    }%
9161    |fi
9162  }%
9163 }%
9164 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9165   #1%
9166   \ifx\#2\%
9167   \else
9168     \@backslashchar(%
9169     \ltx@ReturnAfterFi{%
9170     \Hy@ExchangeLeftParenthesis#2\@nil
9171   }%
9172   \fi
9173 }%
9174 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9175   #1%
9176   \ifx\#2\%
9177   \else
9178     \@backslashchar)%
9179     \ltx@ReturnAfterFi{%
9180     \Hy@ExchangeRightParenthesis#2\@nil
9181   }%
9182   \fi
9183 }%
9184 \else
9185 \def\Hy@pstringdef#1#2{%
9186   \begingroup
9187   \edef~{\string~}%
9188   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9189   \endgroup
9190   \let#1\Hy@gtemp
9191 }%
9192 \fi
9193 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9194 <*pdfTeX>
9195 \providecommand*\XR@ext}{pdf}
9196 \Hy@setbreaklinks{true}
9197 \def\HyPat@ObjRef{%
9198   [0-9]*[1-9][0-9]* 0 R%
9199 }

```

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

```

9200 \let\Hy@pdfminorversion\relax
9201 \begingroup\expandafter\expandafter\expandafter\endgroup
9202 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9203   \begingroup\expandafter\expandafter\expandafter\endgroup
9204   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax

```

```

9205 \else
9206   \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9207 \fi
9208 \else
9209   \def\Hy@pdfminorversion{\pdfminorversion}%
9210 \fi
9211 \@ifundefined{Hy@pdfminorversion}{%
9212   \PackageInfo{hyperref}{%
9213     PDF version is not set, because pdfTeX is too old (<1.10a)%
9214   }%
9215 }{%
9216   \ifHy@ocgcolorlinks
9217     \ifnum\Hy@pdfminorversion<5 %
9218       \kvsetkeys{Hyp}{pdfversion=1.5}%
9219     \fi
9220   \fi
9221   \ifHy@setpdfversion
9222     \ifnum\Hy@pdfversion<5 %
9223       \ltx@ifundefined{pdfobjcompresslevel}{%
9224         }{%
9225           \ifHy@verbose
9226             \Hy@InfoNoLine{%
9227               PDF object streams are disabled, because they are%
9228               \MessageBreak
9229               not supported in requested PDF version %
9230               1.\Hy@pdfversion
9231             }%
9232           \fi
9233           \pdfobjcompresslevel=\ltx@zero
9234         }%
9235       \fi
9236       \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9237     \else
9238       \let\Hy@temp\ltx@empty
9239       \def\Hy@temp@A#1#2{%
9240         \ifnum#1>\ltx@zero
9241           \edef\Hy@temp{%
9242             \Hy@temp
9243             \space\space
9244             \the#1\space #2%
9245             \ifnum#1=\ltx@one\else s\fi
9246             \MessageBreak
9247           }%
9248         \fi
9249       }%
9250       \Hy@temp@A\pdflastobj{PDF object}%
9251       \Hy@temp@A\pdflastxform{form XObject}%
9252       \Hy@temp@A\pdflastximage{image XObject}%
9253       \Hy@temp@A\pdflastannot{annotation}%
9254       \ltx@ifundefined{pdflastlink}{%
9255         }{%
9256           \Hy@temp@A\pdflastlink{link}%
9257         }%
9258       \ifx\Hy@temp\ltx@empty
9259         \Hy@pdfminorversion=\Hy@pdfversion\relax
9260       \else
9261         \let\Hy@temp@A\ltx@empty

```

```

9262 \ifnum\Hy@pdfversion=4 %
9263 \IfFileExists{pdf14.sty}{%
9264 \def\Hy@temp@A{%
9265 \MessageBreak
9266 Or \string\RequirePackage{pdf14} can be used%
9267 \MessageBreak
9268 before \string\documentclass\space as shortcut%
9269 }%
9270 }{}%
9271 \fi
9272 \Hy@WarningNoLine{%
9273 The PDF version number could not be set,\MessageBreak
9274 because some PDF objects are already written:%
9275 \MessageBreak
9276 \Hy@temp
9277 The version should be set as early as possible:%
9278 \MessageBreak
9279 \space\space
9280 \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9281 \string\relax
9282 \ifnum\Hy@pdfversion<5 %
9283 \ltx@ifundefined{pdfobjcompresslevel}{%
9284 }{%
9285 \MessageBreak
9286 \space\space
9287 \string\pdfobjcompresslevel=0\string\relax
9288 }%
9289 \fi
9290 \Hy@temp@A
9291 }%
9292 \fi
9293 \fi
9294 \PackageInfo{hyperref}{%
9295 \expandafter\string\Hy@pdfminorversion
9296 :=\number\Hy@pdfversion\space
9297 }%
9298 \fi
9299 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9300 }
9301 \Hy@DisableOption{pdfversion}%
9302 \ifHy@ocgcolorlinks
9303 \pdf@ifdraftmode{}{%
9304 \immediate\pdfobj{%
9305 <<%
9306 /Type/OCG%
9307 /Name(View)%
9308 /Usage<<%
9309 /Print<<%
9310 /PrintState/OFF%
9311 >>%
9312 /View<<%
9313 /ViewState/ON%
9314 >>%
9315 >>%
9316 >>%
9317 }%
9318 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%

```



```

9319 \immediate\pdfobj{%
9320   <<%
9321     /Type/OCG%
9322     /Name(Print)%
9323     /Usage<<%
9324       /Print<<%
9325         /PrintState/ON%
9326       >>%
9327     /View<<%
9328       /ViewState/OFF%
9329     >>%
9330   >>%
9331 >>%
9332 }%
9333 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
9334 \immediate\pdfobj{%
9335   [%
9336     \OBJ@OCG@view\space\OBJ@OCG@print
9337   ]%
9338 }%
9339 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
9340 \pdfcatalog{%
9341   /OCProperties<<%
9342     /OCGs \OBJ@OCGs
9343   /D<<%
9344     /OFF[\OBJ@OCG@print]%
9345   /AS[%
9346     <<%
9347       /Event/View%
9348       /OCGs \OBJ@OCGs
9349       /Category[/View]%
9350     >>%
9351     <<%
9352       /Event/Print%
9353       /OCGs \OBJ@OCGs
9354       /Category[/Print]%
9355     >>%
9356     <<%
9357       /Event/Export%
9358       /OCGs \OBJ@OCGs
9359       /Category[/Print]%
9360     >>%
9361   ]%
9362   >>%
9363 >>%
9364 }%
9365 \begingroup
9366 \edef\x{\endgroup
9367   \pdfpageresources{%
9368     \the\pdfpageresources
9369     /Properties<<%
9370       /OCView \OBJ@OCG@view
9371       /OCPrint \OBJ@OCG@print
9372     >>%
9373   }%
9374 }%
9375 \x

```

```

9376 }%
9377 \Hy@AtBeginDocument{%
9378   \def\Hy@colorlink#1{%
9379     \begingroup
9380     \ifHy@ocgcolorlinks
9381       \def\Hy@ocgcolor{#1}%
9382       \setbox0=\hbox\bgroup\color@begingroup
9383     \else
9384       \HyColor@UseColor#1%
9385     \fi
9386   }%
9387   \def\Hy@endcolorlink{%
9388     \ifHy@ocgcolorlinks
9389       \color@endgroup\egroup
9390     \mbox{%
9391       \pdfliteral page{/OC/OCPrint BDC}%
9392       \rlap{\copy0}%
9393       \pdfliteral page{EMC/OC/OCView BDC}%
9394     \begingroup
9395       \expandafter\HyColor@UseColor\Hy@ocgcolor
9396     \box0 %
9397   \endgroup
9398   \pdfliteral page{EMC}%
9399   }%
9400   \fi
9401 \endgroup
9402 }%
9403 }%
9404 \else
9405 \Hy@DisableOption{ocgcolorlinks}%
9406 \fi

```

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

```

9407 \def\setpdfinkmargin#1{\pdfinkmargin#1}
9408 \ifx\pdfstartlink\@undefined% less than version 14
9409   \let\pdfstartlink\pdfannotlink
9410   \let\pdfinkmargin\@tempdima
9411   \let\pdfxform\pdfform
9412   \let\pdfastxform\pdfastform
9413   \let\pdfrefxform\pdfrefform
9414 \else
9415   \pdfinkmargin1pt %
9416 \fi

```

First set up the default linking

```

9417 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9418 \Hy@WrapperDef\new@pdfink#1{%
9419   \ifhmode
9420     \@savsf\spacefactor
9421   \fi
9422   \Hy@SaveLastskip
9423   \Hy@VerboseAnchor{#1}%
9424   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9425   \Hy@DestName\Hy@pstringDest\@pdfview
9426   \Hy@RestoreLastskip
9427   \ifhmode
9428     \spacefactor\@savsf

```

```

9429 \fi
9430 }
9431 \let\pdf@endanchor\@empty

```

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

```

9432 \def\Hy@DestName#1#2{%
9433 \pdfdest name{#1}#2\relax
9434 }

```

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.

```

9435 \providecommand*\@pdfborder{0 0 1}
9436 \providecommand*\@pdfborderstyle{}
9437 \def\Hy@undefinedname{UNDEFINED}
9438 \def\find@pdflink#1#2{%
9439 \leavevmode
9440 \protected@edef\Hy@testname{#2}%
9441 \ifx\Hy@testname\@empty
9442 \Hy@Warning{%
9443 Empty destination name,\MessageBreak
9444 using '\Hy@undefinedname'%
9445 }%
9446 \let\Hy@testname\Hy@undefinedname
9447 \else
9448 \Hy@pstringdef\Hy@testname{%
9449 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9450 }%
9451 \fi
9452 \Hy@StartlinkName{%
9453 \ifHy@pdfa /F 4\fi
9454 \Hy@setpdfborder
9455 \ifx\@pdfhighlight\@empty
9456 \else
9457 /H\@pdfhighlight
9458 \fi
9459 \ifx\CurrentBorderColor\relax
9460 \else
9461 /C[\CurrentBorderColor]%
9462 \fi
9463 }\Hy@testname
9464 \expandafter\Hy@colorlink\csname @#1color\endcsname
9465 }
9466 \def\Hy@StartlinkName#1#2{%
9467 \pdfstartlink attr{#1}goto name{#2}\relax
9468 }
9469 \def\close@pdflink{%
9470 \Hy@endcolorlink
9471 \Hy@VerboseLinkStop
9472 \pdfendlink
9473 }
9474 \def\hyper@anchor#1{%
9475 \new@pdflink{#1}\anchor@spot\pdf@endanchor
9476 }
9477 \def\hyper@anchorstart#1{%

```

```

9478 \new@pdfink{#1}%
9479 \Hy@activeanchortrue
9480 }
9481 \def\hyper@anchorend{%
9482 \pdf@endanchor
9483 \Hy@activeanchorfalse
9484 }
9485 \def\hyper@linkstart#1#2{%
9486 \Hy@VerboseLinkStart{#1}{#2}%
9487 \ltx@ifundefined{#@#1bordercolor}{%
9488 \let\CurrentBorderColor\relax
9489 }{%
9490 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9491 }%
9492 \find@pdfink{#1}{#2}%
9493 }
9494 \def\hyper@linkend{\close@pdfink}
9495 \def\hyper@link#1#2#3{%
9496 \Hy@VerboseLinkStart{#1}{#2}%
9497 \ltx@ifundefined{#@#1bordercolor}{%
9498 \let\CurrentBorderColor\relax
9499 }{%
9500 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9501 }%
9502 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9503 \close@pdfink
9504 }
9505 \let\CurrentBorderColor\@linkbordercolor
9506 \def\hyper@linkurl#1#2{%
9507 \begingroup
9508 \Hy@pstringdef\Hy@pstringURI{#2}%
9509 \hyper@chars
9510 \leavevmode
9511 \pdfstartlink
9512 attr{%
9513 \Hy@setpdfborder
9514 \ifx\@pdfhighlight\@empty
9515 \else
9516 /H\@pdfhighlight
9517 \fi
9518 \ifx\@urlbordercolor\relax
9519 \else
9520 /C[\@urlbordercolor]%
9521 \fi
9522 }%
9523 user{%
9524 /Subtype/Link%
9525 \ifHy@pdfa /F 4\fi
9526 /A<<%
9527 /Type/Action%
9528 /S/URI%
9529 /URI(\Hy@pstringURI)%
9530 \ifHy@href@ismap
9531 /IsMap true%
9532 \fi
9533 \Hy@href@nextactionraw
9534 >>%

```

```

9535     }%
9536     \relax
9537     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9538     \close@pdflink
9539 \endgroup
9540 }
9541 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9542 \begingroup
9543   \def\Hy@pstringF{#2}%
9544   \Hy@CleanupFile\Hy@pstringF
9545   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9546   \Hy@pstringdef\Hy@pstringD{#3}%
9547   \Hy@MakeRemoteAction
9548   \leavevmode
9549   \pdfstartlink
9550   attr{%
9551     \Hy@setpdfborder
9552     \ifx\@pdfhighlight\@empty
9553     \else
9554       /H\@pdfhighlight
9555     \fi
9556     \ifx\@filebordercolor\relax
9557     \else
9558       /C[\@filebordercolor]%
9559     \fi
9560   }%
9561   user {%
9562     /Subtype/Link%
9563     \ifHy@pdfa /F 4\fi
9564     /A<<%
9565     /F(\Hy@pstringF)%
9566     /S/GoToR%
9567     \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}

```

```

9568     \ifx\#3\%
9569     /D[\Hy@href@page\@pdfremotestartview]%
9570     \else
9571     /D(\Hy@pstringD)%
9572     \fi
9573     \Hy@href@nextactionraw
9574     >>%
9575   }%
9576   \relax
9577   \Hy@colorlink\@filecolor#1\Hy@xspace@end
9578   \close@pdflink
9579 \endgroup

```

```

9580 }
9581 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9582 \begingroup
9583   \Hy@pstringdef\Hy@pstringF{#1}%
9584   \Hy@pstringdef\Hy@pstringP{#3}%
9585   \leavevmode
9586   \pdfstartlink
9587   attr{%
9588     \Hy@setpdfborder
9589     \ifx\@pdfhighlight\@empty
9590     \else
9591       /H\@pdfhighlight
9592     \fi
9593     \ifx\@runbordercolor\relax
9594     \else
9595       /C[\@runbordercolor]%
9596     \fi
9597   }%
9598   user {%
9599     /Subtype/Link%
9600     \ifHy@pdfa /F 4\fi
9601     /A<<%
9602     /F(\Hy@pstringF)%
9603     /S/Launch%
9604     \Hy@SetNewWindow
9605     \ifx\|#3\|
9606     \else
9607       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9608     \fi
9609     \Hy@href@nextactionraw
9610     >>%
9611   }%
9612   \relax
9613   \Hy@colorlink\@runcolor#2\Hy@xspace@end
9614   \close@pdflink
9615 \endgroup
9616 }

```

\@pdfproducer

```

9617 \ifx\@pdfproducer\relax
9618 \begingroup\expandafter\expandafter\expandafter\endgroup
9619 \expandafter\ifx\cname luatexversion\endcsname\relax
9620 \def\@pdfproducer{pdfTeX}%
9621 \ifx\eTeXversion\@undefined
9622 \else
9623   \ifx\eTeXversion\relax
9624   \else
9625     \ifnum\eTeXversion>0 %
9626     \def\@pdfproducer{pdfeTeX}%
9627   \fi
9628 \fi
9629 \fi
9630 \ifx\pdfTeXversion\@undefined
9631 \else
9632   \ifnum\pdfTeXversion<100 %
9633   \edef\@pdfproducer{%
9634     \@pdfproducer

```

```

9635     \the\pdftexversion.\pdftexrevision
9636   }%
9637 \else
9638   \ifnum\pdftexversion<130 %
9639     \edef\@pdfproducer{%
9640       \@pdfproducer-%
9641       \expandafter\@car\the\pdftexversion\@empty\@nil.%
9642       \expandafter\@cdr\the\pdftexversion\@empty\@nil
9643       \pdftexrevision
9644     }%
9645   \else
9646     \ifnum\pdftexversion<140 %
9647     \else
9648       \def\@pdfproducer{pdfTeX}%
9649     \fi
9650     \edef\@pdfproducer{%
9651       \@pdfproducer-%
9652       \expandafter\@car\the\pdftexversion\@empty\@nil.%
9653       \expandafter\@cdr\the\pdftexversion\@empty\@nil.%
9654       \pdftexrevision
9655     }%
9656   \fi
9657 \fi
9658 \fi
9659 \else
9660   \begingroup
9661     \count@=\luatexversion
9662     \divide\count@ by 100 %
9663     \edef\x{\the\count@}%
9664     \count@=-\x\relax
9665     \multiply\count@ by 100 %
9666     \advance\count@ by \luatexversion
9667     \edef\x{\endgroup
9668       \def\noexpand\@pdfproducer{%
9669         LuaTeX-\x.\the\count@.\luatexrevision
9670       }%
9671     }%
9672   \x
9673 \fi
9674 \fi

```

\PDF@SetupDox

```

9675 \def\PDF@SetupDoc{%
9676   \ifx\@pdfpagescrop\@empty
9677   \else
9678     \edef\process@me{%
9679       \pdfpagesattr=%
9680       /CropBox[\@pdfpagescrop]%
9681       \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9682     \else
9683       ^^J\the\pdfpagesattr
9684     \fi
9685   }%
9686   }%
9687   \process@me
9688 \fi
9689 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9690 \pdfcatalog{%

```

```

9691 /PageMode/\@pdfpagemode
9692 \ifx\@baseurl\@empty
9693 \else
9694 /URI<</Base(\Hy@pstringB)>>%
9695 \fi
9696 }%
9697 \ifx\@pdfstartpage\@empty
9698 \else
9699 \ifx\@pdfstartview\@empty
9700 \else
9701 openaction goto page\@pdfstartpage{\@pdfstartview}%
9702 \fi
9703 \fi
9704 \edef\Hy@temp{%
9705 \ifHy@pdftoolbar\else /HideToolbar true\fi
9706 \ifHy@pdfmenubar\else /HideMenubar true\fi
9707 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9708 \ifHy@pdfwindow /FitWindow true\fi
9709 \ifHy@pdfcenterwindow /CenterWindow true\fi
9710 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9711 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9712 \Hy@UseNameKey{Direction}\@pdfdirection
9713 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9714 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9715 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9716 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9717 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9718 \Hy@UseNameKey{Duplex}\@pdfduplex
9719 \ifx\@pdfpicktraybypdfsize\@empty
9720 \else
9721 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9722 \fi
9723 \ifx\@pdfprintpagerange\@empty
9724 \else
9725 /PrintPageRange[\@pdfprintpagerange]%
9726 \fi
9727 \ifx\@pdfnumcopies\@empty
9728 \else
9729 /NumCopies \@pdfnumcopies
9730 \fi
9731 }%
9732 \pdfcatalog{%
9733 \ifx\Hy@temp\@empty
9734 \else
9735 /ViewerPreferences<<\Hy@temp>>%
9736 \fi
9737 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9738 \ifx\@pdflang\@empty
9739 \else
9740 /Lang(\@pdflang)%
9741 \fi
9742 }%
9743 }

```

\PDF@FinishDoc

```

9744 \def\PDF@FinishDoc{%
9745 \pdf@ifdraftmode{}{%
9746 \Hy@UseMaketitleInfos

```



```

9747 \HyInfo@GenerateAddons
9748 \pdfinfo{%
9749   /Author(\@pdfauthor)%
9750   /Title(\@pdftitle)%
9751   /Subject(\@pdfsubject)%
9752   /Creator(\@pdfcreator)%
9753   \ifx\@pdfcreationdate\@empty
9754   \else
9755     /CreationDate(\@pdfcreationdate)%
9756   \fi
9757   \ifx\@pdfmoddate\@empty
9758   \else
9759     /ModDate(\@pdfmoddate)%
9760   \fi
9761   \ifx\@pdfproducer\relax
9762   \else
9763     /Producer(\@pdfproducer)%
9764   \fi
9765   /Keywords(\@pdfkeywords)%
9766   \ifx\@pdftrapped\@empty
9767   \else
9768     /Trapped/\@pdftrapped
9769   \fi
9770 \HyInfo@Addons
9771 }%
9772 }%
9773 \Hy@DisableOption{pdfauthor}%
9774 \Hy@DisableOption{pdftitle}%
9775 \Hy@DisableOption{pdfsubject}%
9776 \Hy@DisableOption{pdfcreator}%
9777 \Hy@DisableOption{pdfcreationdate}%
9778 \Hy@DisableOption{pdfmoddate}%
9779 \Hy@DisableOption{pdfproducer}%
9780 \Hy@DisableOption{pdfkeywords}%
9781 \Hy@DisableOption{pdftrapped}%
9782 \Hy@DisableOption{pdfinfo}%
9783 }

```

`\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`.

```

9784 \def\hyper@pagetransition{%
9785   \ifx\@pdfpagetransition\relax
9786   \else
9787     \expandafter\Hy@RemoveTransPageAttr
9788     \the\pdfpageattr^^J/Trans{>>\END
9789     \ifx\@pdfpagetransition\@empty
9790     \else
9791       \edef\@processme{%
9792         \global\pdfpageattr{%
9793           \the\pdfpageattr
9794             ^^J/Trans << /S /\@pdfpagetransition\space >>%
9795         }%
9796       }%
9797       \@processme
9798     \fi
9799   \fi

```

9800 }

`\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.

```
9801 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>>#4\END{%
9802   \ifx\#2\%
9803     \global\pdfpageattr{#1}%
9804   \else
9805     \Hy@RemoveTransPageAttr#1#4\END
9806   \fi
9807 }
```

`\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`.

```
9808 \def\hyper@pageduration{%
9809   \ifx\@pdfpageduration\relax
9810   \else
9811     \expandafter
9812     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9813     \ifx\@pdfpageduration\@empty
9814     \else
9815       \edef\@processme{%
9816         \global\pdfpageattr{%
9817           \the\pdfpageattr
9818             ^^J/Dur \@pdfpageduration\space
9819         }%
9820       }%
9821       \@processme
9822     \fi
9823   \fi
9824 }
```

`\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.

```
9825 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9826   \ifx\#2\%
9827     \global\pdfpageattr{#1}%
9828   \else
9829     \Hy@RemoveDurPageAttr#1#4\END
9830   \fi
9831 }
```

`\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).

```
9832 \def\hyper@pagehidden{%
9833   \ifHy@useHidKey
9834   \expandafter
9835   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
9836   \ifHy@pdfpagehidden
```

```

9837 \edef\@processme{%
9838 \global\pdfpageattr{%
9839 \the\pdfpageattr
9840 ^^J/Hid true % SPACE
9841 }%
9842 }%
9843 \@processme
9844 \fi
9845 \fi
9846 }

```

`\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.

```

9847 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
9848 \ifx\#2\%
9849 \global\pdfpageattr{#1}%
9850 \else
9851 \Hy@RemoveHidPageAttr#1#4\END
9852 \fi
9853 }

9854 \pdf@ifdraftmode{}{%
9855 \g@addto@macro\Hy@EveryPageHook{%
9856 \hyper@pagetransition
9857 \hyper@pageduration
9858 \hyper@pagehidden
9859 }%
9860 }

```

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

```

9861 </pdfTeX>
9862 < *pdfTeX | xetex>
9863 \Hy@AtBeginDocument{%
9864 \ifHy@setpagesize
9865 \expandafter\@firstofone
9866 \else
9867 \expandafter\@gobble
9868 \fi
9869 {%
9870 \@ifclassloaded{seminar}{%
9871 < *pdfTeX>
9872 \setlength{\pdfhorigin}{1truein}%
9873 \setlength{\pdfvorigin}{1truein}%
9874 </pdfTeX>
9875 \ifportrait
9876 \ifdim\paperwidth=\z@
9877 \else
9878 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9879 \fi
9880 \ifdim\paperheight=\z@
9881 \else
9882 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9883 \fi
9884 \else
9885 \ifdim\paperheight=\z@

```

```

9886 \else
9887 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9888 \fi
9889 \ifdim\paperwidth=\z@
9890 \else
9891 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9892 \fi
9893 \fi
9894 }{%
9895 \ltx@ifundefined{stockwidth}{%
9896 \ifdim\paperwidth>\z@
9897 \setlength{\pdfpagewidth}{\paperwidth}%
9898 \fi
9899 \ifdim\paperheight>\z@
9900 \setlength{\pdfpageheight}{\paperheight}%
9901 \fi
9902 }{%
9903 \ifdim\stockwidth>\z@
9904 \setlength{\pdfpagewidth}{\stockwidth}%
9905 \fi
9906 \ifdim\stockheight>\z@
9907 \setlength{\pdfpageheight}{\stockheight}%
9908 \fi
9909 }%
9910 }%
9911 }%
9912 \Hy@DisableOption{setpagesize}%
9913 }
9914 </pdfTeX | xetex>
9915 <*pdfTeX>
9916 \def\Acrobatmenu#1#2{%
9917 \Hy@Acrobatmenu{#1}{#2}{%
9918 \leavevmode
9919 \EdefEscapeName\Hy@temp@menu{#1}%
9920 \pdfstartlink
9921 attr{%
9922 \Hy@setpdfborder
9923 \ifx\@pdfhighlight\@empty
9924 \else
9925 /H\@pdfhighlight
9926 \fi
9927 \ifx\@menubordercolor\relax
9928 \else
9929 /C[\@menubordercolor]%
9930 \fi
9931 }%
9932 user{%
9933 /Subtype/Link%
9934 \ifHy@pdfa /F 4\fi
9935 /A<<%
9936 /S/Named%
9937 /N/\Hy@temp@menu
9938 \Hy@href@nextactionraw
9939 >>%
9940 }%
9941 \relax
9942 \Hy@colorlink\@menucolor#2%

```

```

9943   \close@pdfink
9944 }%
9945 }

```

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.

```

9946 \def\Hy@FixNotFirstPage{%
9947   \gdef\Hy@FixNotFirstPage{%
9948     \setbox\AtBeginShipoutBox=\hbox{%
9949       \copy\AtBeginShipoutBox
9950     }%
9951   }%
9952 }
9953 \ltx@ifpackagelater{atbegshi}{2011/10/05}{}%
9954 }{%
9955   \AtBeginShipout{\Hy@FixNotFirstPage}%
9956 }
9957 \</pdfTeX>

```

47.3 hypertex

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

href: html:

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a *name* command represents a possible location to which other hypertext links

may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that ‘’ characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

9958 \*hypertext
9959 \providecommand*\XR@ext}{dvi}
9960 \let\PDF@FinishDoc\ltx@empty
9961 \def\PDF@SetupDoc{%
9962   \ifx\@baseurl\@empty
9963   \else
9964     \special{html:<base href="\@baseurl">}%
9965   \fi
9966 }
9967 \Hy@WrapperDef\hyper@anchor#1{%
9968   \Hy@SaveLastskip
9969   \Hy@VerboseAnchor{#1}%
9970   \begingroup
9971     \let\protect=\string
9972     \hyper@chars
9973     \special{html:<a name=%
9974       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9975   \endgroup
9976   \Hy@activeanchortrue
9977   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9978   \special{html:</a>}%
9979   \Hy@activeanchorfalse
9980   \Hy@RestoreLastskip
9981 }
9982 \Hy@WrapperDef\hyper@anchorstart#1{%
9983   \Hy@SaveLastskip
9984   \Hy@VerboseAnchor{#1}%
9985   \begingroup
9986     \hyper@chars
9987     \special{html:<a name=%
9988       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9989   \endgroup
9990   \Hy@activeanchortrue
9991 }
9992 \def\hyper@anchorend{%
9993   \special{html:</a>}%
9994   \Hy@activeanchorfalse
9995   \Hy@RestoreLastskip
9996 }
9997 \def\@urltype{url}
9998 \def\hyper@linkstart#1#2{%
9999   \Hy@VerboseLinkStart{#1}{#2}%
10000 \expandafter\Hy@colorlink\csname @#1color\endcsname
10001 \def\Hy@tempa{#1}%
10002 \ifx\Hy@tempa\@urltype
10003   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10004 \else
10005   \begingroup
10006     \hyper@chars
10007     \special{html:<a href=%
10008       \hyper@quote\#HyperDestNameFilter{#2}\hyper@quote>}%

```

```

10009 \endgroup
10010 \fi
10011 }
10012 \def\hyper@linkend{%
10013 \special{html:</a>}}%
10014 \Hy@endcolorlink
10015 }
10016 \def\hyper@linkfile#1#2#3{%
10017 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10018 }
10019 \def\hyper@linkurl#1#2{%

```

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

```

10020 \leavevmode
10021 \ifHy@raiselinks
10022 \Hy@SaveSpaceFactor
10023 \Hy@SaveSavedSpaceFactor
10024 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10025 \Hy@RestoreSavedSpaceFactor
10026 \@linkdim\dp\@tempboxa
10027 \lower\@linkdim\hbox{%
10028 \hyper@chars
10029 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10030 }%
10031 \Hy@colorlink\@urlcolor
10032 \Hy@RestoreSpaceFactor
10033 #1%
10034 \Hy@SaveSpaceFactor
10035 \@linkdim\ht\@tempboxa

```

Because of the interaction with the `dvihps` 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).

```

10036 \advance\@linkdim by -6.5\p@
10037 \raise\@linkdim\hbox{\special{html:</a>}}%
10038 \Hy@endcolorlink
10039 \Hy@RestoreSpaceFactor
10040 \else
10041 \begingroup
10042 \hyper@chars
10043 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10044 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10045 \special{html:</a>}}%
10046 \Hy@endcolorlink
10047 \endgroup
10048 \fi
10049 }

```

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

```

10050 \def\hyper@link#1#2#3{%
10051 \Hy@VerboseLinkStart{#1}{#2}%
10052 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}}%
10053 }
10054 \def\hyper@image#1#2{%
10055 \begingroup
10056 \hyper@chars

```

```

10057 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
10058 \endgroup
10059 }
10060 </hypertex>
10061 <*dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the hyperref package if the default `c:/netscape/netscape` is not suitable) Dviwindo could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertex cfg. For dviwindo, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```

10062 \providecommand*\XR@ext}{dvi}
10063 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10064 \Hy@WrapperDef\hyper@anchor#1{%
10065   \Hy@SaveLastskip
10066   \Hy@VerboseAnchor{#1}%
10067   \begingroup
10068     \let\protect=\string
10069     \special{mark: #1}%
10070   \endgroup
10071   \Hy@activeanchortrue
10072   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10073   \Hy@activeanchorfalse
10074   \Hy@RestoreLastskip
10075 }
10076 \Hy@WrapperDef\hyper@anchorstart#1{%
10077   \Hy@SaveLastskip
10078   \Hy@VerboseAnchor{#1}%
10079   \special{mark: #1}%
10080   \Hy@activeanchortrue
10081 }
10082 \def\hyper@anchorend{%
10083   \Hy@activeanchorfalse
10084   \Hy@RestoreLastskip
10085 }
10086 \def\hyper@linkstart#1#2{%
10087   \Hy@VerboseLinkStart{#1}{#2}%
10088   \expandafter\Hy@colorlink\csname @#1color\endcsname
10089   \special{button: %
10090     10000000 %
10091     \number\baselineskip\space
10092     #2%
10093   }%
10094 }
10095 \def\hyper@linkend{%
10096   \Hy@endcolorlink
10097 }
10098 \def\hyper@link#1#2#3{%

```



```

10099 \Hy@VerboseLinkStart{#1}{#2}%
10100 \leavevmode
10101 \ifHy@raiselinks
10102   \Hy@SaveSpaceFactor
10103   \Hy@SaveSavedSpaceFactor
10104   \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10105   \Hy@RestoreSavedSpaceFactor
10106   \@linkdim\dp\@tempboxa
10107   \lower\@linkdim\hbox{%
10108     \special{button: %
10109       \number\wd\@tempboxa\space
10110       \number\ht\@tempboxa\space
10111       #2%
10112     }%
10113     \expandafter\Hy@colorlink\csname @#1color\endcsname
10114     \Hy@RestoreSpaceFactor
10115     #3\Hy@xspace@end
10116     \Hy@SaveSpaceFactor
10117     \Hy@endcolorlink
10118   }%
10119   \@linkdim\ht\@tempboxa
10120   \advance\@linkdim by -6.5\p@
10121   \raise\@linkdim\hbox{}%
10122   \Hy@RestoreSpaceFactor
10123 \else
10124   \special{button: %
10125     \number\wd\@tempboxa\space
10126     \number\ht\@tempboxa\space
10127     #2%
10128   }%
10129   \expandafter\Hy@colorlink\csname @#1color\endcsname
10130   #3\Hy@xspace@end
10131   \Hy@endcolorlink
10132 \fi
10133 }
10134 \def\hyper@linkurl#1#2{%
10135   \begingroup
10136   \hyper@chars
10137   \leavevmode
10138   \ifHy@raiselinks
10139     \Hy@SaveSpaceFactor
10140     \Hy@SaveSavedSpaceFactor
10141     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10142     \Hy@RestoreSavedSpaceFactor
10143     \@linkdim\dp\@tempboxa
10144     \lower\@linkdim\hbox{%
10145       \special{button: %
10146         \number\wd\@tempboxa\space
10147         \number\ht\@tempboxa\space
10148         launch: \wwwbrowser\space
10149         #2%
10150       }%
10151       \Hy@colorlink\@urlcolor
10152       \Hy@RestoreSpaceFactor
10153       #1\Hy@xspace@end
10154       \Hy@SaveSpaceFactor
10155       \Hy@endcolorlink

```

```

10156 }%
10157 \@linkdim\ht\@tempboxa
10158 \advance\@linkdim by -6.5\p@
10159 \raise\@linkdim\hbox{}%
10160 \Hy@RestoreSpaceFactor
10161 \else
10162 \special{button: %
10163 \number\wd\@tempboxa\space
10164 \number\ht\@tempboxa\space
10165 launch: \wwwbrowser\space
10166 #2%
10167 }%
10168 \Hy@colorlink\@urlcolor
10169 #1\Hy@xspace@end
10170 \Hy@endcolorlink
10171 \fi
10172 \endgroup
10173 }
10174 \def\hyper@linkfile#1#2#3{%
10175 \begingroup
10176 \hyper@chars
10177 \leavevmode
10178 \ifHy@raiselinks
10179 \Hy@SaveSpaceFactor
10180 \Hy@SaveSavedSpaceFactor
10181 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10182 \Hy@RestoreSavedSpaceFactor
10183 \@linkdim\dp\@tempboxa
10184 \lower\@linkdim\hbox{%
10185 \special{button: %
10186 \number\wd\@tempboxa\space
10187 \number\ht\@tempboxa\space
10188 #3,%
10189 file: #2%
10190 }%
10191 \Hy@colorlink\@filecolor
10192 \Hy@RestoreSpaceFactor
10193 #1\Hy@xspace@end
10194 \Hy@SaveSpaceFactor
10195 \Hy@endcolorlink
10196 }%
10197 \@linkdim\ht\@tempboxa
10198 \advance\@linkdim by -6.5\p@
10199 \raise\@linkdim\hbox{}%
10200 \Hy@RestoreSpaceFactor
10201 \else
10202 \special{button: %
10203 \number\wd\@tempboxa\space
10204 \number\ht\@tempboxa\space
10205 #3,%
10206 file: #2%
10207 }%
10208 \Hy@colorlink\@filecolor
10209 #1\Hy@xspace@end
10210 \Hy@endcolorlink
10211 \fi
10212 \endgroup

```

```

10213 }
10214 \ifx\@pdfproducer\relax
10215 \def\@pdfproducer{dviwindo + Distiller}%
10216 \fi
10217 \HyInfo@AddonUnsupportedtrue
10218 \def\PDF@FinishDoc{%
10219 \Hy@UseMaketitleInfos
10220 \HyInfo@TrappedUnsupported
10221 \special{PDF: Keywords \@pdfkeywords}%
10222 \special{PDF: Title \@pdftitle}%
10223 \special{PDF: Creator \@pdfcreator}%
10224 \ifx\@pdfcreationdate\@empty
10225 \else
10226 \special{PDF: CreationDate \@pdfcreationdate}%
10227 \fi
10228 \ifx\@pdfmoddate\@empty
10229 \else
10230 \special{PDF: ModDate \@pdfmoddate}%
10231 \fi
10232 \special{PDF: Author \@pdfauthor}%
10233 \ifx\@pdfproducer\relax
10234 \else
10235 \special{PDF: Producer \@pdfproducer}%
10236 \fi
10237 \special{PDF: Subject \@pdfsubject}%
10238 \Hy@DisableOption{pdfauthor}%
10239 \Hy@DisableOption{pdftitle}%
10240 \Hy@DisableOption{pdfsubject}%
10241 \Hy@DisableOption{pdfcreator}%
10242 \Hy@DisableOption{pdfcreationdate}%
10243 \Hy@DisableOption{pdfmoddate}%
10244 \Hy@DisableOption{pdfproducer}%
10245 \Hy@DisableOption{pdfkeywords}%
10246 \Hy@DisableOption{pdftrapped}%
10247 \Hy@DisableOption{pdfinfo}%
10248 }
10249 \def\PDF@SetupDoc{%
10250 \ifx\@baseurl\@empty
10251 \else
10252 \special{PDF: Base \@baseurl}%
10253 \fi
10254 \ifx\@pdfpagescrop\@empty\else
10255 \special{PDF: BBox \@pdfpagescrop}%
10256 \fi
10257 \def\Hy@temp{}%
10258 \ifx\@pdfstartpage\@empty
10259 \else
10260 \ifx\@pdfstartview\@empty
10261 \else
10262 \edef\Hy@temp{%
10263 ,Page=\@pdfstartpage
10264 ,View=\@pdfstartview
10265 }%
10266 \fi
10267 \fi
10268 \edef\Hy@temp{%
10269 \noexpand\pdfmark{%

```

```

10270 pdfmark=/DOCVIEW,%
10271 PageMode=/\@pdfpagemode
10272 \Hy@temp
10273 }%
10274 }%
10275 \Hy@temp
10276 \ifx\@pdfpagescrop\@empty
10277 \else
10278 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10279 \fi
10280 \edef\Hy@temp{%
10281 \ifHy@pdftoolbar\else /HideToolbar true\fi
10282 \ifHy@pdfmenubar\else /HideMenubar true\fi
10283 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10284 \ifHy@pdfwindow /FitWindow true\fi
10285 \ifHy@pdfcenterwindow /CenterWindow true\fi
10286 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10287 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10288 \Hy@UseNameKey{Direction}\@pdfdirection
10289 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10290 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10291 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10292 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10293 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10294 \Hy@UseNameKey{Duplex}\@pdfduplex
10295 \ifx\@pdfpicktraybypdfsize\@empty
10296 \else
10297 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10298 \fi
10299 \ifx\@pdfprintpagerange\@empty
10300 \else
10301 /PrintPageRange[\@pdfprintpagerange]%
10302 \fi
10303 \ifx\@pdfnumcopies\@empty
10304 \else
10305 /NumCopies \@pdfnumcopies
10306 \fi
10307 }%
10308 \pdfmark{pdfmark=/PUT,%
10309 Raw={%
10310 \string{Catalog\string}<<%
10311 \ifx\Hy@temp\@empty
10312 \else
10313 /ViewerPreferences<<\Hy@temp>>%
10314 \fi
10315 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10316 \ifx\@pdflang\@empty
10317 \else
10318 /Lang(\@pdflang)%
10319 \fi
10320 >>%
10321 }%
10322 }%
10323 }
10324 </dviwindo>
10325 <*\dviipdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10326 \providecommand*\XR@ext}{pdf}
10327 \Hy@setbreaklinks{true}
10328 \def\HyPat@ObjRef{%
10329   @[\ ]+}%
10330 }
10331 \newsavebox{\pdfm@box}
10332 \def\@pdfm@mark#1{\special{pdf:#1}}
10333 \Hy@WrapperDef\@pdfm@dest#1{%
10334   \Hy@SaveLastskip
10335   \Hy@VerboseAnchor{#1}%
10336   \begingroup
10337     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10338     \def\x{XYZ}%
10339     \ifx\x\@pdfview
10340       \def\x{XYZ @xpos @ypos null}%
10341     \else
10342       \def\x{FitH}%
10343       \ifx\x\@pdfview
10344         \def\x{FitH @ypos}%
10345       \else
10346         \def\x{FitBH}%
10347         \ifx\x\@pdfview
10348           \def\x{FitBH @ypos}%
10349         \else
10350           \def\x{FitV}%
10351           \ifx\x\@pdfview
10352             \def\x{FitV @xpos}%
10353           \else
10354             \def\x{FitBV}%
10355             \ifx\x\@pdfview
10356               \def\x{FitBV @xpos}%
10357             \else
10358               \def\x{Fit}%
10359               \ifx\x\@pdfview
10360                 \let\x\@pdfview
10361               \else
10362                 \def\x{FitB}%
10363                 \ifx\x\@pdfview
10364                   \let\x\@pdfview
10365                 \else
10366                   \def\x{FitR}%
10367                   \ifx\x\@pdfview
10368                     \Hy@Warning{'pdfview=FitR' is not supported}%
10369                     \def\x{XYZ @xpos @ypos null}%
10370                   \else
10371                     \@onelevel@sanitize\@pdfview
10372                     \Hy@Warning{%
10373                       Unknown value '\@pdfview' for pdfview%
10374                     }%
10375                     \def\x{XYZ @xpos @ypos null}%
10376                   \fi
10377                 \fi
10378               \fi
10379             \fi

```

```

10380     \fi
10381     \fi
10382     \fi
10383     \fi
10384     \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10385 \endgroup
10386 \Hy@RestoreLastskip
10387 }
10388 \providecommand*\@pdfview{XYZ}
10389 \providecommand*\@pdfborder{0 0 1}
10390 \providecommand*\@pdfborderstyle{}
10391 \def\hyper@anchor#1{%
10392   \@pdfm@dest{#1}%
10393 }
10394 \def\hyper@anchorstart#1{%
10395   \Hy@activeanchortrue
10396   \@pdfm@dest{#1}%
10397 }
10398 \def\hyper@anchorend{%
10399   \Hy@activeanchorfalse
10400 }
10401 \newcounter{Hy@AnnotLevel}
10402 \ifHy@ocgcolorlinks
10403   \def\OBJ@OCG@view{@OCG@view}%
10404   \@pdfm@mark{%
10405     obj \OBJ@OCG@view <<%
10406       /Type/OCG%
10407       /Name(View)%
10408       /Usage<<%
10409       /Print<<%
10410       /PrintState/OFF%
10411       >>%
10412       /View<<%
10413       /ViewState/ON%
10414       >>%
10415       >>%
10416       >>%
10417   }%
10418   \@pdfm@mark{close \OBJ@OCG@view}%
10419   \def\OBJ@OCG@print{@OCG@print}%
10420   \@pdfm@mark{%
10421     obj \OBJ@OCG@print <<%
10422       /Type/OCG%
10423       /Name(Print)%
10424       /Usage<<%
10425       /Print<<%
10426       /PrintState/ON%
10427       >>%
10428       /View<<%
10429       /ViewState/OFF%
10430       >>%
10431       >>%
10432       >>%
10433   }%
10434   \@pdfm@mark{close \OBJ@OCG@print}%
10435   \def\OBJ@OCGs{@OCGs}%
10436   \@pdfm@mark{%

```

```

10437   obj \OBJ@OCGs [%
10438       \OBJ@OCG@view\space\OBJ@OCG@print
10439   ]%
10440 }%
10441 \@pdfm@mark{close \OBJ@OCGs}%
10442 \@pdfm@mark{%
10443   put @catalog <<%
10444     /OCProperties<<%
10445     /OCGs \OBJ@OCGs
10446     /D<<%
10447     /OFF[\OBJ@OCG@print]%
10448     /AS[%
10449       <<%
10450         /Event/View%
10451         /OCGs \OBJ@OCGs
10452         /Category[/View]%
10453       >>%
10454       <<%
10455         /Event/Print%
10456         /OCGs \OBJ@OCGs
10457         /Category[/Print]%
10458       >>%
10459       <<%
10460         /Event/Export%
10461         /OCGs \OBJ@OCGs
10462         /Category[/Print]%
10463       >>%
10464     ]%
10465     >>%
10466     >>%
10467     >>%
10468 }%
10469 \AtBeginShipout{%
10470   \setbox\AtBeginShipoutBox=\hbox{%
10471     \copy\AtBeginShipoutBox
10472     \@pdfm@mark{%
10473       put @resources <<%
10474         /Properties<<%
10475         /OCView \OBJ@OCG@view
10476         /OCPrint \OBJ@OCG@print
10477       >>%
10478       >>%
10479     }%
10480   }%
10481 }%
10482 \Hy@AtBeginDocument{%
10483   \def\Hy@colorlink#1{%
10484     \begingroup
10485     \ifHy@ocgcolorlinks
10486       \def\Hy@ocgcolor{#1}%
10487       \setbox0=\hbox\bgroup\color@begingroup
10488     \else
10489       \HyColor@UseColor#1%
10490     \fi
10491   }%
10492   \def\Hy@endcolorlink{%
10493     \ifHy@ocgcolorlinks

```

```

10494 \color@endgroup\egroup
10495 \mbox{%
10496 \@pdfm@mark{content /OC/OCPrint BDC}%
10497 \rlap{\copy0}%
10498 \@pdfm@mark{content EMC/OC/OCView BDC}%
10499 \begingroup
10500 \expandafter\HyColor@UseColor\Hy@ocgcolor
10501 \box0 %
10502 \endgroup
10503 \@pdfm@mark{content EMC}%
10504 }%
10505 \fi
10506 \endgroup
10507 }%
10508 }%
10509 \else
10510 \Hy@DisableOption{ocgcolorlinks}%
10511 \fi

10512 \def\Hy@BeginAnnot#1{%
10513 \stepcounter{Hy@AnnotLevel}%
10514 \ifnum\value{Hy@AnnotLevel}=\@ne
10515 #1%
10516 \fi
10517 }
10518 \def\Hy@endAnnot{%
10519 \ifnum\value{Hy@AnnotLevel}=\@ne
10520 \Hy@endcolorlink
10521 \@pdfm@mark{eann}%
10522 \fi
10523 \addtocounter{Hy@AnnotLevel}\m@ne
10524 }

10525 \def\Hy@undefinedname{UNDEFINED}
10526 \def\hyper@linkstart#1#2{%
10527 \Hy@VerboseLinkStart{#1}{#2}%
10528 \leavevmode
10529 \Hy@BeginAnnot{%
10530 \protected@edef\Hy@testname{#2}%
10531 \ifx\Hy@testname\@empty
10532 \Hy@Warning{%
10533 Empty destination name,\MessageBreak
10534 using '\Hy@undefinedname'%
10535 }%
10536 \let\Hy@testname\Hy@undefinedname
10537 \else
10538 \Hy@pstringdef\Hy@testname{%
10539 \expandafter\HyperDestNameFilter\expandafter{%
10540 \Hy@testname
10541 }%
10542 }%
10543 \fi
10544 \@pdfm@mark{%
10545 bann<<%
10546 /Type/Annot%
10547 /Subtype/Link%
10548 \ifHy@pdfa /F 4\fi
10549 \Hy@setpdfborder
10550 \expandafter\ifx\csname @#1bordercolor\endcsname\relax

```



```

10551     \else
10552     /C[\csname @#1bordercolor\endcsname]%
10553     \fi
10554     /A<<%
10555     /S/GoTo%
10556     /D(\Hy@testname)%
10557     \Hy@href@nextactionraw
10558     >>%
10559     >>%
10560     }%
10561     \expandafter\Hy@colorlink\csname @#1color\endcsname
10562     }%
10563 }
10564 \def\hyper@linkend{\Hy@EndAnnot}%
10565 \def\hyper@link#1#2#3{%
10566   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10567 }
10568 \def\hyper@linkfile#1#2#3{%
10569   \leavevmode
10570   \Hy@BeginAnnot{%
10571     \def\Hy@pstringF{#2}%
10572     \Hy@CleanupFile\Hy@pstringF
10573     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10574     \Hy@pstringdef\Hy@pstringD{#3}%
10575     \Hy@MakeRemoteAction
10576     \@pdfm@mark{%
10577       bann<<%
10578       /Type/Annot%
10579       /Subtype/Link%
10580       \ifHy@pdfa /F 4\fi
10581       \Hy@setpdfborder
10582       \ifx\@filebordercolor\relax
10583       \else
10584         /C[\@filebordercolor]%
10585       \fi
10586       /A<<%
10587       /S/GoToR%
10588       /F(\Hy@pstringF)%
10589       /D%
10590       \ifx\#3\%
10591         [\Hy@href@page\@pdfremotestartview]%
10592       \else
10593         (\Hy@pstringD)%
10594       \fi
10595       \Hy@SetNewWindow
10596       \Hy@href@nextactionraw
10597       >>%
10598       >>%
10599     }%
10600     \Hy@colorlink\@filecolor
10601   }%
10602   #1\Hy@xspace@end
10603   \Hy@EndAnnot
10604 }
10605 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10606   \leavevmode
10607   \Hy@BeginAnnot{%

```

```

10608 \Hy@pstringdef\Hy@pstringF{#1}%
10609 \Hy@pstringdef\Hy@pstringP{#3}%
10610 \@pdfm@mark{%
10611   bann<<%
10612   /Type/Annot%
10613   /Subtype/Link%
10614   \ifHy@pdfa /F 4\fi
10615   \Hy@setpdfborder
10616   \ifx\@runbordercolor\relax
10617   \else
10618     /C[\@runbordercolor]%
10619   \fi
10620   /A<<%
10621   /F(\Hy@pstringF)%
10622   /S/Launch%
10623   \Hy@SetNewWindow
10624   \ifx\#3\%
10625   \else
10626     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10627   \fi
10628   \Hy@href@nextactionraw
10629   >>%
10630   >>%
10631   }%
10632   \Hy@colorlink\@runcolor
10633 }%
10634 #2\Hy@xspace@end
10635 \Hy@endAnnot
10636 }
10637 \def\hyper@linkurl#1#2{%
10638 \leavevmode
10639 \Hy@BeginAnnot{%
10640 \Hy@pstringdef\Hy@pstringURI{#2}%
10641 \@pdfm@mark{%
10642   bann<<%
10643   /Type/Annot%
10644   /Subtype/Link%
10645   \ifHy@pdfa /F 4\fi
10646   \Hy@setpdfborder
10647   \ifx\@urlbordercolor\relax
10648   \else
10649     /C[\@urlbordercolor]%
10650   \fi
10651   /A<<%
10652   /S/URI%
10653   /URI(\Hy@pstringURI)%
10654   \ifHy@href@ismap
10655     /IsMap true%
10656   \fi
10657   \Hy@href@nextactionraw
10658   >>%
10659   >>%
10660   }%
10661   \Hy@colorlink\@urlcolor
10662 }%
10663 #1\Hy@xspace@end
10664 \Hy@endAnnot

```

```

10665 }
10666 \def\Acrobatmenu#1#2{%
10667   \Hy@Acrobatmenu{#1}{#2}{%
10668     \Hy@BeginAnnot{%
10669       \EdefEscapeName\Hy@temp@menu{#1}%
10670       \@pdfm@mark{%
10671         bann<<%
10672         /Type/Annot%
10673         /Subtype/Link%
10674         \ifHy@pdfa /F 4\fi
10675         \Hy@setpdfborder
10676         \ifx\@menubordercolor\relax
10677           \else
10678             /C[\@menubordercolor]%
10679           \fi
10680         /A<<%
10681         /S/Named%
10682         /N/\Hy@temp@menu
10683         \Hy@href@nextactionraw
10684         >>%
10685         >>%
10686       }%
10687       \Hy@colorlink\@menucolor
10688     }%
10689     #2\Hy@xspace@end
10690   \Hy@endAnnot
10691 }%
10692 }
10693 \ifx\@pdfproducer\relax
10694 \def\@pdfproducer{dvipdfm}%

```

Detect XeTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

10695 \begingroup\expandafter\expandafter\expandafter\endgroup
10696 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10697   \else
10698     \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10699   \fi
10700 \fi
10701 \def\PDF@FinishDoc{%
10702   \Hy@UseMaketitleInfos
10703   \HyInfo@GenerateAddons
10704   \@pdfm@mark{%
10705     docinfo<<%
10706     /Title(\@pdftitle)%
10707     /Subject(\@pdfsubject)%
10708     /Creator(\@pdfcreator)%
10709     \ifx\@pdfcreationdate\@empty
10710       \else
10711         /CreationDate(\@pdfcreationdate)%
10712       \fi
10713     \ifx\@pdfmoddate\@empty
10714       \else
10715         /ModDate(\@pdfmoddate)%
10716       \fi
10717     /Author(\@pdfauthor)%
10718     \ifx\@pdfproducer\relax
10719       \else
10720         /Producer(\@pdfproducer)%

```

```

10721 \fi
10722 /Keywords(\@pdfkeywords)%
10723 \ifx\@pdftrapped\@empty
10724 \else
10725 /Trapped/\@pdftrapped
10726 \fi
10727 \HyInfo@Addons
10728 >>%
10729 }%
10730 \Hy@DisableOption{pdfauthor}%
10731 \Hy@DisableOption{pdftitle}%
10732 \Hy@DisableOption{pdfsubject}%
10733 \Hy@DisableOption{pdfcreator}%
10734 \Hy@DisableOption{pdfcreationdate}%
10735 \Hy@DisableOption{pdfmoddate}%
10736 \Hy@DisableOption{pdfproducer}%
10737 \Hy@DisableOption{pdfkeywords}%
10738 \Hy@DisableOption{pdftrapped}%
10739 \Hy@DisableOption{pdfinfo}%
10740 }

10741 \def\PDF@SetupDoc{%
10742 \edef\Hy@temp{%
10743 \ifHy@pdftoolbar\else /HideToolbar true\fi
10744 \ifHy@pdfmenubar\else /HideMenubar true\fi
10745 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10746 \ifHy@pdfwindow /FitWindow true\fi
10747 \ifHy@pdfcenterwindow /CenterWindow true\fi
10748 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10749 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10750 \Hy@UseNameKey{Direction}\@pdfdirection
10751 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10752 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10753 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10754 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10755 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10756 \Hy@UseNameKey{Duplex}\@pdfduplex
10757 \ifx\@pdfpicktraybypdfsize\@empty
10758 \else
10759 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10760 \fi
10761 \ifx\@pdfprintpagerange\@empty
10762 \else
10763 /PrintPageRange[\@pdfprintpagerange]%
10764 \fi
10765 \ifx\@pdfnumcopies\@empty
10766 \else
10767 /NumCopies \@pdfnumcopies
10768 \fi
10769 }%
10770 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10771 \@pdfm@mark{%
10772 docview<<%
10773 \ifx\@pdfstartpage\@empty
10774 \else
10775 \ifx\@pdfstartview\@empty
10776 \else
10777 /OpenAction[@page\@pdfstartpage\@pdfstartview]%

```

```

10778 \fi
10779 \fi
10780 \ifx\@baseurl\@empty
10781 \else
10782 /URI<</Base(\Hy@pstringB)>>%
10783 \fi
10784 /PageMode/\@pdfpagemode
10785 \ifx\Hy@temp\@empty
10786 \else
10787 /ViewerPreferences<<\Hy@temp>>%
10788 \fi
10789 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10790 \ifx\@pdflang\@empty
10791 \else
10792 /Lang(\@pdflang)%
10793 \fi
10794 >>%
10795 }%
10796 \ifx\@pdfpagescrop\@empty
10797 \else
10798 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10799 \fi
10800 }
10801 </dvipdfm | xetex>
10802 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

10803 \def\hyper@pagetransition{%
10804 \ifx\@pdfpagetransition\relax
10805 \else
10806 \ifx\@pdfpagetransition\@empty
10807 \else
10808 \special{pdf:put @thispage %
10809 <</Trans<</S/\@pdfpagetransition>>>>%
10810 }%
10811 \fi
10812 \fi
10813 }

```

\hyper@pageduration

```

10814 \def\hyper@pageduration{%
10815 \ifx\@pdfpageduration\relax
10816 \else
10817 \ifx\@pdfpageduration\@empty
10818 \else
10819 \special{pdf:put @thispage %
10820 <</Dur \@pdfpageduration>>>>%
10821 }%
10822 \fi
10823 \fi
10824 }

```

\hyper@pagehidden

```

10825 \def\hyper@pagehidden{%
10826 \ifHy@useHidKey
10827 \special{pdf:put @thispage %
10828 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%

```

```

10829 }%
10830 \fi
10831 }

10832 \g@addto@macro\Hy@EveryPageBoxHook{%
10833   \hyper@pagetransition
10834   \hyper@pageduration
10835   \hyper@pagehidden
10836 }

10837 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method `\pdfpagewidth` and `\pdfpageheight` for setting the paper size.

```

10838 <*dvipdfm>
10839 \AtBeginShipoutFirst{%
10840   \ifHy@setpagesize
10841     \begingroup
10842       \@ifundefined{stockwidth}{%
10843         \ifdim\paperwidth>\z@
10844           \ifdim\paperheight>\z@
10845             \special{papersize=\the\paperwidth,\the\paperheight}%
10846           \fi
10847         \fi
10848       }{%
10849         \ifdim\stockwidth>\z@
10850           \ifdim\stockheight>\z@
10851             \special{papersize=\the\stockwidth,\the\stockheight}%
10852           \fi
10853         \fi
10854       }%
10855     \endgroup
10856   \fi
10857   \Hy@DisableOption{setpagesize}%
10858 }
10859 </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.

```

10860 <*vtexhtml>
10861 \providecommand*\XR@ext}{htm}
10862 \RequirePackage{vtexhtml}
10863 \newif\if@Localurl
10864 \let\PDF@FinishDoc\ltx@empty
10865 \def\PDF@SetupDoc{%
10866   \ifx\@baseurl\@empty
10867     \else
10868       \special{!direct <base href="\@baseurl">}%
10869     \fi
10870 }
10871 \def\@urltype{url}
10872 \def\hyper@link#1#2#3{%
10873   \Hy@VerboseLinkStart{#1}{#2}%
10874   \leavevmode
10875   \special{!direct <a href=%
10876     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%

```

```

10877 #3\Hy@xspace@end
10878 \special{!direct </a>}%
10879 }
10880 \def\hyper@linkurl#1#2{%
10881 \begingroup
10882 \hyper@chars
10883 \leavevmode
10884 \MathBSuppress=1\relax
10885 \special{!direct <a href=%
10886 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10887 #1\Hy@xspace@end
10888 \MathBSuppress=0\relax
10889 \special{!direct </a>}%
10890 \endgroup
10891 }
10892 \def\hyper@linkfile#1#2#3{%
10893 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10894 }
10895 \def\hyper@linkstart#1#2{%
10896 \Hy@VerboseLinkStart{#1}{#2}%
10897 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10898 \@Localurltrue
10899 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10900 \else
10901 \@Localurlfalse
10902 \begingroup
10903 \hyper@chars
10904 \special{!aref \HyperDestNameFilter{#2}}%
10905 \endgroup
10906 \fi
10907 }
10908 \def\hyper@linkend{%
10909 \if@Localurl
10910 \special{!endaref}%
10911 \else
10912 \special{!direct </a>}%
10913 \fi
10914 }
10915 \Hy@WrapperDef\hyper@anchorstart#1{%
10916 \Hy@SaveLastskip
10917 \Hy@VerboseAnchor{#1}%
10918 \begingroup
10919 \hyper@chars
10920 \special{!aname #1}%
10921 \special{!direct <a name=%
10922 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10923 \endgroup
10924 \Hy@activeanchortrue
10925 }
10926 \def\hyper@anchorend{%
10927 \special{!direct </a>}%
10928 \Hy@activeanchorfalse
10929 \Hy@RestoreLastskip
10930 }
10931 \Hy@WrapperDef\hyper@anchor#1{%
10932 \Hy@SaveLastskip
10933 \Hy@VerboseAnchor{#1}%

```

```

10934 \begingroup
10935 \let\protect=\string
10936 \hyper@chars
10937 \leavevmode
10938 \special{!aname #1}%
10939 \special{!direct <a name=%
10940 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10941 \endgroup
10942 \Hy@activeanchortrue
10943 \bgroup\anchor@spot\egroup
10944 \special{!direct </a>}%
10945 \Hy@activeanchorfalse
10946 \Hy@RestoreLastskip
10947 }
10948 \def\@Form[#1]{%
10949 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10950 }
10951 \let\@endForm\ltx@empty
10952 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10953 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10954 }
10955 \def\@TextField[#1]#2{% parameters, label
10956 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10957 }
10958 \def\@CheckBox[#1]#2{% parameters, label
10959 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10960 }
10961 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10962 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10963 }
10964 \def\@PushButton[#1]#2{% parameters, label
10965 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10966 }
10967 \def\@Reset[#1]#2{%
10968 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10969 }
10970 \def\@Submit[#1]#2{%
10971 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10972 }
10973 </vtexhtml>
10974 < *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.

```

10975 \ifx\mediaheight\@undefined
10976 \else
10977 \ifx\mediaheight\relax
10978 \else
10979 \ifHy@setpagesize
10980 \providecommand*\VTeXInitMediaSize{%
10981 \ltx@ifundefined{stockwidth}{%
10982 \ifdim\paperheight>0pt %
10983 \setlength\mediaheight\paperheight
10984 \fi
10985 \ifdim\paperheight>0pt %
10986 \setlength\mediawidth\paperwidth

```



```

10987     \fi
10988   }{%
10989     \ifdim\stockheight>0pt %
10990       \setlength\mediaheight\stockheight
10991     \fi
10992     \ifdim\stockwidth>0pt %
10993       \setlength\mediawidth\stockwidth
10994     \fi
10995   }%
10996 }%
10997 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10998 \fi
10999 \Hy@DisableOption{setpagesize}%
11000 \fi
11001 \fi

```

Older versions of VTeX require xyz in lower case.

```

11002 \providecommand*\@pdfview{xyz}
11003 \providecommand*\@pdfborder{0 0 1}
11004 \providecommand*\@pdfborderstyle{}
11005 \let\CurrentBorderColor\@linkbordercolor
11006 \Hy@WrapperDef\hyper@anchor#1{%
11007   \Hy@SaveLastskip
11008   \Hy@VerboseAnchor{#1}%
11009   \begingroup
11010     \let\protect=\string
11011     \hyper@chars
11012     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11013   \endgroup
11014   \Hy@activeanchortrue
11015   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11016   \Hy@activeanchorfalse
11017   \Hy@RestoreLastskip
11018 }
11019 \Hy@WrapperDef\hyper@anchorstart#1{%
11020   \Hy@SaveLastskip
11021   \Hy@VerboseAnchor{#1}%
11022   \begingroup
11023     \hyper@chars
11024     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11025   \endgroup
11026   \Hy@activeanchortrue
11027 }
11028 \def\hyper@anchorend{%
11029   \Hy@activeanchorfalse
11030   \Hy@RestoreLastskip
11031 }
11032 \def\@urltype{url}
11033 \def\Hy@undefinedname{UNDEFINED}
11034 \def\hyper@linkstart#1#2{%
11035   \Hy@VerboseLinkStart{#1}{#2}%
11036   \Hy@pstringdef\Hy@pstringURI{#2}%
11037   \expandafter\Hy@colorlink\csname @#1color\endcsname
11038   \ltx@ifundefined{#1bordercolor}{%
11039     \let\CurrentBorderColor\relax
11040   }{%
11041     \edef\CurrentBorderColor{%
11042       \csname @#1bordercolor\endcsname

```

```

11043 }%
11044 }%
11045 \def\Hy@tempa{#1}%
11046 \ifx\Hy@tempa\@urltype
11047 \special{!%
11048   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11049   \ifHy@href@ismap
11050     /IsMap true%
11051   \fi
11052   \Hy@href@nextactionraw
11053   >;%
11054   a=<%
11055   \ifHy@pdfa /F 4\fi
11056   \Hy@setpdfborder
11057   \ifx\CurrentBorderColor\relax
11058   \else
11059     /C [\CurrentBorderColor]%
11060   \fi
11061   >%
11062 }%
11063 \else
11064 \protected@edef\Hy@testname{#2}%
11065 \ifx\Hy@testname\@empty
11066 \Hy@Warning{%
11067   Empty destination name,\MessageBreak
11068   using '\Hy@undefinedname'%
11069 }%
11070 \let\Hy@testname\Hy@undefinedname
11071 \fi
11072 \special{!%
11073   aref \expandafter\HyperDestNameFilter
11074   \expandafter{\Hy@testname};%
11075   a=<%
11076   \ifHy@pdfa /F 4\fi
11077   \Hy@setpdfborder
11078   \ifx\CurrentBorderColor\relax
11079   \else
11080     /C [\CurrentBorderColor]%
11081   \fi
11082   >%
11083 }%
11084 \fi
11085 }
11086 \def\hyper@linkend{%
11087 \special{!endaref}%
11088 \Hy@endcolorlink
11089 }
11090 \def\hyper@linkfile#1#2#3{%
11091 \leavevmode
11092 \def\Hy@pstringF{#2}%
11093 \Hy@CleanupFile\Hy@pstringF
11094 \special{!%
11095   aref <%
11096   \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11097   f=\Hy@pstringF>#3;%
11098   a=<%
11099   \ifHy@pdfa /F 4\fi

```

```

11100 \Hy@setpdfborder
11101 \ifx\@filebordercolor\relax
11102 \else
11103 /C [\@filebordercolor]%
11104 \fi
11105 >%
11106 }%
11107 \Hy@colorlink\@filecolor
11108 #1\Hy@xspace@end
11109 \Hy@endcolorlink
11110 \special{!endaref}%
11111 }
11112 \def\hyper@linkurl#1#2{%
11113 \begingroup
11114 \Hy@pstringdef\Hy@pstringURI{#2}%
11115 \hyper@chars
11116 \leavevmode
11117 \special{!%
11118 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11119 \ifHy@href@ismap
11120 /IsMap true%
11121 \fi
11122 \Hy@href@nextactionraw
11123 >;%
11124 a=<%
11125 \ifHy@pdfa /F 4\fi
11126 \Hy@setpdfborder
11127 \ifx\@urlbordercolor\relax
11128 \else
11129 /C [\@urlbordercolor]%
11130 \fi
11131 >%
11132 }%
11133 \Hy@colorlink\@urlcolor
11134 #1\Hy@xspace@end
11135 \Hy@endcolorlink
11136 \special{!endaref}%
11137 \endgroup
11138 }
11139 \def\hyper@link#1#2#3{%
11140 \Hy@VerboseLinkStart{#1}{#2}%
11141 \ltx@ifundefined{@#1bordercolor}{%
11142 \let\CurrentBorderColor\relax
11143 }{%
11144 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11145 }%
11146 \leavevmode
11147 \protected@edef\Hy@testname{#2}%
11148 \ifx\Hy@testname\@empty
11149 \Hy@Warning{%
11150 Empty destination name,\MessageBreak
11151 using '\Hy@undefinedname'%
11152 }%
11153 \let\Hy@testname\Hy@undefinedname
11154 \fi
11155 \special{!%
11156 aref \expandafter\HyperDestNameFilter

```

```

11157     \expandafter{\Hy@testname};%
11158 a=<%
11159     \ifHy@pdfa /F 4\fi
11160     \Hy@setpdfborder
11161     \ifx\CurrentBorderColor\relax
11162     \else
11163     /C [\CurrentBorderColor]%
11164     \fi
11165 >%
11166 }%
11167 \expandafter
11168 \Hy@colorlink\csname @#1color\endcsname
11169 #3\Hy@xspace@end
11170 \Hy@endcolorlink
11171 \special{!endaref}%
11172 }
11173 \def\hyper@image#1#2{%
11174 \hyper@linkurl{#2}{#1}%
11175 }
11176 \def\@hyper@launch run:#1\#2#3{%
11177 \Hy@pstringdef\Hy@pstringF{#1}%
11178 \Hy@pstringdef\Hy@pstringP{#3}%
11179 \leavevmode
11180 \special{!aref %
11181 <u=%
11182 /Type/Action%
11183 /S/Launch%
11184 /F(\Hy@pstringF)%
11185 \Hy@SetNewWindow
11186 \ifx\#3\%
11187 \else
11188 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11189 \fi
11190 \Hy@href@nextactionraw
11191 >,%
11192 a=<%
11193 \ifHy@pdfa /F 4\fi
11194 \Hy@setpdfborder
11195 \ifx\@runbordercolor\relax
11196 \else
11197 /C[\@runbordercolor]%
11198 \fi
11199 >%
11200 }%
11201 \Hy@colorlink\@runcolor
11202 #2\Hy@xspace@end
11203 \Hy@endcolorlink
11204 \special{!endaref}%
11205 }
11206 \def\Acrobatmenu#1#2{%
11207 \EdefEscapeName\Hy@temp@menu{#1}%
11208 \Hy@Acrobatmenu{#1}{#2}{%
11209 \special{!%
11210 aref <u=/S /Named /N /\Hy@temp@menu>;%
11211 a=<%
11212 \ifHy@pdfa /F 4\fi
11213 \Hy@setpdfborder

```

```

11214 \ifx\@menubordercolor\relax
11215 \else
11216 /C[\@menubordercolor]%
11217 \fi
11218 >%
11219 }%
11220 \Hy@colorlink\@menucolor
11221 #2\Hy@xspace@end
11222 \Hy@endcolorlink
11223 \special{!endaref}%
11224 }%
11225 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for V_T_EX 7.02 or later.

Please never use `\ifundefined{VTeXversion}{..}{..}` *globally*.

```

11226 \ifnum\Hy@VTeXversion<702 %
11227 \else
11228 \def\hyper@pagetransition{%
11229 \ifx\@pdfpagetransition\relax
11230 \else
11231 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

11232 \else
11233 \hvtex@parse@trans\@pdfpagetransition
11234 \fi
11235 \fi
11236 }%

```

I have to write an “honest” parser to convert raw PDF code into V_T_EX `\special`. (AVK)

Syntax of V_T_EX `\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:

```

11237 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11238 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11239 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11240 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11241 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11242 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11243 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```
11244 \def\hvtex@par@dimension{/Dm}%
11245 \def\hvtex@par@direction{/Di}%
11246 \def\hvtex@par@duration{/D}%
11247 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11248 \def\hvtex@gettoken{%
11249   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11250 }%
```

Notice that tokens in the input buffer must be space delimited.

```
11251 \def\hvtex@gettoken@#1 #2\@nil{%
11252   \edef\hvtex@token{#1}%
11253   \edef\hvtex@buffer{#2}%
11254 }%
11255 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11256 \let\hvtex@trans@code\@empty
11257 \let\hvtex@param@dimension\@empty
11258 \let\hvtex@param@direction\@empty
11259 \let\hvtex@param@duration\@empty
11260 \let\hvtex@param@motion\@empty
11261 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
11262 \hvtex@gettoken
11263 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11264 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11265 \else
11266   \hvtex@gettoken
11267 \fi
11268 \fi
11269 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11270 \hvtex@trans@params
11271 }%
```

Reentrant macro to parse optional parameters.

```
11272 \def\hvtex@trans@params{%
11273   \ifx\hvtex@buffer\@empty
11274   \else
11275     \hvtex@gettoken
11276     \let\hvtex@trans@par\hvtex@token
11277     \ifx\hvtex@buffer\@empty
11278     \else
11279       \hvtex@gettoken
11280       \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```
11281       \let\hvtex@param@duration\hvtex@token
11282     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
11283 \expandafter\edef\expandafter\hvtex@param@motion
11284 \expandafter{\expandafter\@gobble\hvtex@token}%
11285 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11286 \expandafter\edef\expandafter\hvtex@param@dimension
11287 \expandafter{\expandafter\@gobble\hvtex@token}%
11288 \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).

```
11289 \let\hvtex@param@direction\hvtex@token
11290 \fi\fi\fi\fi
11291 \fi
11292 \fi
11293 \ifx\hvtex@buffer\@empty
11294 \let\next\hvtex@produce@trans
11295 \else
11296 \let\next\hvtex@trans@params
11297 \fi
11298 \next
11299 }%
```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```
11300 \def\hvtex@produce@trans{%
11301 \let\vtex@trans@special\@empty
11302 \if S\hvtex@trans@code
11303 \edef\vtex@trans@special{\hvtex@trans@code
11304 \hvtex@param@dimension\hvtex@param@motion}%
11305 \else\if B\hvtex@trans@code
11306 \edef\vtex@trans@special{%
11307 \hvtex@trans@code\hvtex@param@dimension
11308 }%
11309 \else\if X\hvtex@trans@code
11310 \edef\vtex@trans@special{%
11311 \hvtex@trans@code\hvtex@param@motion
11312 }%
11313 \else\if W\hvtex@trans@code
11314 \edef\vtex@trans@special{%
11315 \hvtex@trans@code\hvtex@param@direction
11316 }%
11317 \else\if D\hvtex@trans@code
11318 \let\vtex@trans@special\hvtex@trans@code
11319 \else\if R\hvtex@trans@code
11320 \let\vtex@trans@special\hvtex@trans@code
11321 \else\if G\hvtex@trans@code
11322 \edef\vtex@trans@special{%
11323 \hvtex@trans@code\hvtex@param@direction
11324 }%
11325 \fi\fi\fi\fi\fi\fi
11326 \ifx\vtex@trans@special\@empty
11327 \else
11328 \ifx\hvtex@param@duration\@empty
11329 \else
11330 \setlength{\dimen@}{\hvtex@param@duration\p@}%
```

I'm not guilty of possible overflow.

```

11331 \multiply\dimen@ \@m
11332 \edef\vtex@trans@special{%
11333 \vtex@trans@special,\strip@pt\dimen@
11334 }%
11335 \fi

```

And all the mess is just for this.

```

11336 \special{!trans \vtex@trans@special}%
11337 \fi
11338 }%

11339 \def\hyper@pageduration{%
11340 \ifx\@pdfpageduration\relax
11341 \else
11342 \ifx\@pdfpageduration\@empty
11343 \special{!duration-}%
11344 \else
11345 \special{!duration \@pdfpageduration}%
11346 \fi
11347 \fi
11348 }%

11349 \def\hyper@pagehidden{%
11350 \ifHy@useHidKey
11351 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11352 \fi
11353 }%

11354 \g@addto@macro\Hy@EveryPageBoxHook{%
11355 \hyper@pagetransition
11356 \hyper@pageduration
11357 \hyper@pagehidden
11358 }%
11359 \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

```

11360 \ifx\@pdfproducer\relax
11361 \def\@pdfproducer{VTeX}%
11362 \ifnum\Hy@VTeXversion>\z@
11363 \count@\VTeXversion
11364 \divide\count@ 100 %
11365 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11366 \multiply\count@ -100 %
11367 \advance\count@\VTeXversion
11368 \edef\@pdfproducer{%
11369 \@pdfproducer
11370 .\ifnum\count@<10 0\fi\the\count@
11371 \ifx\VTeXOS\@undefined\else
11372 \ifnum\VTeXOS>0 %
11373 \ifnum\VTeXOS<6 %
11374 \space%

```



```

11375         \ifcase\VTeXOS
11376         \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11377         \fi
11378         )%
11379     \fi
11380 \fi
11381 \fi
11382 ,\space
11383 \ifnum\OpMode=\@one PDF\else PS\fi
11384 \space backend%
11385 \ifx\gexmode\@undefined\else
11386 \ifnum\gexmode>\z@\space with GeX\fi
11387 \fi
11388 }%
11389 \fi
11390 \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).

```

11391 \def\PDF@SetupDoc{%
11392 \ifx\@pdfpagescrop\@empty
11393 \else
11394 \special{!pdfinfo b=<\@pdfpagescrop>}%
11395 \fi
11396 \ifx\@pdfstartpage\@empty
11397 \else
11398 \ifx\@pdfstartview\@empty
11399 \else
11400 \special{!onopen Page\@pdfstartpage}%
11401 \fi
11402 \fi
11403 \special{!pdfinfo p=</\@pdfpagemode>}%
11404 \ifx\@baseurl\@empty
11405 \else
11406 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11407 \fi
11408 \special{!pdfinfo v=<<<%
11409 \ifHy@pdftoolbar\else /HideToolbar true\fi
11410 \ifHy@pdfmenubar\else /HideMenubar true\fi
11411 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11412 \ifHy@pdffitwindow /FitWindow true\fi
11413 \ifHy@pdfcenterwindow /CenterWindow true\fi
11414 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11415 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11416 \Hy@UseNameKey{Direction}\@pdfdirection

```

```

11417 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11418 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11419 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11420 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11421 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11422 \Hy@UseNameKey{Duplex}\@pdfduplex
11423 \ifx\@pdfpicktraybypdfsize\@empty
11424 \else
11425 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11426 \fi
11427 \ifx\@pdfprintpagerange\@empty
11428 \else
11429 /PrintPageRange[\@pdfprintpagerange]%
11430 \fi
11431 \ifx\@pdfnumcopies\@empty
11432 \else
11433 /NumCopies \@pdfnumcopies
11434 \fi
11435 >>>}%
11436 \ifx\@pdfpagelayout\@empty
11437 \else
11438 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11439 \fi
11440 }%
11441 \HyInfo@AddonUnsupportedtrue
11442 \define@key{Hyp}{pdfcreationdate}{%
11443 \Hy@Warning{%
11444 VTeX does not support pdfcreationdate.\MessageBreak
11445 Therefore its setting is ignored%
11446 }%
11447 }
11448 \define@key{Hyp}{pdfmoddate}{%
11449 \Hy@Warning{%
11450 VTeX does not support pdfmoddate.\MessageBreak
11451 Therefore its setting is ignored%
11452 }%
11453 }
11454 \def\PDF@FinishDoc{%
11455 \Hy@UseMaketitleInfos
11456 \HyInfo@TrappedUnsupported
11457 \special{!pdfinfo a=<\@pdfauthor>}%
11458 \special{!pdfinfo t=<\@pdftitle>}%
11459 \special{!pdfinfo s=<\@pdfsubject>}%
11460 \special{!pdfinfo c=<\@pdfcreator>}%
11461 \ifx\@pdfproducer\relax
11462 \else
11463 \special{!pdfinfo r=<\@pdfproducer>}%
11464 \fi
11465 \special{!pdfinfo k=<\@pdfkeywords>}%
11466 \Hy@DisableOption{pdfauthor}%
11467 \Hy@DisableOption{pdftitle}%
11468 \Hy@DisableOption{pdfsubject}%
11469 \Hy@DisableOption{pdfcreator}%
11470 \Hy@DisableOption{pdfcreationdate}%
11471 \Hy@DisableOption{pdfmoddate}%
11472 \Hy@DisableOption{pdfproducer}%
11473 \Hy@DisableOption{pdfkeywords}%

```

```

11474 \Hy@DisableOption{pdftrapped}%
11475 \Hy@DisableOption{pdfinfo}%
11476 }
11477 </vtex>

```

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.

```

11478 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11479 <package>\providecommand*{\Hy@DistillerDestFix}{}
11480 <*pdfmark | dviwindo>
11481 \def\Hy@DistillerDestFix{%
11482   \begingroup
11483     \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11484   \ifnum \@ifundefined{OpMode}{0}{%
11485     \@ifundefined{gexmode}{0}{%
11486       \ifnum\gexmode>0 \OpMode\else 0\fi
11487     }>1 %
11488     \def\x##1{%
11489       \immediate\special{!=##1}%
11490     }%
11491     \fi
11492     \x{%
11493       /product where{%
11494         pop %
11495         product(Distiller)search{%
11496           pop pop pop %
11497           version(.)search{%
11498             exch pop exch pop%
11499             (3011)eq{%
11500               gsave %
11501               newpath 0 0 moveto closepath clip%
11502               /Courier findfont 10 scalefont setfont %
11503               72 72 moveto(.)show %
11504               grestore%
11505             }if%
11506             }{pop}ifelse%
11507             }{pop}ifelse%
11508           }if%
11509         }%
11510       \endgroup
11511     }
11512 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

<code>\@pdfproducer</code>	for document information
<code>\literalps@out</code>	PostScript output
<code>\headerps@out</code>	PostScript output that goes in the header area

and the correct definitions of the following PostScript procedures:

<code>H.S</code>	start of anchor, link or rect
<code>#1 H.A</code>	end of anchor, argument=baselineskip in pt
<code>#1 H.L</code>	end of link, argument=baselineskip in pt
<code>H.R</code>	end of rect
<code>H.B</code>	raw rect code

```
11513 (*pdfmark)
11514 \Hy@breaklinks@unsupported
11515 \def\HyPat@ObjRef{%
11516   \[~{}]+\}%
11517 }
11518 \Hy@WrapperDef\hyper@anchor#1{%
11519   \Hy@SaveLastskip
11520   \Hy@VerboseAnchor{#1}%
11521   \begingroup
11522     \pdfmark[\anchor@spot]{%
11523       pdfmark=/DEST,%
11524       linktype=anchor,%
11525       View=/\@pdfview \@pdfviewparams,%
11526       DestAnchor={#1}%
11527     }%
11528   \endgroup
11529   \Hy@RestoreLastskip
11530 }
11531 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
11532 \Hy@WrapperDef\hyper@anchorstart#1{%
11533   \Hy@SaveLastskip
11534   \Hy@VerboseAnchor{#1}%
11535   \literalps@out{H.S}%
11536   \Hy@AllowHyphens
11537   \xdef\hyper@currentanchor{#1}%
11538   \Hy@activeanchortrue
11539 }
11540 \def\hyper@anchorend{%
11541   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11542   \pdfmark{%
11543     pdfmark=/DEST,%
11544     linktype=anchor,%
11545     View=/\@pdfview \@pdfviewparams,%
11546     DestAnchor=\hyper@currentanchor,%
11547   }%
11548   \Hy@activeanchorfalse
11549   \Hy@RestoreLastskip
11550 }
11551 \def\hyper@linkstart#1#2{%
11552   \Hy@VerboseLinkStart{#1}{#2}%
11553   \ifHy@breaklinks
11554     \else
11555     \leavevmode
```

```

11556 \ifmmode
11557   \def\Hy@LinkMath{$}%
11558 \else
11559   \let\Hy@LinkMath\ltx@empty
11560 \fi
11561 \Hy@SaveSpaceFactor
11562 \hbox\bgroup
11563 \Hy@RestoreSpaceFactor
11564 \Hy@LinkMath
11565 \fi
11566 \expandafter\Hy@colorlink\csname @#1color\endcsname
11567 \literalps@out{H.S}%
11568 \Hy@AllowHyphens
11569 \xdef\hyper@currentanchor{#2}%
11570 \gdef\hyper@currentlinktype{#1}%
11571 }
11572 \def\hyper@linkend{%
11573   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11574   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11575     \let\Hy@tempcolor\relax
11576   }{%
11577     \edef\Hy@tempcolor{%
11578       \csname @\hyper@currentlinktype bordercolor\endcsname
11579     }%
11580   }%
11581   \pdfmark{%
11582     pdfmark=/ANN,%
11583     linktype=link,%
11584     Subtype=/Link,%
11585     PDFAMFlags=4,%
11586     Dest=\hyper@currentanchor,%
11587     AcroHighlight=\@pdfhighlight,%
11588     Border=\@pdfborder,%
11589     BorderStyle=\@pdfborderstyle,%
11590     Color=\Hy@tempcolor,%
11591     Raw=H.B%
11592   }%
11593   \Hy@endcolorlink
11594   \ifHy@breaklinks
11595   \else
11596     \Hy@LinkMath
11597     \Hy@SaveSpaceFactor
11598     \egroup
11599     \Hy@RestoreSpaceFactor
11600   \fi
11601 }

```

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.

```

11602 \begingroup
11603   \catcode'P=12 %
11604   \catcode'T=12 %
11605   \lowercase{\endgroup
11606   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11607 }
11608 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```
11609 \def\hyper@pagetransition{%
11610 \ifx\@pdfpagetransition\relax
11611 \else
11612 \ifx\@pdfpagetransition\@empty
11613 % 1. Does an old entry have to be deleted?
11614 % 2. If 1=yes, how to delete?
11615 \else
11616 \pdfmark{%
11617 pdfmark=/PUT,%
11618 Raw={%
11619 \string{ThisPage\string}%
11620 <</Trans << /S /\@pdfpagetransition\space >> >>%
11621 }%
11622 }%
11623 \fi
11624 \fi
11625 }
```

\hyper@pageduration

```
11626 \def\hyper@pageduration{%
11627 \ifx\@pdfpageduration\relax
11628 \else
11629 \ifx\@pdfpageduration\@empty
11630 % 1. Does an old entry have to be deleted?
11631 % 2. If 1=yes, how to delete?
11632 \else
11633 \pdfmark{%
11634 pdfmark=/PUT,%
11635 Raw={%
11636 \string{ThisPage\string}%
11637 <</Dur \@pdfpageduration>>%
11638 }%
11639 }%
11640 \fi
11641 \fi
11642 }
```

\hyper@pagehidden

```
11643 \def\hyper@pagehidden{%
11644 \ifHy@useHidKey
11645 \pdfmark{%
11646 pdfmark=/PUT,%
11647 Raw={%
11648 \string{ThisPage\string}%
11649 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11650 }%
11651 }%
11652 \fi
11653 }

11654 \g@addto@macro\Hy@EveryPageBoxHook{%
11655 \hyper@pagetransition
11656 \hyper@pageduration
11657 \hyper@pagehidden
11658 }

11659 \def\hyper@image#1#2{%
```

```

11660 \hyper@linkurl{#2}{#1}%
11661 }
11662 \def\Hy@undefinedname{UNDEFINED}
11663 \def\hyper@link#1#2#3{%
11664 \Hy@VerboseLinkStart{#1}{#2}%
11665 \ltx@ifundefined{#1bordercolor}{%
11666 \let\Hy@tempcolor\relax
11667 }{%
11668 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11669 }%
11670 \begingroup
11671 \protected@edef\Hy@testname{#2}%
11672 \ifx\Hy@testname\@empty
11673 \Hy@Warning{%
11674 Empty destination name,\MessageBreak
11675 using '\Hy@undefinedname'%
11676 }%
11677 \let\Hy@testname\Hy@undefinedname
11678 \fi
11679 \pdfmark[{#3}]{%
11680 Color=\Hy@tempcolor,%
11681 linktype={#1},%
11682 AcroHighlight=\@pdfhighlight,%
11683 Border=\@pdfborder,%
11684 BorderStyle=\@pdfborderstyle,%
11685 pdfmark=/ANN,%
11686 Subtype=/Link,%
11687 PDFAFlags=4,%
11688 Dest=\Hy@testname
11689 }%
11690 \endgroup
11691 }
11692 \newtoks\pdf@docset
11693 \def\PDF@FinishDoc{%
11694 \Hy@UseMaketitleInfos
11695 \Hy@Info@GenerateAddons
11696 \let\Hy@temp\@empty
11697 \ifx\@pdfcreationdate\@empty
11698 \else
11699 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11700 \fi
11701 \ifx\@pdfmoddate\@empty
11702 \else
11703 \expandafter\def\expandafter\Hy@temp\expandafter{%
11704 \Hy@temp
11705 ModDate=\@pdfmoddate,%
11706 }%
11707 \fi
11708 \ifx\@pdfproducer\relax
11709 \else
11710 \expandafter\def\expandafter\Hy@temp\expandafter{%
11711 \Hy@temp
11712 Producer=\@pdfproducer,%
11713 }%
11714 \fi
11715 \expandafter
11716 \pdfmark\expandafter{%

```

```

11717 \Hy@temp
11718 pdfmark=/DOCINFO,%
11719 Title=\@pdftitle,%
11720 Subject=\@pdfsubject,%
11721 Creator=\@pdfcreator,%
11722 Author=\@pdfauthor,%
11723 Keywords=\@pdfkeywords,%
11724 Trapped=\@pdftrapped
11725 }%
11726 \ifx\HyInfo@Addons\@empty
11727 \else
11728 \pdfmark{%
11729 pdfmark=/DOCINFO,%
11730 Raw={\HyInfo@Addons}%
11731 }%
11732 \fi
11733 \Hy@DisableOption{pdfauthor}%
11734 \Hy@DisableOption{pdftitle}%
11735 \Hy@DisableOption{pdfsubject}%
11736 \Hy@DisableOption{pdfcreator}%
11737 \Hy@DisableOption{pdfcreationdate}%
11738 \Hy@DisableOption{pdfmoddate}%
11739 \Hy@DisableOption{pdfproducer}%
11740 \Hy@DisableOption{pdfkeywords}%
11741 \Hy@DisableOption{pdftrapped}%
11742 \Hy@DisableOption{pdfinfo}%
11743 }
11744 \def\PDF@SetupDoc{%
11745 \def\Hy@temp{}%
11746 \ifx\@pdfstartpage\@empty
11747 \else
11748 \ifx\@pdfstartview\@empty
11749 \else
11750 \edef\Hy@temp{%
11751 ,Page=\@pdfstartpage
11752 ,View=\@pdfstartview
11753 }%
11754 \fi
11755 \fi
11756 \edef\Hy@temp{%
11757 \noexpand\pdfmark{%
11758 pdfmark=/DOCVIEW,%
11759 PageMode=/\@pdfpagemode
11760 \Hy@temp
11761 }%
11762 }%
11763 \Hy@temp
11764 \ifx\@pdfpagescrop\@empty
11765 \else
11766 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11767 \fi
11768 \edef\Hy@temp{%
11769 \ifHy@pdftoolbar\else /HideToolbar true\fi
11770 \ifHy@pdfmenubar\else /HideMenubar true\fi
11771 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11772 \ifHy@pdfwindow /FitWindow true\fi
11773 \ifHy@pdfcenterwindow /CenterWindow true\fi

```



```

11774 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11775 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11776 \Hy@UseNameKey{Direction}\@pdfdirection
11777 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11778 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11779 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11780 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11781 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11782 \Hy@UseNameKey{Duplex}\@pdfduplex
11783 \ifx\@pdfpicktraybypdfsize\@empty
11784 \else
11785 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11786 \fi
11787 \ifx\@pdfprintpagerange\@empty
11788 \else
11789 /PrintPageRange[\@pdfprintpagerange]%
11790 \fi
11791 \ifx\@pdfnumcopies\@empty
11792 \else
11793 /NumCopies \@pdfnumcopies
11794 \fi
11795 }%
11796 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11797 \pdfmark{%
11798 pdfmark=/PUT,%
11799 Raw={%
11800 \string{Catalog\string}<<%
11801 \ifx\Hy@temp\@empty
11802 \else
11803 /ViewerPreferences<<\Hy@temp>>%
11804 \fi
11805 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11806 \ifx\@pdflang\@empty
11807 \else
11808 /Lang(\@pdflang)%
11809 \fi
11810 \ifx\@baseurl\@empty
11811 \else
11812 /URI<</Base(\Hy@pstringB)>>%
11813 \fi
11814 >>%
11815 }%
11816 }%
11817 }
11818 </pdfmark>
11819 <*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.

```

11820 \newif\ifHy@pdfmarkerror
11821 \def\pdfmark{\@ifnextchar[\pdfmark@]{\pdfmark@[]}}
11822 \def\pdfmark@[#1]#2{%
11823 \Hy@pdfmarkerrorfalse

```

```

11824 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11825 \@processme
11826 \let\pdf@type\relax
11827 \let\pdf@objdef\ltx@empty
11828 \kvsetkeys{PDF}{#2}%
11829 \ifHy@pdfmarkerror
11830 \else
11831   \ifx\pdf@type\relax
11832     \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11833     \ifx\\#1\\%
11834       \else
11835         \pdf@rect{#1}%
11836       \fi
11837     \else
11838       \ifx\\#1\\%
11839         \literalps@out{%
11840           [%
11841             \ifx\pdf@objdef\ltx@empty
11842             \else
11843               /_objdef\string{\pdf@objdef\string}%
11844             \fi
11845             \the\pdf@toks\space\pdf@type\space pdfmark%
11846           }%
11847         \else
11848           \ltx@ifundefined{@\pdf@linktype color}{%
11849             \Hy@colorlink\@linkcolor
11850           }{%
11851             \expandafter\Hy@colorlink
11852             \csname @\pdf@linktype color\endcsname
11853           }%
11854           \pdf@rect{#1}%
11855           \literalps@out{%
11856             [%
11857               \ifx\pdf@objdef\ltx@empty
11858               \else
11859                 /_objdef\string{\pdf@objdef\string}%
11860               \fi
11861               \the\pdf@toks\space\pdf@type\space pdfmark%
11862             }%
11863             \Hy@endcolorlink
11864           \fi
11865         \fi
11866       \fi
11867 }

```

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}

```

```

11868 \newsavebox{\pdf@box}
11869 \providecommand*{\Hy@setouterhbox}{\sbox}
11870 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11871 \def\Hy@DEST{/DEST}
11872 \def\pdf@rect#1{%
11873   \begingroup
11874     \chardef\x=1 %
11875     \def\Hy@temp{#1}%
11876     \ifx\Hy@temp\ltx@empty
11877       \chardef\x=0 %
11878     \else
11879       \def\y{\anchor@spot}%
11880       \ifx\Hy@temp\y
11881         \def\y{\relax}%
11882         \ifx\anchor@spot\y
11883           \chardef\x=0 %
11884         \fi
11885       \fi
11886     \fi
11887   \expandafter\endgroup
11888   \ifcase\x
11889     \literalps@out{H.S}%
11890     \literalps@out{H.R}%
11891   \else
11892     \leavevmode
11893     \Hy@SaveSpaceFactor
11894     \ifmmode
11895       \def\Hy@LinkMath{$}%
11896     \else
11897       \let\Hy@LinkMath\ltx@empty
11898     \fi
11899     \ifHy@breaklinks
11900       \Hy@setouterhbox\pdf@box{%
11901         \Hy@RestoreSpaceFactor
11902         \Hy@LinkMath
11903         \Hy@AllowHyphens#1\Hy@xspace@end
11904         \Hy@LinkMath
11905         \Hy@SaveSpaceFactor
11906       }%
11907     \else
11908       \sbox\pdf@box{%
11909         \Hy@RestoreSpaceFactor
11910         \Hy@LinkMath
11911         #1\Hy@xspace@end
11912         \Hy@LinkMath
11913         \Hy@SaveSpaceFactor
11914       }%
11915     \fi
11916     \dimen@ht\pdf@box
11917     \ifdim\dp\pdf@box=\z@
11918       \literalps@out{H.S}%
11919     \else
11920       \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11921     \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...).

```

11922   \ifHy@breaklinks

```

```

11923 \ifhmode
11924 \Hy@breaklinksunhbox\pdf@box
11925 \else
11926 \box\pdf@box
11927 \fi
11928 \else
11929 \expandafter\box\pdf@box
11930 \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

11931 \ifdim\dimen@=\z@
11932 \literalps@out{H.R}%
11933 \else
11934 \raise\dimen@\hbox{\literalps@out{H.R}}%
11935 \fi
11936 \Hy@RestoreSpaceFactor
11937 \fi
11938 \ifx\pdf@type\Hy@DEST
11939 \else
11940 \pdf@addtoksx{H.B}%
11941 \fi
11942 }

```

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.

```

11943 \newtoks\pdf@toks
11944 \newtoks\pdf@defaulttoks
11945 \pdf@defaulttoks={}
11946 \def\pdf@addtoks#1#2{%
11947 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11948 \@processme
11949 }
11950 \def\pdf@addtoksx#1{%
11951 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11952 \@processme
11953 }
11954 \def\PDFdefaults#1{%
11955 \pdf@defaulttoks={#1}%
11956 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11957 % what is the type of pdfmark?
11958 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11959 % what is the link type?
11960 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11961 \def\pdf@linktype{link}
11962 % named object?
11963 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11964 \let\pdf@objdef\ltx@empty
11965 % parameter is a stream of PDF
11966 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11967 % parameter is a name
11968 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}

```

```

11969 % parameter is a array
11970 \define@key{PDF}{Border}{%
11971   \edef\Hy@temp{#1}%
11972   \ifx\Hy@temp\@empty
11973     \else
11974       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11975     \fi
11976 }
11977 \let\Hy@BorderArrayPatch\@empty
11978 % parameter is a dictionary
11979 \define@key{PDF}{BorderStyle}{%
11980   \edef\Hy@temp{#1}%
11981   \ifx\Hy@temp\@empty
11982     \else
11983       \pdf@addtoks{<<#1>>}{BS}%
11984     \fi
11985 }
11986 % parameter is a array
11987 \define@key{PDF}{Color}{%
11988   \ifx\relax#1\relax
11989     \else
11990       \pdf@addtoks{[#1]}{Color}% hash-ok
11991     \fi
11992 }
11993 % parameter is a string
11994 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11995 % parameter is a integer
11996 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11997 % parameter is a array
11998 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11999 % parameter is a string
12000 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12001 % parameter is a string or file
12002 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12003 % parameter is a destination
12004 \define@key{PDF}{Dest}{%
12005   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12006   \ifx\Hy@pstringDest\@empty
12007     \Hy@pdfmarkerrortrue
12008     \Hy@Warning{Destination with empty name ignored}%
12009   \else
12010     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12011   \fi
12012 }
12013 \define@key{PDF}{DestAnchor}{%
12014   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12015   \ifx\Hy@pstringDest\@empty
12016     \Hy@pdfmarkerrortrue
12017     \Hy@Warning{Destination with empty name ignored}%
12018   \else
12019     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12020   \fi
12021 }
12022 % parameter is a string
12023 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12024 % parameter is a string
12025 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}

```

```

12026 % parameter is a int
12027 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12028 \define@key{PDF}{PDFAFlags}{%
12029   \ifHy@pdfa
12030     \pdf@addtoks{#1}{F}%
12031   \fi
12032 }
12033 % parameter is a name
12034 \define@key{PDF}{AcroHighlight}{%
12035   \begingroup
12036     \edef\x{#1}%
12037     \expandafter\endgroup\ifx\x\@empty
12038       \else
12039         \pdf@addtoks{#1}{H}%
12040       \fi
12041 }
12042 % parameter is a string
12043 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
12044 % parameter is a string
12045 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
12046 % parameter is a string
12047 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12048 % parameter is a string
12049 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
12050 % parameter is a Boolean
12051 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12052 % parameter is a integer or name
12053 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12054 % parameter is a name
12055 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12056 % parameter is a string
12057 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
12058 % parameter is a array
12059 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
12060 % parameter is a integer
12061 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12062 % parameter is a name
12063 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12064 % parameter is a string
12065 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
12066 % parameter is a string
12067 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
12068 % parameter is a string
12069 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
12070 % parameter is an array
12071 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
12072 % parameter is a string
12073 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12074 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
12075 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
12076 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
12077 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12078 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
12079 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
12080 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
12081 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}

```

```

12082 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12083 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12084 \define@key{PDF}{Trapped}{%
12085   \edef\Hy@temp{#1}%
12086   \ifx\Hy@temp\@empty
12087   \else
12088     \pdf@addtoks{/#1}{Trapped}%
12089   \fi
12090 }
12091
12092 </pdfmarkbase>
12093 <*pdfmark>
12094 \def\Acrobatmenu#1#2{%
12095   \EdefEscapeName\Hy@temp@menu{#1}%
12096   \Hy@Acrobatmenu{#1}{#2}{%
12097     \pdfmark[{#2}]{%
12098       linktype=menu,%
12099       pdfmark=/ANN,%
12100       AcroHighlight=\@pdfhighlight,%
12101       Border=\@pdfborder,%
12102       BorderStyle=\@pdfborderstyle,%
12103       Color=\@menubordercolor,%
12104       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12105       Subtype=/Link,%
12106       PDFAFlags=4%
12107     }%
12108   }%
12109 }

```

And now for some useful examples:

```

12110 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
12111 \def\PDFNextPage@[#1]#2{%
12112   \pdfmark[{#2}]{%
12113     #1,%
12114     Border=\@pdfborder,%
12115     BorderStyle=\@pdfborderstyle,%
12116     Color=.2 .1 .5,%
12117     pdfmark=/ANN,%
12118     Subtype=/Link,%
12119     PDFAFlags=4,%
12120     Page=/Next%
12121   }%
12122 }
12123 \def\PDFPreviousPage{%
12124   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12125 }
12126 \def\PDFPreviousPage@[#1]#2{%
12127   \pdfmark[{#2}]{%
12128     #1,%
12129     Border=\@pdfborder,%
12130     BorderStyle=\@pdfborderstyle,%
12131     Color=.4 .4 .1,%
12132     pdfmark=/ANN,%
12133     Subtype=/Link,%
12134     PDFAFlags=4,%
12135     Page=/Prev%
12136   }%
12137 }

```

```

12138 \def\PDFOpen#1{%
12139   \pdfmark{#1,pdfmark=/DOCVIEW}%
12140 }

```

This will only work if you use Distiller 2.1 or higher.

```

12141 \def\hyper@linkurl#1#2{%
12142   \begingroup
12143   \Hy@pstringdef\Hy@pstringURI{#2}%
12144   \hyper@chars
12145   \leavevmode
12146   \pdfmark[{#1}]{%
12147     pdfmark=/ANN,%
12148     linktype=url,%
12149     AcroHighlight=\@pdfhighlight,%
12150     Border=\@pdfborder,%
12151     BorderStyle=\@pdfborderstyle,%
12152     Color=\@urlbordercolor,%
12153     Action={<<%
12154       /Subtype/URI%
12155       /URI(\Hy@pstringURI)%
12156       \ifHy@href@ismap
12157         /IsMap true%
12158       \fi
12159     >>},%
12160     Subtype=/Link,%
12161     PDFAFlags=4%
12162   }%
12163   \endgroup
12164 }
12165 \def\hyper@linkfile#1#2#3{%
12166   \begingroup
12167   \def\Hy@pstringF{#2}%
12168   \Hy@CleanupFile\Hy@pstringF
12169   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12170   \Hy@pstringdef\Hy@pstringD{#3}%
12171   \Hy@MakeRemoteAction
12172   \leavevmode
12173   \pdfmark[{#1}]{%
12174     pdfmark=/ANN,%
12175     Subtype=/Link,%
12176     PDFAFlags=4,%
12177     AcroHighlight=\@pdfhighlight,%
12178     Border=\@pdfborder,%
12179     BorderStyle=\@pdfborderstyle,%
12180     linktype=file,%
12181     Color=\@filebordercolor,%
12182     Action={%
12183       <<%
12184       /S/GoToR%
12185       \Hy@SetNewWindow
12186       /F(\Hy@pstringF)%
12187       /D%
12188       \ifx\#3\%
12189         [\Hy@href@page\@pdfremotestartview]%
12190       \else
12191         (\Hy@pstringD)cvn%
12192       \fi
12193       \Hy@href@nextactionraw

```



```

12194     >>%
12195   }%
12196 }%
12197 \endgroup
12198 }
12199 \def\@hyper@launch run:#1\#2#3{%
12200 \begingroup
12201   \Hy@pstringdef\Hy@pstringF{#1}%
12202   \Hy@pstringdef\Hy@pstringP{#3}%
12203   \leavevmode
12204   \pdfmark[{#2}]{%
12205     pdfmark=/ANN,%
12206     Subtype=/Link,%
12207     PDFAFlags=4,%
12208     AcroHighlight=\@pdfhighlight,%
12209     Border=\@pdfborder,%
12210     BorderStyle=\@pdfborderstyle,%
12211     linktype=run,%
12212     Color=\@runbordercolor,%
12213     Action={%
12214       <<%
12215         /S/Launch%
12216         \Hy@SetNewWindow
12217         /F(\Hy@pstringF)%
12218         \ifx\#3\%
12219           \else
12220             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12221           \fi
12222           \Hy@href@nextactionraw
12223         >>%
12224       }%
12225     }%
12226   \endgroup
12227 }
12228 \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.

```

12229 \(*dvips)
12230 \providecommand*\XR@ext}{pdf}
12231 \let\Hy@raisedlink\ltx@empty
12232 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12233 \def\headerps@out#1{\special{! #1}}%
12234 \input{pdfmark.def}%
12235 \ifx\@pdfproducer\relax
12236   \def\@pdfproducer{dvips + Distiller}%
12237 \fi
12238 \providecommand*\@pdfborder{0 0 1}
12239 \providecommand*\@pdfborderstyle{}
12240 \providecommand*\@pdfview{XYZ}

```

```

12241 \providecommand*\@pdfviewparams{ H.V}
12242 \def\Hy@BorderArrayPatch{BorderArrayPatch}

12243 \g@addto@macro\Hy@FirstPageHook{%
12244 \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.

```

12245 /DvipsToPDF{72.27 mul Resolution div} def%
12246 /PDFToDvips{72.27 div Resolution mul} def%
12247 /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.

```

12248 /BorderArrayPatch{%
12249   [exch{%
12250     dup dup type/integertype eq exch type/realtype eq or%
12251     {BPToDvips}if%
12252   }forall]%
12253   }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.

```

12254 /HyperBorder {1 PDFToDvips} def%
12255 /H.V {pdf@hoff pdf@voff null} def%
12256 /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

```

12257 /H.S {%
12258   currentpoint %
12259   HyperBorder add /pdf@lly exch def %
12260   dup DvipsToPDF 72 add /pdf@hoff exch def %
12261   HyperBorder sub /pdf@llx exch def%
12262 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current `baselineskip` is, and convert it to the dvips coordinate system.

Argument: `baselineskip` in pt. The x and y coordinates of the current point, minus the `baselineskip`

```

12263 /H.L {%
12264   2 sub dup%
12265   /HyperBasePt exch def %
12266   PDFToDvips /HyperBaseDvips exch def %

```

```

12267     currentpoint %
12268     HyperBaseDvips sub /pdf@ury exch def%
12269     /pdf@urx exch def%
12270   } def%
12271   /H.A {%
12272     H.L %
12273 % | /pdf@voff| = the distance from the top of the page to a point
12274 % | \baselineskip| above the current point in PDF coordinates
12275     currentpoint exch pop %
12276     vsize 72 sub exch DvipsToPDF %
12277     HyperBasePt sub % baseline skip
12278     sub /pdf@voff exch def%
12279   } def%
12280   /H.R {%
12281     currentpoint %
12282     HyperBorder sub /pdf@ury exch def %
12283     HyperBorder add /pdf@urx exch def %
12284 % | /pdf@voff| = the distance from the top of the page to the current point, in
12285 % PDF coordinates
12286     currentpoint exch pop vsize 72 sub %
12287     exch DvipsToPDF sub /pdf@voff exch def%
12288   } def%
12289 }%
12290 }
12291 \AtBeginShipoutFirst{%
12292   \ifHy@setpagesize
12293     \begingroup
12294       \@ifundefined{stockwidth}{{%
12295         \ifdim\paperwidth>\z@
12296           \ifdim\paperheight>\z@
12297             \special{papersize=\the\paperwidth,\the\paperheight}%
12298           \fi
12299         \fi
12300       }{%
12301         \ifdim\stockwidth>\z@
12302           \ifdim\stockheight>\z@
12303             \special{papersize=\the\stockwidth,\the\stockheight}%
12304           \fi
12305         \fi
12306       }%
12307     \endgroup
12308   \fi
12309   \Hy@DisableOption{setpagesize}%
12310 }
12311 </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.

```

12312 <*vtexpdfmark>
12313 \providecommand*{\XR@ext}{pdf}
12314 \let\Hy@raisedlink\ltx@empty
12315 \def\literalps@out#1{\special{pS:#1}}%
12316 \def\headerps@out#1{\immediate\special{pS:#1}}%

```

```

12317 \input{pdfmark.def}%
12318 \ifx\@pdfproducer\relax
12319   \ifnum\OpMode=\@ne
12320     \def\@pdfproducer{VTeX}%
12321   \else
12322     \def\@pdfproducer{VTeX + Distiller}%
12323   \fi
12324 \fi
12325 \providecommand*\@pdfborder{0 0 1}
12326 \providecommand*\@pdfborderstyle{}
12327 \providecommand*\@pdfview{XYZ}
12328 \providecommand*\@pdfviewparams{ H.V}

12329 \g@addto@macro\Hy@FirstPageHook{%
12330   \headerps@out{%
12331     /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.

```

12332   /HyperBorder {1} def%
12333   /H.V {pdf@hoff pdf@voff null} def%
12334   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12335   /H.S {%
12336     currentpoint %
12337     HyperBorder sub%
12338     /pdf@lly exch def %
12339     dup 72 add /pdf@hoff exch def %
12340     HyperBorder sub%
12341     /pdf@llx exch def%
12342   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12343   /H.L {%
12344     2 sub%
12345     /HyperBasePt exch def %
12346     currentpoint %
12347     HyperBasePt add HyperBorder add%
12348     /pdf@ury exch def %
12349     HyperBorder add%
12350     /pdf@urx exch def%
12351   } def%
12352   /H.A {%
12353     H.L %
12354     currentpoint exch pop %
12355     vsize 72 sub exch %
12356     HyperBasePt add add%
12357     /pdf@voff exch def%
12358   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12359   /H.R {%
12360     currentpoint %
12361     HyperBorder add%
12362     /pdf@ury exch def %

```

```

12363   HyperBorder add%
12364   /pdf@urx exch def %
12365   currentpoint exch pop vsize 72 sub add%
12366   /pdf@voff exch def%
12367   } def%
12368 }%
12369 }
12370 </vtxpdfmark>

```

47.11 Textures

```

12371 <*textures>
12372 \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.

```

12373 \begingroup
12374   \obeylines %
12375   \gdef\Hy@ps@CR{\noexpand
12376   }%
12377 \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`.

```

12378 \def\literalps@out#1{%
12379   \special{postscript 0 0 transform}%
12380   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12381 }%
12382 %

```

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.

```

12383 \def\headerps@out#1{%
12384   \special{%
12385     prepostscript TeXdict begin\Hy@ps@CR
12386     #1\Hy@ps@CR
12387     end%
12388   }%
12389 }%
12390 %

```

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.

```

12391 \g@addto@macro\Hy@FirstPageHook{%
12392   \headerps@out{%
12393     /betterpdfmark {%
12394       systemdict begin %
12395         dup /BP eq%
12396         {cleartomark gsave nulldevice []%
12397           {dup /EP eq%
12398             {cleartomark cleartomark grestore}%
12399             {cleartomark}%
12400             ifelse%
12401           }ifelse %
12402         end%
12403       }def\Hy@ps@CR
12404     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12405   }% end of \headerps@out
12406 }% end of \AtBeginShipoutFirst
12407 %
12408 \input{pdfmark.def}%
12409 %
12410 \ifx\@pdfproducer\relax
12411   \def\@pdfproducer{Textures + Distiller}%
12412 \fi
12413 \providecommand*\@pdfborder{0 0 1}
12414 \providecommand*\@pdfborderstyle{}
12415 \providecommand*\@pdfview{XYZ}
12416 \providecommand*\@pdfviewparams{ H.V}
12417 %

```

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`.

```

12418 \Hy@AtBeginDocument{%
12419   \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12420   /vsize {\Hy@pageheight} def%
12421   /DvipsToPDF {} def%
12422   /PDFToDvips {} def%
12423   /BPToDvips {} def%
12424   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12425   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12426   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12427   /H.S {%
12428     currentpoint %
12429     HyperBorder add /pdf@lly exch def %
12430     dup DvipsToPDF 72 add /pdf@hoff exch def %
12431     HyperBorder sub /pdf@llx exch def%
12432   } def\Hy@ps@CR
12433   /H.L {%
12434     2 sub %
12435     PDFToDvips /HyperBase exch def %

```

```

12436     currentpoint %
12437     HyperBase sub /pdf@ury exch def%
12438     /pdf@urx exch def%
12439   } def\Hy@ps@CR
12440   /H.A {%
12441     H.L %
12442     currentpoint exch pop %
12443     vsize 72 sub exch DvipsToPDF %
12444     HyperBase sub % baseline skip
12445     sub /pdf@voff exch def%
12446   } def\Hy@ps@CR
12447   /H.R {%
12448     currentpoint %
12449     HyperBorder sub /pdf@ury exch def %
12450     HyperBorder add /pdf@urx exch def %
12451     currentpoint exch pop vsize 72 sub %
12452     exch DvipsToPDF sub /pdf@voff exch def%
12453   } def\Hy@ps@CR
12454 }%
12455 }

12456 \Hy@AtBeginDocument{%
12457   \ifHy@colorlinks
12458     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12459   \fi
12460 }

```

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.

```

12461 \expandafter\let\expandafter\keepPDF@SetupDoc
12462   \csname PDF@SetupDoc\endcsname
12463 \def\PDF@SetupDoc{%
12464   \ifx\@baseurl\@empty
12465     \else
12466       \special{html:<base href="\@baseurl">}%
12467     \fi
12468   \keepPDF@SetupDoc
12469 }

12470 \Hy@WrapperDef\hyper@anchor#1{%
12471   \Hy@SaveLastskip
12472   \Hy@VerboseAnchor{#1}%
12473   \begingroup
12474     \let\protect=\string
12475     \special{html:<a name=%
12476       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12477   \endgroup
12478   \Hy@activeanchortrue
12479   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12480   \special{html:</a>}%
12481   \Hy@activeanchorfalse
12482   \Hy@RestoreLastskip
12483 }

12484 \Hy@WrapperDef\hyper@anchorstart#1{%
12485   \Hy@SaveLastskip
12486   \Hy@VerboseAnchor{#1}%
12487   \begingroup
12488   \hyper@chars

```

```

12489 \special{html:<a name=%
12490 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12491 \endgroup
12492 \Hy@activeanchortrue
12493 }
12494 \def\hyper@anchorend{%
12495 \special{html:</a>}%
12496 \Hy@activeanchorfalse
12497 \Hy@RestoreLastskip
12498 }
12499 \def\@urltype{url}
12500 \def\hyper@linkstart#1#2{%
12501 \Hy@VerboseLinkStart{#1}{#2}%
12502 \expandafter\Hy@colorlink\csname @#1color\endcsname
12503 \def\Hy@tempa{#1}%
12504 \ifx\Hy@tempa\@urltype
12505 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12506 \else
12507 \begingroup
12508 \hyper@chars
12509 \special{%
12510 html:<a href=%
12511 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12512 }%
12513 \endgroup
12514 \fi
12515 }
12516 \def\hyper@linkend{%
12517 \special{html:</a>}%
12518 \Hy@endcolorlink
12519 }
12520 \def\hyper@linkfile#1#2#3{%
12521 \hyper@linkurl{#1}{%
12522 \Hy@linkfileprefix#2\ifx\#3\else\#3\fi
12523 }%
12524 }
12525 \def\hyper@linkurl#1#2{%
12526 \leavevmode
12527 \ifHy@raiselinks
12528 \Hy@SaveSpaceFactor
12529 \Hy@SaveSavedSpaceFactor
12530 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12531 \Hy@RestoreSavedSpaceFactor
12532 \@linkdim\dp\@tempboxa
12533 \lower\@linkdim\hbox{%
12534 \hyper@chars
12535 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12536 }%
12537 \Hy@colorlink\@urlcolor
12538 \Hy@RestoreSpaceFactor
12539 #1\Hy@xspace@end
12540 \Hy@SaveSpaceFactor
12541 \@linkdim\ht\@tempboxa
12542 \advance\@linkdim by -6.5\p@
12543 \raise\@linkdim\hbox{\special{html:</a>}}%
12544 \Hy@endcolorlink
12545 \Hy@RestoreSpaceFactor

```



```

12546 \else
12547 \begingroup
12548 \hyper@chars
12549 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12550 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12551 \special{html:</a>}%
12552 \Hy@endcolorlink
12553 \endgroup
12554 \fi
12555 }

```

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

```

12556 \def\hyper@link#1#2#3{%
12557 \Hy@VerboseLinkStart{#1}{#2}%
12558 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12559 }
12560 \def\hyper@image#1#2{%
12561 \begingroup
12562 \hyper@chars
12563 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12564 \endgroup
12565 }
12566 </textures>

```

47.12 dvipsone

```

12567 % \subsection{dvipsone driver}
12568 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12569 % |\special| commands.
12570 (*dvipsone)
12571 \providecommand*\XR@ext}{pdf}
12572 \let\Hy@raisedlink\ltx@empty
12573 \providecommand*\@pdfborder{0 0 1}
12574 \providecommand*\@pdfborderstyle{}
12575 \def\literalps@out#1{\special{ps:#1}}%
12576 \def\headerps@out#1{\special{headertext=#1}}%
12577 \input{pdfmark.def}%
12578 \ifx\@pdfproducer\relax
12579 \def\@pdfproducer{dvipsone + Distiller}%
12580 \fi
12581 \HyInfo@AddOnUnsupportedtrue
12582 \def\PDF@FinishDoc{%
12583 \Hy@UseMaketitleInfos
12584 \HyInfo@TrappedUnsupported
12585 \special{PDF: Keywords \@pdfkeywords}%
12586 \special{PDF: Title \@pdftitle}%
12587 \special{PDF: Creator \@pdfcreator}%
12588 \ifx\@pdfcreationdate\@empty
12589 \else
12590 \special{PDF: CreationDate \@pdfcreationdate}%
12591 \fi
12592 \ifx\@pdfmoddate\@empty
12593 \else
12594 \special{PDF: ModDate \@pdfmoddate}%
12595 \fi
12596 \special{PDF: Author \@pdfauthor}%
12597 \ifx\@pdfproducer\relax
12598 \else

```

```

12599 \special{PDF: Producer \@pdfproducer}%
12600 \fi
12601 \special{PDF: Subject \@pdfsubject}%
12602 \Hy@DisableOption{pdfauthor}%
12603 \Hy@DisableOption{pdftitle}%
12604 \Hy@DisableOption{pdfsubject}%
12605 \Hy@DisableOption{pdfcreator}%
12606 \Hy@DisableOption{pdfcreationdate}%
12607 \Hy@DisableOption{pdfmoddate}%
12608 \Hy@DisableOption{pdfproducer}%
12609 \Hy@DisableOption{pdfkeywords}%
12610 \Hy@DisableOption{pdftrapped}%
12611 \Hy@DisableOption{pdfinfo}%
12612 }
12613 \def\PDF@SetupDoc{%
12614 \def\Hy@temp{}%
12615 \ifx\@pdfstartpage\@empty
12616 \else
12617 \ifx\@pdfstartview\@empty
12618 \else
12619 \edef\Hy@temp{%
12620 ,Page=\@pdfstartpage
12621 ,View=\@pdfstartview
12622 }%
12623 \fi
12624 \fi
12625 \edef\Hy@temp{%
12626 \noexpand\pdfmark{%
12627 pdfmark=/DOCVIEW,%
12628 PageMode=/\@pdfpagemode
12629 \Hy@temp
12630 }%
12631 }%
12632 \Hy@temp
12633 \ifx\@pdfpagescrop\@empty
12634 \else
12635 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12636 \fi
12637 \edef\Hy@temp{%
12638 \ifHy@pdftoolbar\else /HideToolbar true\fi
12639 \ifHy@pdfmenubar\else /HideMenubar true\fi
12640 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12641 \ifHy@pdfwindow /FitWindow true\fi
12642 \ifHy@pdfcenterwindow /CenterWindow true\fi
12643 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12644 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12645 \Hy@UseNameKey{Direction}\@pdfdirection
12646 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12647 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12648 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12649 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12650 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12651 \Hy@UseNameKey{Duplex}\@pdfduplex
12652 \ifx\@pdfpicktraybypdfsize\@empty
12653 \else
12654 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12655 \fi

```

```

12656 \ifx\@pdfprintpagerange\@empty
12657 \else
12658 /PrintPageRange[\@pdfprintpagerange]%
12659 \fi
12660 \ifx\@pdfnumcopies\@empty
12661 \else
12662 /NumCopies \@pdfnumcopies
12663 \fi
12664 }%
12665 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12666 \pdfmark{%
12667 pdfmark=/PUT,%
12668 Raw={%
12669 \string{Catalog\string}<<%
12670 \ifx\Hy@temp\@empty
12671 \else
12672 /ViewerPreferences<<\Hy@temp>>%
12673 \fi
12674 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12675 \ifx\@pdflang\@empty
12676 \else
12677 /Lang(\@pdflang)%
12678 \fi
12679 \ifx\@baseurl\@empty
12680 \else
12681 /URI<</Base(\Hy@pstringB)>>%
12682 \fi
12683 >>%
12684 }%
12685 }%
12686 }
12687 \providecommand*\@pdfview{XYZ}
12688 \providecommand*\@pdfviewparams{ %
12689 gsave revscl currentpoint grestore %
12690 72 add exch pop null exch null%
12691 }
12692 \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 .

```

12693 \g@addto@macro\Hy@FirstPageHook{%
12694 \headerps@out{%

```

`dvipsone` lives in scaled points; does this mean 65536 or 65781?

```

12695 /DvipsToPDF { 65781 div } def%
12696 /PDFToDvips { 65781 mul } def%
12697 /BPToDvips{65781 mul}def%
12698 /HyperBorder { 1 PDFToDvips } def%
12699 /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.

```

12700 /BorderArrayPatch{%
12701 [exch{%
12702 dup dup type/integertype eq exch type/realtype eq or%

```

```

12703     {BPToDvips}if%
12704     }forall}%
12705 }def%

12706 /H.S {%
12707     currentpoint %
12708     HyperBorder add /pdf@lly exch def %
12709     dup DvipsToPDF 72 add /pdf@hoff exch def %
12710     HyperBorder sub /pdf@llx exch def%
12711 } def%
12712 /H.L {%
12713     2 sub %
12714     PDFToDvips /HyperBase exch def %
12715     currentpoint %
12716     HyperBase sub /pdf@ury exch def%
12717     /pdf@urx exch def%
12718 } def%
12719 /H.A {%
12720     H.L %
12721     currentpoint exch pop %
12722     HyperBase sub % baseline skip
12723     DvipsToPDF /pdf@voff exch def%
12724 } def%
12725 /H.R {%
12726     currentpoint %
12727     HyperBorder sub /pdf@ury exch def %
12728     HyperBorder add /pdf@urx exch def %
12729     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12730 } def%
12731 }%
12732 }
12733 </dvipsone>

```

47.13 TeX4ht

```

12734 <*tex4ht>
12735 \providecommand*\XR@ext}{html}
12736 \let\Hy@raisedlink\ltx@empty
12737 \@ifpackageloaded{tex4ht}{%
12738   \Hy@InfoNoLine{tex4ht is already loaded}%
12739 }{%
12740   \RequirePackage[hTeX4ht]{tex4ht}%
12741 }
12742 \hyperlinkfileprefix{}
12743 \let\PDF@FinishDoc\ltx@empty
12744 \def\PDF@SetupDoc{%
12745   \ifx\@baseurl\@empty
12746   \else
12747     \special{t4ht=<base href="\@baseurl">}%
12748   \fi
12749 }
12750 \Hy@WrapperDef\hyper@anchor#1{%
12751   \Hy@SaveLastskip
12752   \Hy@VerboseAnchor{#1}%
12753   \begingroup
12754     \let\protect=\string
12755     \special{t4ht=<a name=%
12756       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12757   \endgroup

```

```

12758 \Hy@activeanchortrue
12759 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12760 \special{t4ht=</a>}%
12761 \Hy@activeanchorfalse
12762 \Hy@RestoreLastskip
12763 }
12764 \Hy@WrapperDef\hyper@anchorstart#1{%
12765 \Hy@SaveLastskip
12766 \Hy@VerboseAnchor{#1}%
12767 \begingroup
12768 \hyper@chars\special{t4ht=<a name=%
12769 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12770 \endgroup
12771 \Hy@activeanchortrue
12772 }
12773 \def\hyper@anchorend{%
12774 \special{t4ht=</a>}%
12775 \Hy@activeanchorfalse
12776 \Hy@RestoreLastskip
12777 }
12778 \def\@urlltype{url}
12779 \def\hyper@linkstart#1#2{%
12780 \Hy@VerboseLinkStart{#1}{#2}%
12781 \expandafter\Hy@colorlink\csname @#1color\endcsname
12782 \def\Hy@tempa{#1}%
12783 \ifx\Hy@tempa\@urlltype
12784 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12785 \else
12786 \begingroup
12787 \hyper@chars
12788 \special{t4ht=<a href=%
12789 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12790 \endgroup
12791 \fi
12792 }
12793 \def\hyper@linkend{%
12794 \special{t4ht=</a>}%
12795 \Hy@endcolorlink
12796 }
12797 \def\hyper@linkfile#1#2#3{%
12798 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12799 }
12800 \def\hyper@linkurl#1#2{%
12801 \leavevmode
12802 \ifHy@raiselinks
12803 \Hy@SaveSpaceFactor
12804 \Hy@SaveSavedSpaceFactor
12805 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12806 \Hy@RestoreSavedSpaceFactor
12807 \@linkdim\dp\@tempboxa
12808 \lower\@linkdim\hbox{%
12809 \begingroup
12810 \hyper@chars
12811 \special{%
12812 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12813 }%
12814 \endgroup

```

```

12815 }%
12816 \Hy@colorlink\@urlcolor
12817 \Hy@RestoreSpaceFactor
12818 #1\Hy@xspace@end
12819 \Hy@SaveSpaceFactor
12820 \Hy@endcolorlink
12821 \@linkdim\ht\@tempboxa
12822 \advance\@linkdim by -6.5\p@
12823 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12824 \Hy@RestoreSpaceFactor
12825 \else
12826 \begingroup
12827 \hyper@chars
12828 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12829 \Hy@colorlink\@urlcolor
12830 #1\Hy@xspace@end
12831 \Hy@endcolorlink
12832 \special{t4ht=</a>}%
12833 \endgroup
12834 \fi
12835 }

```

Poor implementation of \hyper@link without considering #1.

```

12836 \def\hyper@link#1#2#3{%
12837 \Hy@VerboseLinkStart{#1}{#2}%
12838 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
12839 }
12840 \def\hyper@image#1#2{%
12841 \begingroup
12842 \hyper@chars
12843 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12844 \endgroup
12845 }
12846 \let\autoref\ref
12847 \ifx \rEFLiNK \UnDef
12848 \def\rEFLiNK #1#2{#2}%
12849 \fi
12850 \let\backref\ltx@gobble

```

Fix for tex4ht.

```

12851 \AtBeginDocument{%
12852 \expandafter
12853 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12854 \expandafter\def\csname Make:Label\endcsname#1#2{%
12855 \ifhmode
12856 \Hy@SaveSpaceFactor
12857 \else
12858 \global\Hy@SavedSpaceFactor=1000 %
12859 \fi
12860 \Hy@OrgMakeLabel{#1}{%
12861 \Hy@RestoreSpaceFactor
12862 #2\Hy@xspace@end%
12863 \Hy@SaveSpaceFactor
12864 }%
12865 \Hy@RestoreSpaceFactor
12866 }%
12867 }
12868 </tex4ht>
12869 <*tex4htcfg>

```

```

12870 \IfFileExists{\jobname.cfg}{\endinput}{}
12871 \Preamble{html}
12872 \begin{document}%
12873 \EndPreamble
12874 \def\TeX{\TeX}
12875 \def\OMEGA{\Omega}
12876 \def\LaTeX{\LaTeX}
12877 \def\LaTeXe{\LaTeX2e}
12878 \def\TeX{e-TeX}
12879 \def\MF{Metafont}
12880 \def\MP{MetaPost}
12881 \</tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

12882 \<pdfmark>
12883 \long\def\@Form[#1]{%
12884 \g@addto@macro\Hy@FirstPageHook{%
12885 \headerps@out{%
12886 [%
12887 /__objdef{pdfDocEncoding}%
12888 /type/dict%
12889 /OBJ pdfmark%
12890 [%
12891 {pdfDocEncoding}%
12892 <<%
12893 /Type/Encoding%
12894 /Differences[%
12895 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12896 /tilde %
12897 39/quotesingle %
12898 96/grave %
12899 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12900 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12901 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12902 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12903 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12904 164/currency %
12905 166/brokenbar %
12906 168/dieresis/copyright/ordfeminine %
12907 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12908 /twosuperior/threesuperior/acute/mu %
12909 183/periodcentered/cedilla/onesuperior/ordmasculine %
12910 188/onequarter/onehalf/threequarters %
12911 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12912 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12913 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12914 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12915 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12916 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12917 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12918 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12919 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
12920 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12921 ]%
12922 >>%

```

```

12923 /PUT pdfmark%
12924 [%
12925   /_objdef{ZaDb}%
12926   /type/dict%
12927 /OBJ pdfmark%
12928 [%
12929   {ZaDb}%
12930   <<%
12931     /Type/Font%
12932     /Subtype/Type1%
12933     /Name/ZaDb%
12934     /BaseFont/ZapfDingbats%
12935   >>%
12936 /PUT pdfmark%
12937 [%
12938   /_objdef{Helv}%
12939   /type/dict%
12940 /OBJ pdfmark%
12941 [%
12942   {Helv}%
12943   <<%
12944     /Type/Font%
12945     /Subtype/Type1%
12946     /Name/Helv%
12947     /BaseFont/Helvetica%
12948     /Encoding{pdfDocEncoding}%
12949   >>%
12950 /PUT pdfmark%
12951 [%
12952   /_objdef{aform}%
12953   /type/dict%
12954 /OBJ pdfmark%
12955 [%
12956   /_objdef{afields}%
12957   /type/array%
12958 /OBJ pdfmark%
12959 [%
12960   /_objdef{corder}%
12961   /type/array%
12962 /OBJ pdfmark%
12963 {%
12964 [%
12965   /BBox[0 0 100 100]%
12966   /_objdef{Check}%
12967 /BP pdfmark %
12968 1 0 0 setrgbcolor%
12969 /ZapfDingbats 80 selectfont %
12970 20 20 moveto%
12971 (4)show%
12972 [/EP pdfmark%
12973 [%
12974   /BBox[0 0 100 100]%
12975   /_objdef{Cross}%
12976 /BP pdfmark %
12977 1 0 0 setrgbcolor%
12978 /ZapfDingbats 80 selectfont %
12979 20 20 moveto%

```



```

12980 (8)show%
12981 [/EP pdfmark%
12982 [%
12983   /BBox[0 0 250 100]%
12984   /_objdef{Submit}%
12985 /BP pdfmark %
12986 0.6 setgray %
12987 0 0 250 100 rectfill %
12988 1 setgray %
12989 2 2 moveto %
12990 2 98 lineto %
12991 248 98 lineto %
12992 246 96 lineto %
12993 4 96 lineto %
12994 4 4 lineto %
12995 fill %
12996 0.34 setgray %
12997 248 98 moveto %
12998 248 2 lineto %
12999 2 2 lineto %
13000 4 4 lineto %
13001 246 4 lineto %
13002 246 96 lineto %
13003 fill%
13004 /Helvetica 76 selectfont %
13005 0 setgray %
13006 8 22.5 moveto%
13007 (Submit)show%
13008 [/EP pdfmark%
13009 [%
13010   /BBox[0 0 250 100]%
13011   /_objdef{SubmitP}%
13012 /BP pdfmark %
13013 0.6 setgray %
13014 0 0 250 100 rectfill %
13015 0.34 setgray %
13016 2 2 moveto %
13017 2 98 lineto %
13018 248 98 lineto %
13019 246 96 lineto %
13020 4 96 lineto %
13021 4 4 lineto %
13022 fill %
13023 1 setgray %
13024 248 98 moveto %
13025 248 2 lineto %
13026 2 2 lineto %
13027 4 4 lineto %
13028 246 4 lineto %
13029 246 96 lineto %
13030 fill%
13031 /Helvetica 76 selectfont %
13032 0 setgray %
13033 10 20.5 moveto%
13034 (Submit)show%
13035 [/EP pdfmark%
13036 } ?pdfmark%

```

```

13037 [%
13038   {aform}%
13039   <<%
13040     /Fields{afields}%
13041     /DR<<%
13042     /Font<<%
13043     /ZaDb{ZaDb}%
13044     /Helv{Helv}%
13045     >>%
13046   >>%
13047   /DA(/Helv 10 Tf 0 g)%
13048   /CO{corder}%
13049   \ifHy@pdfa
13050   \else
13051     \ifHyField@NeedAppearances
13052       /NeedAppearances true%
13053     \fi
13054   \fi
13055   >>%
13056 /PUT pdfmark%
13057 [%
13058   {Catalog}%
13059   <<%
13060     /AcroForm{aform}%
13061     >>%
13062 /PUT pdfmark%
13063 }}%
13064 \kvsetkeys{Form}{#1}%
13065 }
13066 \let\@endForm\ltx@empty
13067 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13068   \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13069 }

13070 \newcount\HyField@AnnotCount
13071 \HyField@AnnotCount=\z@
13072 \def\HyField@AdvanceAnnotCount{%
13073   \global\advance\HyField@AnnotCount\@ne
13074 }
13075 \def\HyField@TheAnnotCount{%
13076   \the\HyField@AnnotCount
13077 }

13078 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13079 \def\HyField@AddToFields#1{%
13080   \pdfmark{%
13081     pdfmark=/APPEND,%
13082     Raw={%
13083       \string{afields\string}%
13084       \string{#1\HyField@TheAnnotCount\string}%
13085     }%
13086   }%
13087   \ifx\Fld@calculate@code\ltx@empty
13088   \else
13089     \pdfmark{%
13090       pdfmark=/APPEND,%
13091       Raw={%
13092         \string{corder\string}%

```

```

13093     \string{#1\HyField@TheAnnotCount\string}%
13094     }%
13095 }%
13096 \fi
13097 }

13098 \def\@TextField[#1]#2{% parameters, label
13099   \def\Fld@name{#2}%
13100   \let\Fld@default\ltx@empty
13101   \let\Fld@value\@empty
13102   \def\Fld@width{\DefaultWidthofText}%
13103   \def\Fld@height{%
13104     \ifFld@multiline
13105       \DefaultHeightofTextMultiline
13106     \else
13107       \DefaultHeightofText
13108     \fi
13109   }%
13110   \begingroup
13111     \expandafter\HyField@SetKeys\expandafter{%
13112       \DefaultOptionsofText,#1%
13113     }%
13114     \HyField@FlagsText
13115     \ifFld@hidden\def\Fld@width{1sp}\fi
13116     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13117     \HyField@AdvanceAnnotCount
13118     \LayoutTextField{#2}{%
13119       \leavevmode
13120       \Hy@escapeform\PDFForm@Text
13121       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
13122         pdfmark=/ANN,%
13123         objdef=text\HyField@TheAnnotCount,%
13124         Raw={\PDFForm@Text}%
13125       }%
13126     }%
13127     \HyField@AddToFields{text}%
13128   \endgroup
13129 }

13130 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13131   \def\Fld@name{#2}%
13132   \let\Fld@default\relax
13133   \let\Fld@value\relax
13134   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13135   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13136   \begingroup
13137     \Fld@menulength=0 %
13138     \@tempdima\z@
13139     \@for\@curropt:=#3\do{%
13140       \expandafter\Fld@checkequals\@curropt==\%
13141       \Hy@StepCount\Fld@menulength
13142       \settowidth{\@tempdimb}{\@currDisplay}%
13143       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13144     }%
13145     \advance\@tempdima by 15\p@
13146     \begingroup
13147       \HyField@SetKeys{#1}%
13148     \edef\x{\endgroup
13149       \noexpand\expandafter

```

```

13150 \noexpand\HyField@SetKeys
13151 \noexpand\expandafter{%
13152 \expandafter\noexpand\csname DefaultOptionsof%
13153 \ifFld@radio
13154 Radio%
13155 \else
13156 \ifFld@combo
13157 \ifFld@popdown
13158 PopdownBox%
13159 \else
13160 ComboBox%
13161 \fi
13162 \else
13163 ListBox%
13164 \fi
13165 \fi
13166 \endcsname
13167 }%
13168 }\x
13169 \HyField@SetKeys{#1}%
13170 \ifFld@hidden\def\Fld@width{1sp}\fi
13171 \ifx\Fld@value\relax
13172 \let\Fld@value\Fld@default
13173 \fi
13174 \LayoutChoiceField{#2}{%
13175 \ifFld@radio
13176 \HyField@FlagsRadioButton
13177 \@@Radio{#3}%
13178 \else
13179 \begingroup
13180 \HyField@FlagsChoice
13181 \ifdim\Fld@width<\@tempdima
13182 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13183 \edef\Fld@width{\the\@tempdima}%
13184 \fi
13185 \ifFld@combo
13186 \else
13187 \@tempdima=\the\Fld@menulength\Fld@charsize
13188 \advance\@tempdima by \Fld@borderwidth bp %
13189 \advance\@tempdima by \Fld@borderwidth bp %
13190 \edef\Fld@height{\the\@tempdima}%
13191 \fi
13192 \@@ListBox{#3}%
13193 \endgroup
13194 \fi
13195 }%
13196 \endgroup
13197 }
13198 \def\@@Radio#1{%
13199 \Fld@listcount=0 %
13200 \EdefEscapeName\Fld@default{\Fld@default}%
13201 \@for\@curropt:=#1\do{%
13202 \expandafter\Fld@checkequals\@curropt==\%
13203 \EdefEscapeName\@currValue{\@currValue}%
13204 \Hy@StepCount\Fld@listcount
13205 \@currDisplay\space
13206 \Hy@escapeform\PDFForm@Radio

```

```

13207 \ifnum\Fld@listcount=1 %
13208 \HyField@AdvanceAnnotCount
13209 \fi
13210 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13211 pdfmark=/ANN,%
13212 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13213 Raw={%
13214 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13215 }%
13216 } % deliberate space between radio buttons
13217 \ifnum\Fld@listcount=1 %
13218 \HyField@AddToFields{radio}%
13219 \fi
13220 }%
13221 }
13222 \newcount\Fld@listcount
13223 \def\@@Listbox#1{%
13224 \HyField@PDFChoices{#1}%
13225 \Hy@escapeform\PDFForm@List
13226 \HyField@AdvanceAnnotCount
13227 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13228 pdfmark=/ANN,%
13229 objdef=list\HyField@TheAnnotCount,%
13230 Raw={\PDFForm@List}%
13231 }%
13232 \HyField@AddToFields{list}%
13233 }
13234 \def\@PushButton[#1]#2{% parameters, label
13235 \def\Fld@name{#2}%
13236 \begingroup
13237 \expandafter\HyField@SetKeys\expandafter{%
13238 \DefaultOptionsofPushButton,#1%
13239 }%
13240 \ifHy@pdfa
13241 \Hy@Error{%
13242 PDF/A: Push button with JavaScript is prohibited%
13243 }\@ehc
13244 \LayoutPushButtonField{%
13245 \leavevmode
13246 \MakeButtonField{#2}%
13247 }%
13248 \else
13249 \HyField@FlagsPushButton
13250 \ifFld@hidden\def\Fld@width{1sp}\fi
13251 \HyField@AdvanceAnnotCount
13252 \LayoutPushButtonField{%
13253 \leavevmode
13254 \Hy@escapeform\PDFForm@Push
13255 \pdfmark[\MakeButtonField{#2}]{%
13256 pdfmark=/ANN,%
13257 objdef=push\HyField@TheAnnotCount,%
13258 Raw={\PDFForm@Push}%
13259 }%
13260 }%
13261 \HyField@AddToFields{push}%
13262 \fi
13263 \endgroup

```

```

13264 }
13265 \def\@Submit[#1]#2{%
13266   \def\Fld@width{\DefaultWidthofSubmit}%
13267   \def\Fld@height{\DefaultHeightofSubmit}%
13268   \begingroup
13269     \expandafter\HyField@SetKeys\expandafter{%
13270       \DefaultOptionsofSubmit,#1%
13271     }%
13272     \HyField@FlagsPushButton
13273     \HyField@FlagsSubmit
13274     \ifFld@hidden\def\Fld@width{1sp}\fi
13275     \Hy@escapeform\PDFForm@Submit
13276     \HyField@AdvanceAnnotCount
13277     \pdfmark[\MakeButtonField{#2}]{%
13278       pdfmark=/ANN,%
13279       objdef=submit\HyField@TheAnnotCount,%
13280       Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13281     }%
13282     \HyField@AddToFields{submit}%
13283   \endgroup
13284 }
13285 \def\@Reset[#1]#2{%
13286   \def\Fld@width{\DefaultWidthofReset}%
13287   \def\Fld@height{\DefaultHeightofReset}%
13288   \begingroup
13289     \expandafter\HyField@SetKeys\expandafter{%
13290       \DefaultOptionsofReset,#1%
13291     }%
13292     \leavevmode
13293     \ifHy@pdfa
13294       \Hy@Error{%
13295         PDF/A: Reset action is prohibited%
13296       }\@ehc
13297       \MakeButtonField{#2}%
13298     \else
13299       \HyField@FlagsPushButton
13300       \ifFld@hidden\def\Fld@width{1sp}\fi
13301       \Hy@escapeform\PDFForm@Reset
13302       \HyField@AdvanceAnnotCount
13303       \pdfmark[\MakeButtonField{#2}]{%
13304         pdfmark=/ANN,%
13305         objdef=reset\HyField@TheAnnotCount,%
13306         Raw={\PDFForm@Reset}%
13307       }%
13308       \HyField@AddToFields{reset}%
13309     \fi
13310   \endgroup
13311 }%
13312 \def\@CheckBox[#1]#2{% parameters, label
13313   \def\Fld@name{#2}%
13314   \def\Fld@default{0}%
13315   \begingroup
13316     \def\Fld@width{\DefaultWidthofCheckBox}%
13317     \def\Fld@height{\DefaultHeightofCheckBox}%
13318     \expandafter\HyField@SetKeys\expandafter{%
13319       \DefaultOptionsofCheckBox,#1%
13320     }%

```

```

13321 \HyField@FlagsCheckBox
13322 \ifFld@hidden\def\Fld@width{1sp}\fi
13323 \HyField@AdvanceAnnotCount
13324 \LayoutCheckField{#2}{%
13325 \leavevmode
13326 \Hy@escapeform\PDFForm@Check
13327 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13328 pdfmark=/ANN,%
13329 objdef=check\HyField@TheAnnotCount,%
13330 Raw={\PDFForm@Check}%
13331 }%
13332 }%
13333 \HyField@AddToFields{check}%
13334 \endgroup
13335 }
13336 \pdfmark

```

48.2 HyperTeX

```

13337 \*hypertex
13338 \def\@Form[#1]{%
13339 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13340 }
13341 \let\@endForm\ltx@empty
13342 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13343 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13344 }
13345 \def\@TextField[#1]#2{% parameters, label
13346 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13347 }
13348 \def\@CheckBox[#1]#2{% parameters, label
13349 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13350 }
13351 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13352 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13353 }
13354 \def\@PushButton[#1]#2{% parameters, label
13355 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13356 }
13357 \def\@Reset[#1]#2{%
13358 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13359 }
13360 \def\@Submit[#1]#2{%
13361 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13362 }
13363 \endhypertex

```

48.3 TeX4ht

```

13364 \*tex4ht
13365 \def\@Form[#1]{%
13366 \kvsetkeys{Form}{#1}%
13367 \HCode{<form action="\Form@action" method="\Form@method">}%
13368 }
13369 \def\@endForm{\HCode{</form>}}
13370 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13371 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13372 }
13373 \def\@TextField[#1]#2{% parameters, label

```

```

13374 \let\Hy@reserved@a\@empty
13375 \def\Fld@name{#2}%
13376 \let\Fld@default\ltx@empty
13377 \bgroup
13378 \Field@toks={ }%
13379 \kvsetkeys{Field}{#1}%
13380 \HCode{<label for="\Fld@name">#2</label>}%
13381 \ifFld@password
13382 \@@PasswordField
13383 \else
13384 \@@TextField
13385 \fi
13386 \egroup
13387 }
13388 \def\@@PasswordField{%
13389 \HCode{%
13390 <input type="password" %
13391 id="\Fld@name" %
13392 name="\Fld@name" %
13393 \ifFld@hidden type="hidden" \fi
13394 value="\Fld@default" %
13395 \the\Field@toks
13396 >%
13397 }%
13398 }
13399 \def\@@TextField{%
13400 \ifFld@multiline
13401 \HCode{<textarea %
13402 \ifFld@readonly readonly \fi
13403 id="\Fld@name" %
13404 name="\Fld@name" %
13405 \ifFld@hidden type="hidden" \fi
13406 \the\Field@toks>%
13407 }%
13408 \Fld@default
13409 \HCode{</textarea>}%
13410 \else
13411 \HCode{<input type="text" %
13412 \ifFld@readonly readonly \fi
13413 id="\Fld@name" %
13414 name="\Fld@name" %
13415 \ifFld@hidden type="hidden" \fi
13416 value="\Fld@default" %
13417 \the\Field@toks>%
13418 }%
13419 \fi
13420 }
13421 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13422 \def\Fld@name{#2}%
13423 \let\Fld@default\ltx@empty
13424 \let\Hy@reserved@a\relax
13425 \beginngroup
13426 \expandafter\Fld@findlength#3\\%
13427 \Field@toks={ }%
13428 \kvsetkeys{Field}{#1}%
13429 #2%
13430 \ifFld@radio

```



```

13431     \expandafter\@@Radio#3\\%
13432     \else
13433     \expandafter\@@Menu#3\\%
13434     \fi
13435 \endgroup
13436 }
13437 \def\Fld@findlength#1\\{%
13438   \Fld@menulength=0 %
13439   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13440 }
13441 \def\@@Menu#1\\{%
13442   \HCode{<select size="\the\Fld@menulength" %
13443     name="\Fld@name" %
13444     \the\Field@toks>%
13445   }%
13446   \@for\@curropt:=#1\do{%
13447     \expandafter\Fld@checkequals\@curropt==\\%
13448     \HCode{<option %
13449       \ifx\@curropt\Fld@default selected \fi
13450       value="\@currValue">\@currDisplay</option>%
13451     }%
13452   }%
13453   \HCode{</select>}%
13454 }
13455 \def\@@Radio#1\\{%
13456   \@for\@curropt:=#1\do{%
13457     \expandafter\Fld@checkequals\@curropt==\\%
13458     \HCode{<input type="radio" %
13459       \ifx\@curropt\Fld@default checked \fi
13460       name="\Fld@name" %
13461       value="\@currValue" %
13462       \the\Field@toks>%
13463     }%
13464     \@currDisplay
13465   }%
13466 }
13467 \def\@PushButton[#1]#2{% parameters, label
13468   \def\Fld@name{#2}%
13469   \bgroup
13470     \Field@toks={ }%
13471     \kvsetkeys{Field}{#1}%
13472     \HCode{<input type="button" %
13473       name="\Fld@name" %
13474       value="#2" %
13475       \the\Field@toks>%
13476     }%
13477     \HCode{</button>}%
13478   \egroup
13479 }
13480 \def\@Submit[#1]#2{%
13481   \HCode{<button type="submit">#2</button>}%
13482 }
13483 \def\@Reset[#1]#2{%
13484   \HCode{<button type="reset">#2</button>}%
13485 }
13486 \def\@CheckBox[#1]#2{% parameters, label
13487   \let\Hy@reserved@a\@empty

```

```

13488 \def\Fld@name{#2}%
13489 \def\Fld@default{0}%
13490 \bgroup
13491 \Field@toks={ }%
13492 \kvsetkeys{Field}{#1}%
13493 \HCode{<input type="checkbox" %
13494 \ifFld@checked checked \fi
13495 \ifFld@disabled disabled \fi
13496 \ifFld@readonly readonly \fi
13497 name="\Fld@name" %
13498 \ifFld@hidden type="hidden" \fi
13499 value="\Fld@default" %
13500 \the\Field@toks>%
13501 #2%
13502 }%
13503 \egroup
13504 }
13505 (/tex4ht)

```

48.4 pdfTeX

```

13506 (*pdfTeX)
13507 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13508 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13509 }
13510 \def\MakeFieldObject#1#2{\sbox0{#1}%
13511 \immediate\pdfxform0 %
13512 \expandafter\edef\csname #2Object\endcsname{%
13513 \the\pdflastxform\space 0 R%
13514 }%
13515 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
13516 }%
13517 \let\HyField@afields\ltx@empty
13518 \let\HyField@cofields\ltx@empty
13519 \begingroup\expandafter\expandafter\expandafter\endgroup
13520 \expandafter\ifx\csname pdflastlink\endcsname\relax
13521 \let\HyField@AddToFields\relax
13522 \PackageInfo{hyperref}{%
13523 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13524 \MessageBreak
13525 Adobe Reader/Acrobat accepts an empty /Field array,%
13526 \MessageBreak
13527 but other PDF viewers might complain%
13528 }%
13529 \else
13530 \let\HyField@AuxAddToFields\ltx@gobble
13531 \let\HyField@AuxAddToCoFields\ltx@gobble
13532 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
13533 \Hy@AtBeginDocument{%
13534 \if@filesw
13535 \immediate\write\@mainaux{%
13536 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13537 }%
13538 \immediate\write\@mainaux{%
13539 \string\providecommand\string\HyField@AuxAddToCoFields[1]{}%
13540 }%
13541 \fi
13542 \let\HyField@AfterAuxOpen\@firstofone

```

```

13543 \def\HyField@AuxAddToFields#1{%
13544 \xdef\HyField@afields{%
13545 \ifx\HyField@afields\@empty
13546 \else
13547 \HyField@afields
13548 \space
13549 \fi
13550 #1 0 R%
13551 }%
13552 }%
13553 \def\HyField@AuxAddToCoFields#1{%
13554 \xdef\HyField@cofields{%
13555 \ifx\HyField@cofields\@empty
13556 \else
13557 \HyField@cofields
13558 \space
13559 \fi
13560 #1 0 R%
13561 }%
13562 }%
13563 }%
13564 \def\HyField@AddToFields{%
13565 \expandafter\HyField@@AddToFields\expandafter{%
13566 \the\pdfastlink
13567 }%
13568 \ifx\Fld@calculate@code\ltx@empty
13569 \else
13570 \expandafter\HyField@@AddToCoFields\expandafter{%
13571 \the\pdfastlink
13572 }%
13573 \fi
13574 }%
13575 \def\HyField@@AddToFields#1{%
13576 \HyField@AfterAuxOpen{%
13577 \if@filesw
13578 \write\@mainaux{%
13579 \string\HyField@AuxAddToFields{#1}%
13580 }%
13581 \fi
13582 }%
13583 }%
13584 \def\HyField@@AddToCoFields#1{%
13585 \HyField@AfterAuxOpen{%
13586 \if@filesw
13587 \write\@mainaux{%
13588 \string\HyField@AuxAddToCoFields{#1}%
13589 }%
13590 \fi
13591 }%
13592 }%
13593 \fi
13594 \def\@Form[#1]{%
13595 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13596 \kvsetkeys{Form}{#1}%
13597 \pdf@ifdraftmode{}{%
13598 \Hy@FormObjects
13599 \ifnum\pdfTeXversion>13 %

```

```

13600 \pdfrefobj\OBJ@pdfdocencoding
13601 \pdfrefobj\OBJ@ZaDb
13602 \pdfrefobj\OBJ@Helv
13603 \fi
13604 \AtVeryEndDocument{%
13605 \immediate\pdfobj{%
13606 <<%
13607 /Fields[\HyField@afields]%
13608 \ifx\HyField@cofields\ltx@empty
13609 \else
13610 /CO[\HyField@cofields]%
13611 \fi
13612 /DR<<%
13613 /Font<<%
13614 /ZaDb \OBJ@ZaDb\space 0 R%
13615 /Helv \OBJ@Helv\space 0 R%
13616 >>%
13617 >>%
13618 /DA(/Helv 10 Tf 0 g)%
13619 \ifHy@pdfa
13620 \else
13621 \ifHyField@NeedAppearances
13622 /NeedAppearances true%
13623 \fi
13624 \fi
13625 >>%
13626 }%
13627 \edef\OBJ@acroform{\the\pdfastobj}%
13628 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13629 }%
13630 }%
13631 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13632 \begingroup
13633 \fontfamily{pzd}%
13634 \fontencoding{U}%
13635 \fontseries{m}%
13636 \fontshape{n}%
13637 \selectfont
13638 \char123 %
13639 \endgroup
13640 }{Ding}%
13641 \MakeFieldObject{%
13642 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13643 }{Submit}%
13644 \MakeFieldObject{%
13645 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13646 }{SubmitP}%
13647 }
13648 \let\@endForm\ltx@empty
13649 \let\HyAnn@AbsPageLabel\ltx@empty
13650 \let\Fld@pageobjref\ltx@empty
13651 \ltx@ifUndefined{pdfpageref}{%
13652 }{%
13653 \ltx@ifpackageloaded{zref-abspage}{%
13654 \newcount\HyAnn@Count
13655 \HyAnn@Count=\ltx@zero

```

```

13656 \def\HyAnn@AbsPageLabel{%
13657 \global\advance\HyAnn@Count by\ltx@one
13658 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13659 \zref@refused{HyAnn@\the\HyAnn@Count}%
13660 }%
13661 \def\Fld@pageobjref{%
13662 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13663 }{%
13664 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13665 /P \pdfpageref
13666 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13667 \space 0 R%
13668 }{%
13669 }%
13670 }%
13671 }%
13672 }{%
13673 }%
13674 }

13675 \def\@TextField[#1]#2{% parameters, label
13676 \def\Fld@name{#2}%
13677 \let\Fld@default\ltx@empty
13678 \let\Fld@value\@empty
13679 \def\Fld@width{\DefaultWidthofText}%
13680 \def\Fld@height{%
13681 \ifFld@multiline
13682 \DefaultHeightofTextMultiline
13683 \else
13684 \DefaultHeightofText
13685 \fi
13686 }%
13687 \begingroup
13688 \expandafter\HyField@SetKeys\expandafter{%
13689 \DefaultOptionsofText,#1%
13690 }%
13691 \PDFForm@Name
13692 \HyField@FlagsText
13693 \ifFld@hidden\def\Fld@width{1sp}\fi
13694 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13695 \LayoutTextField{#2}{%
13696 \leavevmode
13697 \HyAnn@AbsPageLabel
13698 \Hy@escapeform\PDFForm@Text
13699 \pdfstartlink user {\PDFForm@Text}\relax
13700 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13701 \HyField@AddToFields
13702 }%
13703 \endgroup
13704 }

13705 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13706 \def\Fld@name{#2}%
13707 \let\Fld@default\relax
13708 \let\Fld@value\relax
13709 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13710 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13711 \begingroup
13712 \Fld@menulength=0 %

```

```

13713 \@tempdima\z@
13714 \@for\@curropt:=#3\do{%
13715   \expandafter\Fld@checkequals\@curropt==\\%
13716   \Hy@StepCount\Fld@menulength
13717   \settowidth{\@tempdimb}{\@currDisplay}%
13718   \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13719 }%
13720 \advance\@tempdima by 15\p@
13721 \begingroup
13722   \HyField@SetKeys{#1}%
13723 \edef\x{\endgroup
13724   \noexpand\expandafter
13725   \noexpand\HyField@SetKeys
13726   \noexpand\expandafter{%
13727     \expandafter\noexpand\csname DefaultOptionsof%
13728     \ifFld@radio
13729       Radio%
13730     \else
13731       \ifFld@combo
13732       \ifFld@popdown
13733         PopdownBox%
13734       \else
13735         ComboBox%
13736       \fi
13737     \else
13738       ListBox%
13739     \fi
13740   \fi
13741   \endcsname
13742 }%
13743 }\x
13744 \HyField@SetKeys{#1}%
13745 \PDFForm@Name
13746 \ifFld@hidden\def\Fld@width{1sp}\fi
13747 \ifx\Fld@value\relax
13748   \let\Fld@value\Fld@default
13749 \fi
13750 \LayoutChoiceField{#2}{%
13751   \ifFld@radio
13752     \HyField@FlagsRadioButton
13753     \@@Radio{#3}%
13754   \else
13755     \begingroup
13756     \HyField@FlagsChoice
13757     \ifdim\Fld@width<\@tempdima
13758       \ifdim\@tempdima<1cm\@tempdima1cm\fi
13759     \edef\Fld@width{\the\@tempdima}%
13760     \fi
13761     \ifFld@combo
13762     \else
13763       \@tempdima=\the\Fld@menulength\Fld@charsize
13764       \advance\@tempdima by \Fld@borderwidth bp %
13765       \advance\@tempdima by \Fld@borderwidth bp %
13766       \edef\Fld@height{\the\@tempdima}%
13767     \fi
13768     \@@ListBox{#3}%
13769   \endgroup

```

```

13770 \fi
13771 }%
13772 \endgroup
13773 }
13774 \def\@@Radio#1{%
13775 \Fld@listcount=0 %
13776 \EdefEscapeName\Fld@default{\Fld@default}%
13777 \@for\@curropt:=#1\do{%
13778 \expandafter\Fld@checkequals\@curropt==\%
13779 \EdefEscapeName\@currValue{\@currValue}%
13780 \Hy@StepCount\Fld@listcount
13781 \@currDisplay\space
13782 \leavevmode
13783 \HyAnn@AbsPageLabel
13784 \Hy@escapeform\PDFForm@Radio
13785 \pdfstartlink user {%
13786 \PDFForm@Radio
13787 /AP<<%
13788 /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.

```

13789 /\@currValue\space \DingObject
13790 >>%
13791 >>%
13792 }%
13793 \relax
13794 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13795 \ifnum\Fld@listcount=1 %
13796 \HyField@AddToFields
13797 \fi
13798 \space % deliberate space between radio buttons
13799 }%
13800 }
13801 \newcount\Fld@listcount
13802 \def\@@Listbox#1{%
13803 \HyField@PDFChoices{#1}%
13804 \leavevmode
13805 \HyAnn@AbsPageLabel
13806 \Hy@escapeform\PDFForm@List
13807 \pdfstartlink user {\PDFForm@List}\relax
13808 \MakeChoiceField{\Fld@width}{\Fld@height}%
13809 \pdfendlink
13810 \HyField@AddToFields
13811 }
13812 \def\@PushButton[#1]#2{% parameters, label
13813 \def\Fld@name{#2}%
13814 \begingroup
13815 \expandafter\HyField@SetKeys\expandafter{%
13816 \DefaultOptionsofPushButton,#1%
13817 }%
13818 \PDFForm@Name
13819 \ifHy@pdfa
13820 \Hy@Error{%
13821 PDF/A: Push button with JavaScript is prohibited%
13822 }\@ehc
13823 \LayoutPushButtonField{%

```

```

13824     \leavevmode
13825     \MakeButtonField{#2}%
13826   }%
13827 \else
13828   \HyField@FlagsPushButton
13829   \ifFld@hidden\def\Fld@width{1sp}\fi
13830   \LayoutPushButtonField{%
13831     \leavevmode
13832     \HyAnn@AbsPageLabel
13833     \Hy@escapeform\PDFForm@Push
13834     \pdfstartlink user {\PDFForm@Push}\relax
13835     \MakeButtonField{#2}%
13836     \pdfendlink
13837     \HyField@AddToFields
13838   }%
13839 \fi
13840 \endgroup
13841 }
13842 \def\@Submit[#1]#2{%
13843   \def\Fld@width{\DefaultWidthofSubmit}%
13844   \def\Fld@height{\DefaultHeightofSubmit}%
13845   \begingroup
13846     \expandafter\HyField@SetKeys\expandafter{%
13847       \DefaultOptionsofSubmit,#1%
13848     }%
13849     \HyField@FlagsPushButton
13850     \HyField@FlagsSubmit
13851     \ifFld@hidden\def\Fld@width{1sp}\fi
13852     \leavevmode
13853     \HyAnn@AbsPageLabel
13854     \Hy@escapeform\PDFForm@Submit
13855     \pdfstartlink user {%
13856       \PDFForm@Submit
13857       /AP<</N \SubmitObject/D \SubmitPObject>>%
13858     }%
13859     \relax
13860     \MakeButtonField{#2}%
13861     \pdfendlink
13862     \HyField@AddToFields
13863   \endgroup
13864 }
13865 \def\@Reset[#1]#2{%
13866   \def\Fld@width{\DefaultWidthofReset}%
13867   \def\Fld@height{\DefaultHeightofReset}%
13868   \begingroup
13869     \expandafter\HyField@SetKeys\expandafter{%
13870       \DefaultOptionsofReset,#1%
13871     }%
13872     \leavevmode
13873     \ifHy@pdfa
13874       \Hy@Error{%
13875         PDF/A: Reset action is prohibited%
13876       }\@ehc
13877       \MakeButtonField{#2}%
13878     \else
13879       \HyField@FlagsPushButton
13880       \ifFld@hidden\def\Fld@width{1sp}\fi

```



```

13881 \HyAnn@AbsPageLabel
13882 \Hy@escapeform\PDFForm@Reset
13883 \pdfstartlink user {\PDFForm@Reset}\relax
13884 \MakeButtonField{#2}%
13885 \pdfendlink
13886 \HyField@AddToFields
13887 \fi
13888 \endgroup
13889 }
13890 \def\@CheckBox[#1]#2{% parameters, label
13891 \def\Fld@name{#2}%
13892 \def\Fld@default{0}%
13893 \begingroup
13894 \def\Fld@width{\DefaultWidthofCheckBox}%
13895 \def\Fld@height{\DefaultHeightofCheckBox}%
13896 \expandafter\HyField@SetKeys\expandafter{%
13897 \DefaultOptionsofCheckBox,#1%
13898 }%
13899 \PDFForm@Name
13900 \HyField@FlagsCheckBox
13901 \ifFld@hidden\def\Fld@width{1sp}\fi
13902 \LayoutCheckField{#2}{%
13903 \leavevmode
13904 \HyAnn@AbsPageLabel
13905 \Hy@escapeform\PDFForm@Check
13906 \pdfstartlink user {\PDFForm@Check}\relax
13907 \MakeCheckField{\Fld@width}{\Fld@height}%
13908 \pdfendlink
13909 \HyField@AddToFields
13910 }%
13911 \endgroup
13912 }
13913 \def\Hy@FormObjects{%
13914 \pdfobj {%
13915 <<%
13916 /Type/Encoding%
13917 /Differences%
13918 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13919 /ring/tilde %
13920 39/quotesingle %
13921 96/grave %
13922 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13923 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13924 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13925 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13926 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13927 164/currency %
13928 166/brokenbar %
13929 168/dieresis/copyright/ordfeminine %
13930 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13931 /twosuperior/threesuperior/acute/mu %
13932 183/periodcentered/cedilla/onesuperior/ordmasculine %
13933 188/onequarter/onehalf/threequarters %
13934 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13935 /Cedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13936 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13937 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%

```

```

13938      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13939      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13940      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13941      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
13942      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13943      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13944  }%
13945  >>%
13946  }%
13947  \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
13948  \pdfobj{%
13949  <<%
13950      /Type/Font%
13951      /Subtype/Type1%
13952      /Name/ZaDb%
13953      /BaseFont/ZapfDingbats%
13954  >>%
13955  }%
13956  \xdef\OBJ@ZaDb{\the\pdflastobj}%
13957  \pdfobj{%
13958  <<%
13959      /Type/Font%
13960      /Subtype/Type1%
13961      /Name/Helv%
13962      /BaseFont/Helvetica%
13963      /Encoding \OBJ@pdfdocencoding\space 0 R%
13964  >>%
13965  }%
13966  \xdef\OBJ@Helv{\the\pdflastobj}%
13967  \global\let\Hy@FormObjects\relax
13968  }
13969  </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.

```
13970 <{*dvipdfm | xetex}>
```

\@Gauge

```

13971 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13972   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13973 }

```

\@Form

```

13974 \def\@Form[#1]{%
13975   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13976   \kvsetkeys{Form}{#1}%
13977   \Hy@FormObjects
13978   \@pdfm@mark{obj @afields []}%
13979   \@pdfm@mark{obj @corder []}%
13980   \@pdfm@mark{%
13981     obj @aform <<%
13982       /Fields @afields%
13983       /DR<<%
13984       /Font<<%
13985       /ZaDb @OBJZaDb%
13986       /Helv @OBJHelv%

```

```

13987     >>%
13988     >>%
13989     /DA(/Helv 10 Tf 0 g)%
13990     /CO @corder%
13991     \ifHy@pdfa
13992     \else
13993     \ifHyField@NeedAppearances
13994     /NeedAppearances true%
13995     \fi
13996     \fi
13997     >>%
13998     }%
13999     \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14000 }

```

\@endForm

```

14001 \let\@endForm\ltx@empty

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

14002 \def\dvipdfm@setdim{%
14003   height \the\ht\pdfm@box\space
14004   width \the\wd\pdfm@box\space
14005   depth \the\dp\pdfm@box\space
14006 }

```

\HyField@AnnotCount

```

14007 \newcount\HyField@AnnotCount
14008 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

14009 \def\HyField@AdvanceAnnotCount{%
14010   \global\advance\HyField@AnnotCount\@ne
14011 }

```

\HyField@TheAnnotCount

```

14012 \def\HyField@TheAnnotCount{%
14013   \the\HyField@AnnotCount
14014 }

```

\Fld@pageobjref

```

14015 \def\Fld@pageobjref{/P @thispage}%

```

\HyField@AddToFields

```

14016 \def\HyField@AddToFields#1{%
14017   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14018   \ifx\Fld@calculate@code\ltx@empty
14019   \else
14020   \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14021   \fi
14022 }

```

\@TextField

```

14023 \def\@TextField[#1]#2{% parameters, label
14024   \def\Fld@name{#2}%
14025   \let\Fld@default\ltx@empty
14026   \let\Fld@value\@empty

```

```

14027 \def\Fld@width{\DefaultWidthofText}%
14028 \def\Fld@height{%
14029   \ifFld@multiline
14030     \DefaultHeightofTextMultiline
14031   \else
14032     \DefaultHeightofText
14033   \fi
14034 }%
14035 \begingroup
14036 \expandafter\HyField@SetKeys\expandafter{%
14037   \DefaultOptionsofText,#1%
14038 }%
14039 \PDFForm@Name
14040 \HyField@FlagsText
14041 \ifFld@hidden\def\Fld@width{1sp}\fi
14042 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
14043 \setbox\pdfm@box=\hbox{%
14044   \MakeTextField{\Fld@width}{\Fld@height}%
14045 }%
14046 \HyField@AdvanceAnnotCount
14047 \LayoutTextField{#2}{%
14048   \leavevmode
14049   \Hy@escapeform\PDFForm@Text
14050   \@pdfm@mark{%
14051     ann @text\HyField@TheAnnotCount\space
14052     \dvi pdfm@setdim << \PDFForm@Text >>%
14053   }%
14054 }%
14055 \unhbox\pdfm@box
14056 \HyField@AddToFields{text}%
14057 % record in @afields array
14058 \endgroup
14059 }

```

\@ChoiceMenu

```

14060 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14061   \def\Fld@name{#2}%
14062   \let\Fld@default\relax
14063   \let\Fld@value\relax
14064   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14065   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14066   \begingroup
14067     \Fld@menulength=0 %
14068     \@tempdima\z@
14069     \@for\@curropt:=#3\do{%
14070       \expandafter\Fld@checkequals\@curropt==\%
14071       \Hy@StepCount\Fld@menulength
14072       \settowidth{\@tempdimb}{\@currDisplay}%
14073       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14074     }%
14075     \advance\@tempdima by 15\p@
14076     \begingroup
14077       \HyField@SetKeys{#1}%
14078     \edef\x{\endgroup
14079       \noexpand\expandafter
14080       \noexpand\HyField@SetKeys
14081       \noexpand\expandafter{%
14082         \expandafter\noexpand\curname DefaultOptionsof%

```

```

14083         \ifFld@radio
14084         Radio%
14085     \else
14086         \ifFld@combo
14087         \ifFld@popdown
14088         PopdownBox%
14089         \else
14090         ComboBox%
14091         \fi
14092     \else
14093         ListBox%
14094     \fi
14095 \fi
14096 \endcsname
14097 }%
14098 }\x
14099 \HyField@SetKeys{#1}%
14100 \PDFForm@Name
14101 \ifFld@hidden\def\Fld@width{1sp}\fi
14102 \ifx\Fld@value\relax
14103     \let\Fld@value\Fld@default
14104 \fi
14105 \LayoutChoiceField{#2}{%
14106     \ifFld@radio
14107     \HyField@FlagsRadioButton
14108     \@@Radio{#3}%
14109 \else
14110     \begingroup
14111     \HyField@FlagsChoice
14112     \ifdim\Fld@width<\@tempdima
14113         \ifdim\@tempdima<1cm\@tempdima1cm\fi
14114         \edef\Fld@width{\the\@tempdima}%
14115     \fi
14116     \ifFld@combo
14117     \else
14118         \@tempdima=\the\Fld@menulength\Fld@charsize
14119         \advance\@tempdima by \Fld@borderwidth bp %
14120         \advance\@tempdima by \Fld@borderwidth bp %
14121         \edef\Fld@height{\the\@tempdima}%
14122     \fi
14123     \@@ListBox{#3}%
14124 \endgroup
14125 \fi
14126 }%
14127 \endgroup
14128 }

\@@Radio
14129 \def\@@Radio#1{%
14130     \Fld@listcount=0 %
14131     \EdefEscapeName\Fld@default{\Fld@default}%
14132     \setbox\pdfm@box=\hbox{%
14133         \MakeRadioField{\Fld@width}{\Fld@height}%
14134     }%
14135     \@for\@curropt:=#1\do{%
14136         \expandafter\Fld@checkequals\@curropt==\\%
14137         \EdefEscapeName\@currValue{\@currValue}%
14138         \Hy@StepCount\Fld@listcount

```

```

14139 \currDisplay\space
14140 \leavevmode
14141 \Hy@escapeform\PDFForm@Radio
14142 \ifnum\Fld@listcount=1 %
14143   \HyField@AdvanceAnnotCount
14144 \fi
14145 \@pdfm@mark{%
14146   ann %
14147   \ifnum\Fld@listcount=1 %
14148     @radio\HyField@TheAnnotCount%
14149   \space
14150 \fi
14151 \dvipdfm@setdim
14152 <<%
14153   \PDFForm@Radio
14154   /AP<</N<</\@currValue /null>>>>%
14155 >>%
14156 }%
14157 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14158 \ifnum\Fld@listcount=1 %
14159   \HyField@AddToFields{radio}%
14160 \fi
14161 }%
14162 }

\Fld@listcount
14163 \newcount\Fld@listcount

@@@Listbox
14164 \def\@@Listbox#1{%
14165   \HyField@PDFChoices{#1}%
14166   \setbox\pdfm@box=\hbox{%
14167     \MakeChoiceField{\Fld@width}{\Fld@height}%
14168   }%
14169   \leavevmode
14170   \Hy@escapeform\PDFForm@List
14171   \HyField@AdvanceAnnotCount
14172   \@pdfm@mark{%
14173     ann @list\HyField@TheAnnotCount\space
14174     \dvipdfm@setdim
14175     <<\PDFForm@List>>%
14176   }%
14177   \unhbox\pdfm@box
14178   \HyField@AddToFields{list}%
14179 }

@@PushButton
14180 \def\@PushButton[#1]#2{% parameters, label
14181   \def\Fld@name{#2}%
14182   \begingroup
14183     \expandafter\HyField@SetKeys\expandafter{%
14184       \DefaultOptionsofPushButton,#1%
14185     }%
14186     \PDFForm@Name
14187     \ifHy@pdfa
14188       \Hy@Error{%
14189         PDF/A: Push button with JavaScript is prohibited%

```

```

14190    }\@ehc
14191    \LayoutPushButtonField{%
14192        \leavevmode
14193        \MakeButtonField{#2}%
14194    }%
14195    \else
14196        \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14197        \HyField@FlagsPushButton
14198        \ifFld@hidden\def\Fld@width{1sp}\fi
14199        \HyField@AdvanceAnnotCount
14200        \LayoutPushButtonField{%
14201            \leavevmode
14202            \Hy@escapeform\PDFForm@Push
14203            \@pdfm@mark{%
14204                ann @push\HyField@TheAnnotCount\space
14205                \dvipdfm@setdim
14206                <<\PDFForm@Push>>%
14207            }%
14208        }%
14209        \unhbox\pdfm@box
14210        \HyField@AddToFields{push}%
14211    \fi
14212 \endgroup
14213 }

\@Submit
14214 \def\@Submit[#1]#2{%
14215     \def\Fld@width{\DefaultWidthofSubmit}%
14216     \def\Fld@height{\DefaultHeightofSubmit}%
14217     \begingroup
14218         \expandafter\HyField@SetKeys\expandafter{%
14219             \DefaultOptionsofSubmit,#1%
14220         }%
14221         \HyField@FlagsPushButton
14222         \HyField@FlagsSubmit
14223         \ifFld@hidden\def\Fld@width{1sp}\fi
14224         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14225         \leavevmode
14226         \Hy@escapeform\PDFForm@Submit
14227         \HyField@AdvanceAnnotCount
14228         \@pdfm@mark{%
14229             ann @submit\HyField@TheAnnotCount\space
14230             \dvipdfm@setdim
14231             <<\PDFForm@Submit>>%
14232         }%
14233         \unhbox\pdfm@box%
14234         \HyField@AddToFields{submit}%
14235     \endgroup
14236 }

\@Reset
14237 \def\@Reset[#1]#2{%
14238     \def\Fld@width{\DefaultWidthofReset}%
14239     \def\Fld@height{\DefaultHeightofReset}%
14240     \begingroup
14241         \expandafter\HyField@SetKeys\expandafter{%
14242             \DefaultOptionsofReset,#1%

```

```

14243 }%
14244 \leavevmode
14245 \ifHy@pdfa
14246   \Hy@Error{%
14247     PDF/A: Reset action is prohibited%
14248   }\@ehc
14249   \MakeButtonField{#2}%
14250 \else
14251   \HyField@FlagsPushButton
14252   \ifFld@hidden\def\Fld@width{1sp}\fi
14253   \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14254   \Hy@escapeform\PDFForm@Reset
14255   \HyField@AdvanceAnnotCount
14256   \@pdfm@mark{%
14257     ann @reset\HyField@TheAnnotCount\space
14258     \dvi pdfm@setdim
14259     <<\PDFForm@Reset>>%
14260   }%
14261   \unhbox\pdfm@box
14262   \HyField@AddToFields{reset}%
14263 \fi
14264 \endgroup
14265 }

```

\@CheckBox

```

14266 \def\@CheckBox[#1]#2{% parameters, label
14267   \def\Fld@name{#2}%
14268   \def\Fld@default{0}%
14269   \begingroup
14270     \def\Fld@width{\DefaultWidthofCheckBox}%
14271     \def\Fld@height{\DefaultHeightofCheckBox}%
14272     \expandafter\HyField@SetKeys\expandafter{%
14273       \DefaultOptionsofCheckBox,#1%
14274     }%
14275     \PDFForm@Name
14276     \HyField@FlagsCheckBox
14277     \ifFld@hidden\def\Fld@width{1sp}\fi
14278     \setbox\pdfm@box=\hbox{%
14279       \MakeCheckField{\Fld@width}{\Fld@height}%
14280     }%
14281     \HyField@AdvanceAnnotCount
14282     \LayoutCheckField{#2}%
14283     \leavevmode
14284     \Hy@escapeform\PDFForm@Check
14285     \@pdfm@mark{%
14286       ann @check\HyField@TheAnnotCount\space
14287       \dvi pdfm@setdim
14288       <<\PDFForm@Check>>%
14289     }%
14290     \unhbox\pdfm@box
14291     \HyField@AddToFields{check}%
14292   }%
14293 \endgroup
14294 }

14295 \def\Hy@FormObjects{%
14296   \@pdfm@mark{obj @OBJpdfdocencoding%
14297     <<%

```



```

14298 /Type/Encoding%
14299 /Differences[%
14300 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14301 39/quotesingle %
14302 96/grave %
14303 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14304 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14305 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14306 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14307 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14308 164/currency %
14309 166/brokenbar %
14310 168/dieresis/copyright/ordfeminine %
14311 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14312 /twosuperior/threesuperior/acute/mu %
14313 183/periodcentered/cedilla/onesuperior/ordmasculine %
14314 188/onequarter/onehalf/threequarters %
14315 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14316 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14317 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14318 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14319 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14320 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14321 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14322 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
14323 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14324 /thorn/ydieresis%
14325 ]%
14326 >>%
14327 }%
14328 \@pdfmark{obj @OBJZaDb%
14329 <<%
14330 /Type/Font%
14331 /Subtype/Type1%
14332 /Name/ZaDb%
14333 /BaseFont/ZapfDingbats%
14334 >>%
14335 }%
14336 \@pdfmark{obj @OBJHelv%
14337 <<%
14338 /Type/Font%
14339 /Subtype/Type1%
14340 /Name/Helv%
14341 /BaseFont/Helvetica%
14342 /Encoding @OBJpdfdocencoding%
14343 >>%
14344 }%
14345 \global\let\Hy@FormObjects\relax
14346 }
14347 </dvipdfm | xetex>

```

48.6 Common forms part

```

14348 (*pdfform)
\Fld@pageobjref
14349 \providecommand*{\Fld@pageobjref}{}

```

\Hy@escapestring

```
14350 \begingroup\expandafter\expandafter\expandafter\endgroup
14351 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14352 \let\Hy@escapestring\@firstofone
14353 \def\Hy@escapeform#1{%
14354 \ifHy@pdfescapeform
14355 \def\Hy@escapestring###1{%
14356 \noexpand\Hy@escapestring{\noexpand###1}%
14357 }%
14358 \edef\Hy@temp{#1}%
14359 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14360 \def\Hy@escapestring###1{%
14361 \@ifundefined{Hy@esc@\string###1}{%
14362 ###1%
14363 \ThisShouldNotHappen
14364 }{%
14365 \csname Hy@esc@\string###1\endcsname
14366 }%
14367 }%
14368 \else
14369 \let\Hy@escapestring\@firstofone
14370 \fi
14371 }%
14372 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
14373 \ifx\#3\%
14374 \else
14375 \expandafter
14376 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14377 \ltx@ReturnAfterFi{%
14378 \Hy@@@escapeform#3\@nil
14379 }%
14380 \fi
14381 }%
14382 \else
14383 \def\Hy@escapeform#1{%
14384 \ifHy@pdfescapeform
14385 \let\Hy@escapestring\pdfescapestring
14386 \else
14387 \let\Hy@escapestring\@firstofone
14388 \fi
14389 }%
14390 \Hy@escapeform{}%
14391 \fi
```

\PDFForm@Name

```
14392 \def\PDFForm@Name{%
14393 \PDFForm@@@Name\Fld@name
14394 \ifx\Fld@altname\relax
14395 \else
14396 \PDFForm@@@Name\Fld@altname
14397 \fi
14398 \ifx\Fld@mappingname\relax
14399 \else
14400 \PDFForm@@@Name\Fld@mappingname
14401 \fi
14402 }
```

\PDFForm@@Name

```
14403 \def\PDFForm@@Name#1{%
14404   \begingroup
14405   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14406     \ifHy@unicode
14407       \Hy@unicodedefalse
14408     \fi
14409   \fi
14410   \HyPsd@XeTeXBigCharstrue
14411   \pdfstringdef\Hy@gtemp#1%
14412 \endgroup
14413 \let#1\Hy@gtemp
14414 }
```

\Fld@additionalactions

```
14415 \def\Fld@@additionalactions{%
K input (keystroke) format
14416   \ifx\Fld@keystroke@code\@empty
14417   \else
14418     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14419   \fi
F display format
14420   \ifx\Fld@format@code\@empty
14421   \else
14422     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14423   \fi
V validation
14424   \ifx\Fld@validate@code\@empty
14425   \else
14426     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14427   \fi
C calculation
14428   \ifx\Fld@calculate@code\@empty
14429   \else
14430     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14431   \fi
Fo receiving the input focus
14432   \ifx\Fld@onfocus@code\@empty
14433   \else
14434     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14435   \fi
Bl loosing the input focus (blurred)
14436   \ifx\Fld@onblur@code\@empty
14437   \else
14438     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14439   \fi
D pressing the mouse button (down)
14440   \ifx\Fld@onmousedown@code\@empty
14441   \else
14442     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14443   \fi
```

U releasing the mouse button (up)

```
14444 \ifx\Fld@onmouseup@code\@empty
14445 \else
14446 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14447 \fi
```

E cursor enters the annotation's active area.

```
14448 \ifx\Fld@onenter@code\@empty
14449 \else
14450 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14451 \fi
```

X cursor exits the annotation's active area.

```
14452 \ifx\Fld@onexit@code\@empty
14453 \else
14454 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14455 \fi
14456 }
14457 \def\Fld@additionalactions{%
14458 \if-\Fld@@additionalactions-%
14459 \else
14460 \ifHy@pdfa
14461 \else
14462 /AA<<\Fld@@additionalactions>>%
14463 \fi
14464 \fi
14465 }
```

\Fld@annotnames

```
14466 \def\Fld@annotnames{%
14467 /T(\Fld@name)%
14468 \ifx\Fld@altname\relax
14469 \else
14470 /TU(\Fld@altname)%
14471 \fi
14472 \ifx\Fld@mappingname\relax
14473 \else
14474 /TM(\Fld@mappingname)%
14475 \fi
14476 }
```

\PDFForm@Check

```
14477 \def\PDFForm@Check{%
14478 /Subtype/Widget%
14479 \Fld@annotflags
14480 \Fld@pageobjref
14481 \Fld@annotnames
14482 /FT/Btn%
14483 \Fld@flags
14484 /Q \Fld@align
14485 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14486 /MK<<%
14487 \ifnum\Fld@rotation=z@
14488 \else
14489 /R \Fld@rotation
14490 \fi
14491 \ifx\Fld@bordercolor\relax
14492 \else
```

```

14493     /BC[\Fld@bordercolor]%
14494     \fi
14495     \ifx\Fld@bcolor\relax
14496     \else
14497     /BG[\Fld@bcolor]%
14498     \fi
14499     /CA(\Hy@escapestring{\Fld@cbsymbol})%
14500 >>%
14501 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14502     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14503 /H/P%
14504 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14505 \Fld@additionalactions
14506 }

```

\PDFForm@Push

```

14507 \ifHy@pdfa
14508 \else
14509 \def\PDFForm@Push{%
14510     /Subtype/Widget%
14511     \Fld@annotflags
14512     \Fld@pageobjref
14513     \Fld@annotnames
14514     /FT/Btn%
14515     \Fld@flags
14516     /H/P%
14517     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14518     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14519         \ifx\Fld@bordercolor\relax\else 1\fi
14520         \space
14521     \else
14522     /MK<<%
14523         \ifnum\Fld@rotation=\z@
14524         \else
14525         /R \Fld@rotation
14526         \fi
14527         \ifx\Fld@bordercolor\relax
14528         \else
14529         /BC[\Fld@bordercolor]%
14530         \fi
14531     >>%
14532     \fi
14533     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14534     \Fld@additionalactions
14535 }%
14536 \fi

```

\PDFForm@List

```

14537 \def\PDFForm@List{%
14538     /Subtype/Widget%
14539     \Fld@annotflags
14540     \Fld@pageobjref
14541     \Fld@annotnames
14542     /FT/Ch%
14543     \Fld@flags
14544     /Q \Fld@align
14545     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%

```

```

14546 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14547 \ifx\Fld@bordercolor\relax\else 1\fi
14548 \ifx\Fld@bcolor\relax \else 1\fi
14549 \space
14550 \else
14551 /MK<<%
14552 \ifnum\Fld@rotation=\z@
14553 \else
14554 /R \Fld@rotation
14555 \fi
14556 \ifx\Fld@bordercolor\relax
14557 \else
14558 /BC[\Fld@bordercolor]%
14559 \fi
14560 \ifx\Fld@bcolor\relax
14561 \else
14562 /BG[\Fld@bcolor]%
14563 \fi
14564 >>%
14565 \fi
14566 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14567 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14568 \Fld@choices
14569 \Fld@additionalactions
14570 }

```

\PDFForm@Radio

```

14571 \def\PDFForm@Radio{%
14572 /Subtype/Widget%
14573 \Fld@annotflags
14574 \Fld@pageobjref
14575 \Fld@annotnames
14576 /FT/Btn%
14577 \Fld@flags
14578 /H/P%
14579 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14580 /MK<<%
14581 \ifnum\Fld@rotation=\z@
14582 \else
14583 /R \Fld@rotation
14584 \fi
14585 \ifx\Fld@bordercolor\relax
14586 \else
14587 /BC[\Fld@bordercolor]%
14588 \fi
14589 \ifx\Fld@bcolor\relax
14590 \else
14591 /BG[\Fld@bcolor]%
14592 \fi
14593 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14594 >>%
14595 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14596 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14597 \ifx\@currValue\Fld@default
14598 /V/\Fld@default
14599 /DV/\Fld@default
14600 \else
14601 /V/Off%

```

```

14602 /DV/Off%
14603 \fi
14604 \Fld@additionalactions
14605 }

```

\PDFForm@Text

```

14606 \def\PDFForm@Text{%
14607 /Subtype/Widget%
14608 \Fld@annotflags
14609 \Fld@pageobjref
14610 \Fld@annotnames
14611 /FT/Tx%
14612 \Fld@flags
14613 /Q \Fld@align
14614 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14615 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14616 \ifx\Fld@bordercolor\relax\else 1\fi
14617 \ifx\Fld@bcolor\relax \else 1\fi
14618 \space
14619 \else
14620 /MK<<%
14621 \ifnum\Fld@rotation=\z@
14622 \else
14623 /R \Fld@rotation
14624 \fi
14625 \ifx\Fld@bordercolor\relax
14626 \else
14627 /BC[\Fld@bordercolor]%
14628 \fi
14629 \ifx\Fld@bcolor\relax
14630 \else
14631 /BG[\Fld@bcolor]%
14632 \fi
14633 >>%
14634 \fi
14635 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14636 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14637 /DV(\Hy@escapestring{\Fld@default})%
14638 /V(\Hy@escapestring{\Fld@value})%
14639 \Fld@additionalactions
14640 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14641 }

```

\PDFForm@Submit

```

14642 \def\PDFForm@Submit{%
14643 /Subtype/Widget%
14644 \Fld@annotflags
14645 \Fld@pageobjref
14646 \Fld@annotnames
14647 /FT/Btn%
14648 \Fld@flags
14649 /H/P%
14650 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14651 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14652 \ifx\Fld@bordercolor\relax\else 1\fi
14653 \space
14654 \else

```

```

14655 /MK<<%
14656   \ifnum\Fld@rotation=\z@
14657   \else
14658     /R \Fld@rotation
14659   \fi
14660   \ifx\Fld@bordercolor\relax
14661   \else
14662     /BC[\Fld@bordercolor]%
14663   \fi
14664 >>%
14665 \fi
14666 /A<<%
14667 /S/SubmitForm%
14668 /F<<%
14669 /FS/URL%
14670 /F(\Hy@escapestring{\Form@action})%
14671 >>%
14672 \Fld@submitflags
14673 >>%
14674 \Fld@additionalactions
14675 }

```

\PDFForm@Reset

```

14676 \ifHy@pdfa
14677 \else
14678   \def\PDFForm@Reset{%
14679     /Subtype/Widget%
14680     \Fld@annotflags
14681     \Fld@pageobjref
14682     \Fld@annotnames
14683     /FT/Btn%
14684     \Fld@flags
14685     /H/P%
14686     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14687     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14688       \ifx\Fld@bordercolor\relax\else 1\fi
14689       \space
14690     \else
14691       /MK<<%
14692       \ifnum\Fld@rotation=\z@
14693       \else
14694         /R \Fld@rotation
14695       \fi
14696       \ifx\Fld@bordercolor\relax
14697       \else
14698         /BC[\Fld@bordercolor]%
14699       \fi
14700 % /CA (Clear)
14701 % /AC (Done)
14702 >>%
14703 \fi
14704 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14705 /A<</S/ResetForm>>%
14706 \Fld@additionalactions
14707 }%
14708 \fi
14709 </pdfform>

```



```
14710 \<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`

```
14711 \def\phantomsection{%
14712   \Hy@MakeCurrentHrefAuto{section*}%
14713   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14714 }
14715 \</package>
```

49.1 Bookmarks

```
14716 \<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.

```
14717 \def\Hy@writebookmark#1#2#3#4#5{%
14718   % section number, text, label, level, file
14719   \ifx\WriteBookmarks\relax%
14720     \else
14721       \ifnum#4>\Hy@bookmarksdepth\relax
14722       \else
14723         \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14724       \fi
14725     \fi
14726 }
14727 \def\Hy@currentbookmarklevel{0}
14728 \def\Hy@numberline#1{#1}
14729 \def\@@writetorep#1#2#3#4#5{%
14730   \begingroup
14731   \edef\Hy@tempa{#5}%
14732   \ifx\Hy@tempa\Hy@bookmarkstype
14733     \edef\Hy@level{#4}%
```

```

14734 \ifx\Hy@levelcheck Y%
14735 \@tempcnta\Hy@level\relax
14736 \advance\@tempcnta by -1 %
14737 \ifnum\Hy@currentbookmarklevel<\@tempcnta
14738 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14739 \advance\@tempcnta by 1 %
14740 \Hy@Warning{%
14741 Difference (\the\@tempcnta) between bookmark levels is %
14742 greater \MessageBreak than one, level fixed%
14743 }%
14744 \@tempcnta\Hy@currentbookmarklevel
14745 \advance\@tempcnta by 1 %
14746 \edef\Hy@level{\the\@tempcnta}%
14747 \fi
14748 \else
14749 \global\let\Hy@levelcheck Y%
14750 \fi
14751 \global\let\Hy@currentbookmarklevel\Hy@level
14752 \@tempcnta\Hy@level\relax
14753 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14754 \advance\@tempcnta by -1 %
14755 \edef\Hy@tempa{#3}%
14756 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14757 \ifx\Hy@tempa\Hy@tempb
14758 \Hy@Warning{%
14759 The anchor of a bookmark and its parent's must not%
14760 \MessageBreak be the same. Added a new anchor%
14761 }%
14762 \phantomsection
14763 \fi
14764 \ifHy@bookmarksnumbered
14765 \let\numberline\Hy@numberline
14766 \let\booknumberline\Hy@numberline
14767 \let\partnumberline\Hy@numberline
14768 \let\chapternumberline\Hy@numberline
14769 \else
14770 \let\numberline\@gobble
14771 \let\booknumberline\@gobble
14772 \let\partnumberline\@gobble
14773 \let\chapternumberline\@gobble
14774 \fi
14775 \HyPsd@XeTeXBigCharstrue
14776 \pdfstringdef\Hy@tempa{#2}%
14777 \HyPsd@SanitizeForOutFile\Hy@tempa
14778 \if@filesw
14779 \stepcounter{bookmark@seq@number}%
14780 \@ifundefined{@outlinefile}{%
14781 }{%
14782 \protected@write\@outlinefile{}{%
14783 \protect\BOOKMARK
14784 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14785 {\Hy@tempa}{\Hy@tempb}%
14786 \@percentchar\space\thebookmark@seq@number
14787 }%
14788 }%
14789 \fi
14790 \fi

```

```

14791 \endgroup
14792 }
14793 \newcounter{bookmark@seq@number}

14794 \begingroup
14795 \lccode'('= '{%
14796 \lccode')= '}%
14797 \lccode'1=\z@
14798 \lccode'2=\z@
14799 \lccode'3=\z@
14800 \lccode'5=\z@
14801 \lccode'7=\z@
14802 \lccode'\#=\z@
14803 \lccode'\'=\z@
14804 \lccode'\{=\z@
14805 \lccode'\}=\z@
14806 \lowercase{%
14807 \endgroup
14808 \def\HyPsd@SanitizeForOutFile#1{%
14809   \@onelevel@sanitize\Hy@tempa
14810   \escapechar'\%
14811   \edef\Hy@tempa{%
14812     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14813   }%
14814   \edef\Hy@tempa{%
14815     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14816   }%
14817 }%
14818 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14819   #1%
14820   \ifx\#2\%
14821     \expandafter\ltx@gobble
14822   \else
14823     \expandafter\ltx@firstofone
14824   \fi
14825   {%
14826     \string\173%
14827     \HyPsd@SanitizeOut@BraceLeft#2\@nil
14828   }%
14829 }%
14830 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14831   #1%
14832   \ifx\#2\%
14833     \expandafter\ltx@gobble
14834   \else
14835     \expandafter\ltx@firstofone
14836   \fi
14837   {%
14838     \string\175%
14839     \HyPsd@SanitizeOut@BraceRight#2\@nil
14840   }%
14841 }%
14842 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14843 \newcommand{\currentpdfbookmark}{%
14844   \pdfbookmark[\Hy@currentbookmarklevel]%
14845 }

```

```

14846 \newcommand{\subpdfbookmark}{%
14847   \@tempcnta\Hy@currentbookmarklevel
14848   \Hy@StepCount\@tempcnta
14849   \expandafter\pdfbookmark\expandafter\the\@tempcnta}%
14850 }
14851 \newcommand{\belowpdfbookmark}[2]{%
14852   \@tempcnta\Hy@currentbookmarklevel
14853   \Hy@StepCount\@tempcnta
14854   \expandafter\pdfbookmark\expandafter\the\@tempcnta{#1}{#2}%
14855   \advance\@tempcnta by -1 %
14856   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14857 }

```

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.

```

14858 \renewcommand\pdfbookmark[3][0]{%
14859   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
14860   \hyper@anchorstart{#3.#1}\hyper@anchorend
14861 }
14862 \def\BOOKMARK{%
14863   \ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
14864 }
14865 \def\@BOOKMARK[#1]{%
14866   \ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
14867 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14868 \RequirePackage{rerunfilecheck}[2009/12/10]
14869 \def\Hy@OutlineRerunCheck{%
14870   \RerunFileCheck{\jobname.out}{%
14871     \immediate\closeout\@outlinefile
14872   }{%
14873     Rerun to get outlines right\MessageBreak
14874     or use package 'bookmark'%
14875   }%
14876 }

```

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.

```

14877 <*vtex>
14878 \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.

```

14879 \begingroup
14880 \catcode'\'=12 %

```

```

14881 \ifnum\Hy@VTeXversion<650 %
14882 \catcode'\'=12 %
14883 \gdef\hv@pdf@char#1#2#3{%
14884 \char
14885 \ifcase'#1#2#3 %
14886 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14887 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14888 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14889 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14890 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14891 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14892 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14893 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14894 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14895 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14896 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14897 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14898 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14899 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14900 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14901 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14902 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14903 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14904 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14905 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14906 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14907 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14908 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14909 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14910 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14911 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14912 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14913 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14914 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14915 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14916 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14917 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14918 \fi
14919 }%
14920 \else
14921 \gdef\hv@pdf@char{\char'}%
14922 \fi
14923 \endgroup

```

\@@BOOKMARK

```

14924 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14925 \expandafter\edef\csname @count@#3\endcsname{%
14926 \the\@serial@counter
14927 }%
14928 \edef\@mycount{\the\@serial@counter}%
14929 \Hy@StepCount\@serial@counter
14930 \edef\@parcount{%
14931 \expandafter\ifx\csname @count@#5\endcsname\relax
14932 0%
14933 \else
14934 \csname @count@#5\endcsname
14935 \fi
14936 }%

```

```

14937 \immediate\special{%
14938 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14939 s=\ifx#2-c\else o\fi,t=#4%
14940 }%
14941 }%

```

\ReadBookmarks

```

14942 \def\ReadBookmarks{%
14943 \begingroup
14944 \def\0{\hv@pdf@char 0}%
14945 \def\1{\hv@pdf@char 1}%
14946 \def\2{\hv@pdf@char 2}%
14947 \def\3{\hv@pdf@char 3}%
14948 \def\{()%
14949 \def\)}{}%
14950 \def\do##1{%
14951 \ifnum\catcode'##1=\active
14952 \@makeother##1%
14953 \else
14954 \ifnum\catcode'##1=6 %
14955 \@makeother##1%
14956 \fi
14957 \fi
14958 }%
14959 \dospecials
14960 \Hy@safe@activetrue
14961 \InputIfFileExists{jobname.out}{\relax}%
14962 \endgroup
14963 \ifx\WriteBookmarks\relax
14964 \else
14965 \if@files
14966 \newwrite\@outlinefile
14967 \Hy@OutlineRerunCheck
14968 \immediate\openout\@outlinefile=jobname.out\relax
14969 \ifHy@typexml
14970 \immediate\write\@outlinefile{<relaxxml>\relax}%
14971 \fi
14972 \fi
14973 \fi
14974 }

14975 </vtex>
14976 (*!vtex)
14977 \def\ReadBookmarks{%
14978 \pdf@ifdraftmode{}{}%
14979 \begingroup
14980 \def\do##1{%
14981 \ifnum\catcode'##1=\active
14982 \@makeother##1%
14983 \else
14984 \ifnum\catcode'##1=6 %
14985 \@makeother##1%
14986 \fi
14987 \fi
14988 }%
14989 \dospecials
14990 \Hy@safe@activetrue

```

```

14991 \escapechar='\\%
14992 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14993   \calc@bm@number{##5}%
14994 }%
14995 \InputIfFileExists{\jobname.out}{-}{-}%
14996 \ifx\WriteBookmarks\relax
14997   \global\let\WriteBookmarks\relax
14998 \fi
14999 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15000   \def\Hy@temp{##4}%
15001 \<*pdfTeX>
15002   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15003   \Hy@OutlineName{}\Hy@pstringName{%
15004     ##2\check@bm@number{##3}%
15005   }%
15006   \expandafter\strip@prefix\meaning\Hy@temp
15007 }%
15008 \</pdfTeX>
15009 \<*pdfmark>
15010   \pdfmark{%
15011     pdfmark=/OUT,%
15012     Count={##2\check@bm@number{##3}},%
15013     Dest={##3},%
15014     Title=\expandafter\strip@prefix\meaning\Hy@temp
15015   }%
15016 \</pdfmark>
15017 \<*dvipdfm|xetex>
15018   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15019   \@pdfm@mark{%
15020     outline \ifHy@DvipdfmxOutlineOpen
15021       [%
15022         \ifnum##21>\z@
15023         \else
15024           -%
15025         \fi
15026       ] %
15027     \fi
15028     ##1<<%
15029     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15030     /A<<%
15031     /S/GoTo%
15032     /D(\Hy@pstringName)%
15033     >>%
15034     >>%
15035   }%
15036 \</dvipdfm|xetex>
15037 }%
15038 \begingroup
15039   \def\WriteBookmarks{0}%
15040   \InputIfFileExists{\jobname.out}{-}{-}%
15041 \endgroup
15042 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15043 \endgroup
15044 }%
15045 \ifx\WriteBookmarks\relax
15046 \else
15047   \if@filesW

```

```

15048 \newwrite\@outlinefile
15049 \Hy@OutlineRerunCheck
15050 \immediate\openout\@outlinefile=\jobname.out\relax
15051 \ifHy@typexml
15052 \immediate\write\@outlinefile{<relaxxml>\relax}%
15053 \fi
15054 \fi
15055 \fi
15056 }
15057 <*/pdfTex>
15058 \def\Hy@OutlineName#1#2#3#4{%
15059 \pdfoutline goto name{#2}count#3{#4}%
15060 }
15061 </pdfTex>
15062 \def\check@bm@number#1{%
15063 \expandafter\ifx\csname B_#1\endcsname\relax
15064 0%
15065 \else
15066 \csname B_#1\endcsname
15067 \fi
15068 }
15069 \def\calc@bm@number#1{%
15070 \@tempcnta=\check@bm@number{#1}\relax
15071 \advance\@tempcnta by 1 %
15072 \expandafter\xdef\csname B_#1\endcsname{the\@tempcnta}%
15073 }
15074 </!vTex>

15075 \ifHy@implicit
15076 \else
15077 \expandafter\endinput
15078 \fi

15079 </outlines>
15080 <*outlines | hypertex>

15081 \newlength\Hy@SectionHShift
15082 \def\Hy@SectionAnchorHref#1{%
15083 \ifx\protect\@typeset@protect
15084 \Hy@@@SectionAnchor{#1}%
15085 \fi
15086 }
15087 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
15088 \leavevmode
15089 \hbox to 0pt{%
15090 \kern-\Hy@SectionHShift
15091 \Hy@raisedlink{%
15092 \hyper@anchorstart{#1}\hyper@anchorend
15093 }%
15094 \hss
15095 }%
15096 }
15097 \let\H@old@ssect\@ssect
15098 \def\@ssect#1#2#3#4#5{%
15099 \Hy@MakeCurrentHrefAuto{section*}%
15100 \setlength{\Hy@SectionHShift}{#1}%
15101 \begingroup
15102 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15103 \toks\tw@\expandafter{%

```



```

15104 \expandafter\Hy@sectionAnchorHref\expandafter{\@currentHref}%
15105 #5%
15106 }%
15107 \edef\x{\endgroup
15108 \the\toks@{\the\toks\tw@}}%
15109 }\x
15110 }
15111 \let\H@old@chapter\@chapter
15112 \def\@chapter#1{%
15113 \begingroup
15114 \let\@mkboth\@gobbletwo
15115 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15116 \Hy@raisedlink{%
15117 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15118 }%
15119 \endgroup
15120 \H@old@chapter{#1}%
15121 }

```

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:

```

15122 \ltx@ifundefined{@chapter}{-}{%
15123 \let\Hy@org@chapter\@chapter
15124 \def\@chapter{%
15125 \def\Hy@next{%
15126 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15127 \Hy@raisedlink{%
15128 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15129 }%
15130 }%
15131 \ifnum\c@secnumdepth>\m@ne
15132 \ltx@ifundefined{if@mainmatter}%
15133 \iftrue{ \csname if@mainmatter\endcsname}%
15134 \let\Hy@next\relax
15135 \fi
15136 \fi
15137 \Hy@next
15138 \Hy@org@chapter
15139 }%
15140 }

15141 \let\H@old@part\@part
15142 \begingroup\expandafter\expandafter\expandafter\endgroup
15143 \expandafter\ifx\csname chapter\endcsname\relax
15144 \let\Hy@secnum@part\z@
15145 \else
15146 \let\Hy@secnum@part\m@ne
15147 \fi
15148 \def\@part{%
15149 \ifnum\Hy@secnum@part>\c@secnumdepth
15150 \phantomsection
15151 \fi
15152 \H@old@part
15153 }

15154 \let\H@old@spart\@spart
15155 \def\@spart#1{%
15156 \Hy@MakeCurrentHrefAuto{part*}%

```

```

15157 \Hy@raisedlink{%
15158   \hyper@anchorstart{\@currentHref}\hyper@anchorend
15159 }%
15160 \H@old@spart{#1}%
15161 }
15162 \let\H@old@sect\@sect
15163 \def\@sect#1#2#3#4#5#6[#7]#8{%
15164   \ifnum #2>\c@secnumdepth
15165     \expandafter\@firstoftwo
15166   \else
15167     \expandafter\@secondoftwo
15168   \fi
15169 {%
15170   \Hy@MakeCurrentHrefAuto{section*}%
15171   \setlength{\Hy@SectionHShift}{#3}%
15172   \begingroup
15173     \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15174     \toks\tw@\expandafter{%
15175       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15176       #8%
15177     }%
15178     \edef\x{\endgroup
15179       \the\toks@\the\toks\tw@}%
15180     }\x
15181   }{%
15182     \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15183   }%
15184 }

15185 </outlines | hypertex>
15186 <*outlines>

15187 \expandafter\def\csname Parent-4\endcsname{}
15188 \expandafter\def\csname Parent-3\endcsname{}
15189 \expandafter\def\csname Parent-2\endcsname{}
15190 \expandafter\def\csname Parent-1\endcsname{}
15191 \expandafter\def\csname Parent0\endcsname{}
15192 \expandafter\def\csname Parent1\endcsname{}
15193 \expandafter\def\csname Parent2\endcsname{}
15194 \expandafter\def\csname Parent3\endcsname{}
15195 \expandafter\def\csname Parent4\endcsname{}

15196 </outlines>

```

50 Compatibility with koma-script classes

```
15197 <*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.

```

15198 \def\Hy@tempa{%
15199   \def\@addchap[##1]##2{%
15200     \typeout{##2}%
15201     \if@twoside
15202       \@mkboth{##1}{}%
15203     \else
15204       \@mkboth{}{##1}%

```

```

15205 \fi
15206 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15207 \addtocontents{lot}{\protect\addvspace{10\p@}}%
15208 \Hy@MakeCurrentHrefAuto{\Hy@chapapp}%
15209 \Hy@raisedlink{%
15210   \hyper@anchorstart{\@currentHref}\hyper@anchorend
15211 }%
15212 \if@twocolumn
15213   \@topnewpage[\@makeschapterhead{##2}]%
15214 \else
15215   \@makeschapterhead{##2}%
15216   \@afterheading
15217 \fi
15218 \addcontentsline{toc}{chapter}{##1}%
15219 }%
15220 }
15221 \@ifclassloaded{scrbook}{%
15222   \@ifclasslater{scrbook}{2001/01/01}{%
15223     \let\Hy@tempa\@empty
15224   }{%
15225 }%
15226   \@ifclassloaded{scrreprt}{%
15227     \@ifclasslater{scrreprt}{2001/01/01}{%
15228       \let\Hy@tempa\@empty
15229     }{%
15230 }%
15231     \let\Hy@tempa\@empty
15232   }%
15233 }%
15234 \Hy@tempa
15235 </outlines | hypertext>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15236 <*pd1enc>
15237 \DeclareFontEncoding{PD1}{}{}

Accents
15238 \DeclareTextAccent{'}{PD1}{\textasciigrave}
15239 \DeclareTextAccent{'}{PD1}{\textacute}
15240 \DeclareTextAccent{^}{PD1}{\textasciicircum}
15241 \DeclareTextAccent{~}{PD1}{\texttilde}
15242 \DeclareTextAccent{¨}{PD1}{\textasciidieresis}
15243 \DeclareTextAccent{r}{PD1}{\textring}
15244 \DeclareTextAccent{v}{PD1}{\textasciicaron}
15245 \DeclareTextAccent{.}{PD1}{\textdotaccent}
15246 \DeclareTextAccent{c}{PD1}{\textcedilla}
15247 \DeclareTextAccent{=}{PD1}{\textasciimacron}
15248 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
15249 \DeclareTextAccent{d}{PD1}{\textdotbelow}
15250 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
15251 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}

```

```

15252 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
15253 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15254 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15255 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15256 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15257 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15258 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15259 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15260 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15261 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15262 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
15263 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15264 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
15265 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15266 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15267 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15268 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15269 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15270 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15271 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15272 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15273 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15274 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}}{#1}
15275 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}}{#1}
15276 \DeclareTextCommand{\newtie}{PD1}[1]{%
15277 \TextSymbolUnavailable{\newtie{#1}}}{#1}%
15278 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15279 % U+0009 (CHARACTER TABULATION)
15280 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15281 % U+000A (LINE FEED)
15282 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15283 % U+000D (CARRIAGE RETURN)
15284 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15285 % U+02D8 BREVE; breve
15286 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15287 % U+02C7 CARON; caron
15288 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15289 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15290 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15291 % U+02D9 DOT ABOVE; dotaccent
15292 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15293 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15294 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15295 % U+02DB OGONEK; ogonek
15296 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15297 % U+02DA RING ABOVE; ring
15298 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15299 % U+02DC SMALL TILDE; ilde, *tilde
15300 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

15301 % U+0022 QUOTATION MARK; quotedbl

15302 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022

15303 % U+0023 NUMBER SIGN; numbersign
 15304 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15305 % U+0024 DOLLAR SIGN; dollar
 15306 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15307 % U+0025 PERCENT SIGN; percent
 15308 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15309 % U+0026 AMPERSAND; ampersand
 15310 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15311 % U+0028 LEFT PARENTHESIS; parenleft
 15312 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 15313 % U+0029 RIGHT PARENTHESIS; parenright
 15314 \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
 15315 % U+002E FULL STOP; period
 15316 \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
 15317 % U+003C LESS-THAN SIGN; less
 15318 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15319 % U+003E GREATER-THAN SIGN; greater
 15320 \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
 15321 % U+005C REVERSE SOLIDUS; backslash
 15322 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15323 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15324 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15325 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15326 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15327 % U+005F LOW LINE; underscore
 15328 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15329 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15330 % U+0060 GRAVE ACCENT; grave
 15331 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h

15332 % U+0069 LATIN SMALL LETTER I; i
 15333 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15334 % U+007B LEFT CURLY BRACKET; braceleft
 15335 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15336 % U+007C VERTICAL LINE; *bar, verticalbar
 15337 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15338 % U+007D RIGHT CURLY BRACKET; braceright
 15339 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15340 % U+007E TILDE; asciitilde
 15341 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15342 % U+2022 BULLET; bullet
 15343 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15344 % U+2020 DAGGER; dagger
 15345 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15346 % U+2021 DOUBLE DAGGER; daggerdbl; ddagger (LaTeX)
 15347 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15348 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15349 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15350 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15351 % U+2014 EM DASH; emdash
 15352 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15353 % U+2013 EN DASH; endash
 15354 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15355 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15356 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15357 % U+2044 FRACTION SLASH; fraction
 15358 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15359 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 15360 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 15361 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 15362 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15363 % U+2212 MINUS SIGN; minus
 15364 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15365 % U+2030 PER MILLE SIGN; perthousand
 15366 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15367 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15368 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15369 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15370 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15371 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15372 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15373 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15374 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15375 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15376 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15377 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15378 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15379 % U+2122 TRADE MARK SIGN; trademark
 15380 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15381 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15382 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01

15383 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15384 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15385 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15386 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15387 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15388 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15389 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15390 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15391 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15392 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 15393 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15394 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15395 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15396 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15397 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15398 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15399 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15400 % U+0153 LATIN SMALL LIGATURE OE; oe
 15401 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15402 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15403 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15404 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15405 \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.
 15406 % U+20AC EURO SIGN; *Euro, euro
 15407 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15408 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15409 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15410 % U+00A2 CENT SIGN; cent
 15411 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15412 % U+00A3 POUND SIGN; sterling
 15413 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15414 % U+00A4 CURRENCY SIGN; currency
 15415 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15416 % U+00A5 YEN SIGN; yen
 15417 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15418 % U+00A6 BROKEN BAR; brokenbar
 15419 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15420 % U+00A7 SECTION SIGN; section
 15421 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15422 % U+00A8 DIAERESIS; dieresis
 15423 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15424 % U+00A9 COPYRIGHT SIGN; copyright
 15425 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15426 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15427 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15428 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15429 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15430 % U+00AC NOT SIGN; logicalnot
 15431 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15432 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15433 % U+00AE REGISTERED SIGN; registered
 15434 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15435 % U+00AF MACRON; *macron, overscore

15436 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15437 % U+00B0 DEGREE SIGN; degree
15438 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15439 % U+00B1 PLUS-MINUS SIGN; plusminus
15440 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15441 % U+00B2 SUPERSCRIPT TWO; twosuperior
15442 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15443 % U+00B3 SUPERSCRIPT THREE; threesuperior
15444 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15445 % U+00B4 ACUTE ACCENT; acute
15446 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15447 % U+00B5 MICRO SIGN; mu, mu1
15448 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15449 % U+00B6 PILCROW SIGN; paragraph
15450 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15451 % U+00B7 MIDDLE DOT; middot, *periodcentered
15452 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15453 % U+00B8 CEDILLA; cedilla
15454 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15455 % U+00B9 SUPERSCRIPT ONE; onesuperior
15456 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15457 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15458 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15459 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15460 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15461 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15462 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15463 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15464 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15465 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15466 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15467 % U+00BF INVERTED QUESTION MARK; questiondown
15468 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15469 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15470 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15471 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15472 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15473 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15474 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15475 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15476 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15477 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15478 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15479 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15480 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15481 % U+00C6 LATIN CAPITAL LETTER AE; AE
15482 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15483 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15484 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15485 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15486 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15487 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15488 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15489 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15490 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15491 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis

15492 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
15493 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15494 \DeclareTextCompositeCommand{'}{PD1}{I}{\314}% U+00CC
15495 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15496 \DeclareTextCompositeCommand{'}{PD1}{I}{\315}% U+00CD
15497 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15498 \DeclareTextCompositeCommand{^}{PD1}{I}{\316}% U+00CE
15499 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15500 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
15501 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15502 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15503 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15504 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15505 \DeclareTextCompositeCommand{~}{PD1}{N}{\321}% U+00D1
15506 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15507 \DeclareTextCompositeCommand{'}{PD1}{O}{\322}% U+00D2
15508 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15509 \DeclareTextCompositeCommand{'}{PD1}{O}{\323}% U+00D3
15510 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15511 \DeclareTextCompositeCommand{^}{PD1}{O}{\324}% U+00D4
15512 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15513 \DeclareTextCompositeCommand{~}{PD1}{O}{\325}% U+00D5
15514 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15515 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
15516 % U+00D7 MULTIPLICATION SIGN; multiply
15517 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15518 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15519 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15520 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15521 \DeclareTextCompositeCommand{'}{PD1}{U}{\331}% U+00D9
15522 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15523 \DeclareTextCompositeCommand{'}{PD1}{U}{\332}% U+00DA
15524 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15525 \DeclareTextCompositeCommand{^}{PD1}{U}{\333}% U+00DB
15526 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15527 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
15528 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15529 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
15530 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15531 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15532 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15533 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15534 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15535 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15536 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
15537 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15538 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
15539 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15540 \DeclareTextCompositeCommand{^}{PD1}{a}{\342}% U+00E2
15541 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15542 \DeclareTextCompositeCommand{~}{PD1}{a}{\343}% U+00E3
15543 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15544 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
15545 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15546 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15547 % U+00E6 LATIN SMALL LETTER AE; ae
15548 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6

15549 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15550 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15551 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15552 \DeclareTextCompositeCommand{\' }{PD1}{e}{\350}% U+00E8
15553 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15554 \DeclareTextCompositeCommand{\' }{PD1}{e}{\351}% U+00E9
15555 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15556 \DeclareTextCompositeCommand{\^ }{PD1}{e}{\352}% U+00EA
15557 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15558 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15559 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15560 \DeclareTextCompositeCommand{\' }{PD1}{i}{\354}% U+00EC
15561 \DeclareTextCompositeCommand{\' }{PD1}{i}{\354}% U+00EC
15562 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15563 \DeclareTextCompositeCommand{\' }{PD1}{i}{\355}% U+00ED
15564 \DeclareTextCompositeCommand{\' }{PD1}{i}{\355}% U+00ED
15565 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15566 \DeclareTextCompositeCommand{\^ }{PD1}{i}{\356}% U+00EE
15567 \DeclareTextCompositeCommand{\^ }{PD1}{i}{\356}% U+00EE
15568 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15569 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15570 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15571 % U+00F0 LATIN SMALL LETTER ETH; eth
15572 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15573 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15574 \DeclareTextCompositeCommand{\~ }{PD1}{n}{\361}% U+00F1
15575 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15576 \DeclareTextCompositeCommand{\' }{PD1}{o}{\362}% U+00F2
15577 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15578 \DeclareTextCompositeCommand{\' }{PD1}{o}{\363}% U+00F3
15579 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15580 \DeclareTextCompositeCommand{\^ }{PD1}{o}{\364}% U+00F4
15581 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15582 \DeclareTextCompositeCommand{\~ }{PD1}{o}{\365}% U+00F5
15583 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15584 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15585 % U+00F7 DIVISION SIGN; divide
15586 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15587 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15588 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15589 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15590 \DeclareTextCompositeCommand{\' }{PD1}{u}{\371}% U+00F9
15591 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15592 \DeclareTextCompositeCommand{\' }{PD1}{u}{\372}% U+00FA
15593 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15594 \DeclareTextCompositeCommand{\^ }{PD1}{u}{\373}% U+00FB
15595 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15596 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15597 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15598 \DeclareTextCompositeCommand{\' }{PD1}{y}{\375}% U+00FD
15599 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15600 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15601 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15602 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15603 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15604 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.

```

15605 \DeclareTextCommand{\SS}{PD1}{SS}%
15606 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%
Aliases (german.sty)
15607 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15608 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15609 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15610 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15611 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15612 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15613 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15614 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%
Aliases (math names)
15615 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15616 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15617 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15618 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15619 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15620 \DeclareTextCommand{\textbeta}{PD1}{\ss}%
Polish aliases. PDF encoding does not have the characters, but it is useful to Poles
to have the plain letters regardless. Requested by Wojciech Myszka (W.Myszka@
immt.pwr.wroc.pl).
15621 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15622 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15623 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15624 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15625 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15626 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15627 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15628 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15629 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15630 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15631 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15632 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15633 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15634 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15635 \end{pd1enc}

```

51.2 PU encoding

```

15636 (*puenc)
15637 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

15638 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15639 \DeclareTextCommand{\`}{PU}[1]{\#1\83\000}% U+0300
15640 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15641 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
15642 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15643 \DeclareTextCommand{\^}{PU}[1]{\#1\83\002}% U+0302
15644 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15645 \DeclareTextCommand{\~}{PU}[1]{\#1\83\003}% U+0303
15646 % U+0304 COMBINING MACRON; macroncmb
15647 \DeclareTextCommand{\=}{PU}[1]{\#1\83\004}% U+0304
15648 % U+0306 COMBINING BREVE; brevecmb
15649 \DeclareTextCommand{\u}{PU}[1]{\#1\83\006}% U+0306
15650 \DeclareTextCommand{\U}{PU}[1]{\#1\83\006}% U+0306

```

15651 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 15652 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 15653 % U+0308 COMBINING DIAERESIS; dieresiscmb
 15654 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 15655 % U+030A COMBINING RING ABOVE; ringcmb
 15656 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 15657 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 15658 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 15659 % U+030C COMBINING CARON; caroncmb
 15660 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 15661 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 15662 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 15663 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 15664 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 15665 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
 15666 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 15667 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 15668 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
 laut (tipa)
 15669 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
 15670 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
 15671 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
 15672 % U+0327 COMBINING CEDILLA; cedillacmb
 15673 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 15674 % U+0328 COMBINING OGONEK; ogonekcmb
 15675 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 15676 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
 15677 % \textsubcircum (tipa)
 15678 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
 15679 % U+032E COMBINING BREVE BELOW; brevebelowcmb
 15680 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
 15681 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
 15682 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
 15683 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 15684 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 15685 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 15686 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 15687 % U+20DD COMBINING ENCLOSING CIRCLE
 15688 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

15689 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
 15690 \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.

15691 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}%
 15692 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
 15693 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciicircum}%
 15694 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
 15695 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
 15696 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
 15697 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
 15698 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
 15699 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
 15700 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
 15701 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
 15702 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%

15703 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15704 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15705 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
15706 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
15707 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15708 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
low}%
15709 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
15710 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
15711 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15712 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15713 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15714 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15715 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15716 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
15717 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
15718 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}%
15719 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15720 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
15721 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15722 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15723 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15724 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15725 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15726 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15727 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15728 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15729 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15730 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15731 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15732 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
15733 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
15734 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
15735 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15736 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
15737 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildebelow}%
15738 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15739 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15740 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15741 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15742 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15743 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
15744 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

15745 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15746 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15747 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'{#1}}%
15748 \DeclareTextCommand{\capitalacute}{PU}[1]{\\'{#1}}%
15749 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15750 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15751 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\">{#1}}%
15752 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15753 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15754 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15755 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15756 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15757 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%

15758 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
 15759 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

15760 % U+0009 (CHARACTER TABULATION)
 15761 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
 15762 % U+000A (LINE FEED)
 15763 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
 15764 % U+000D (CARRIAGE RETURN)
 15765 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
 \80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 15766 % U+0022 QUOTATION MARK; quotedbl
 15767 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
 15768 % U+0023 NUMBER SIGN; numbersign
 15769 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 15770 % U+0024 DOLLAR SIGN; dollar
 15771 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 15772 %* \textdollar -> \mathdollar
 15773 %* \textdollar -> \EyesDollar (marvosym)
 15774 % U+0025 PERCENT SIGN; percent
 15775 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 15776 % U+0026 AMPERSAND; ampersand
 15777 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 15778 %* \textampersand -> \binampersand (stmaryrd)
 15779 %* \textampersand -> \with (cml)
 15780 % U+0027 APOSTROPHE; quotesingle
 15781 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 15782 % U+0028 LEFT PARENTHESIS; parenleft
 15783 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 15784 % U+0029 RIGHT PARENTHESIS; parenright
 15785 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 15786 % U+002A ASTERISK; asterisk; (?)
 15787 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
 15788 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
 15789 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
 15790 % U+002C COMMA; comma; \MVComma (marvosym)
 15791 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
 15792 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
 15793 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
 15794 % U+002E FULL STOP; period; \MVPeriod (marvosym)
 15795 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
 15796 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
 15797 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
 15798 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
 15799 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
 15800 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
 15801 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 15802 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 15803 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 15804 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 15805 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 15806 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 15807 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
 15808 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
 15809 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035

15810 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 15811 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 15812 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 15813 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 15814 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 15815 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 15816 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 15817 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 15818 % U+003C LESS-THAN SIGN; less
 15819 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 15820 % U+003E GREATER-THAN SIGN; greater
 15821 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 15822 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 15823 \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
 15824 % U+005C REVERSE SOLIDUS; backslash
 15825 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 15826 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15827 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 15828 % U+005F LOW LINE; underscore
 15829 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 15830 %* \textunderscore -> \mathunderscore (LaTeX)
 15831 % U+0060 GRAVE ACCENT; grave
 15832 \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
 15833 % U+0069 LATIN SMALL LETTER I; i
 15834 \DeclareTextCompositeCommand{\.}{PU}{i}% \80\151 U+0069
 15835 \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
 15836 % U+007B LEFT CURLY BRACKET; braceleft
 15837 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 15838 % U+007C VERTICAL LINE; *bar, verticalbar
 15839 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 15840 %* \textbar -> \textvertline (tipa)
 15841 % U+007D RIGHT CURLY BRACKET; braceright
 15842 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 15843 % U+007E TILDE; asciitilde
 15844 \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
15845 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15846 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
15847 % U+00A2 CENT SIGN; cent
15848 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
15849 % U+00A3 POUND SIGN; sterling
15850 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
15851 %* \textsterling -> \mathsterling (LaTeX)
15852 %* \textsterling -> \pounds (LaTeX)
15853 % U+00A4 CURRENCY SIGN; currency
15854 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
15855 % U+00A5 YEN SIGN; yen
15856 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
15857 % U+00A6 BROKEN BAR; brokenbar
15858 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
15859 %* \textbrokenbar -> \brokenvert (wasysym)
15860 % U+00A7 SECTION SIGN; section
15861 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
15862 %* \textsection -> \mathsection (LaTeX)
15863 %* \textsection -> \S (LaTeX)
15864 % U+00A8 DIAERESIS; dieresis
15865 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15866 % U+00A9 COPYRIGHT SIGN; copyright
15867 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15868 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15869 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15870 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
15871 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15872 % U+00AC NOT SIGN; logicalnot
15873 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15874 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
15875 % U+00AE REGISTERED SIGN; registered
15876 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15877 % U+00AF MACRON; *macron, overscore
15878 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15879 % U+00B0 DEGREE SIGN; degree
15880 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15881 % U+00B1 PLUS-MINUS SIGN; plusminus
15882 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15883 % U+00B2 SUPERSCRIPT TWO; twosuperior
15884 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15885 % U+00B3 SUPERSCRIPT THREE; threesuperior
15886 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15887 % U+00B4 ACUTE ACCENT; acute
15888 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15889 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15890 % U+00B5 MICRO SIGN; mu, mul
15891 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15892 % U+00B6 PILCROW SIGN; paragraph
15893 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15894 %* \textparagraph -> \mathparagraph (LaTeX)
15895 % U+00B7 MIDDLE DOT; middot, *periodcentered
15896 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7

15897 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15898 %* \textperiodcentered -> \Squaredot (marvosym)
15899 % U+00B8 CEDILLA; cedilla
15900 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15901 % U+00B9 SUPERSCRIPT ONE; onesuperior
15902 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15903 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15904 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15905 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15906 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15907 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15908 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15909 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15910 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15911 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15912 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15913 % U+00BF INVERTED QUESTION MARK; questiondown
15914 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15915 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15916 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15917 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15918 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15919 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15920 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15921 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15922 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15923 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15924 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15925 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15926 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15927 % U+00C6 LATIN CAPITAL LETTER AE; AE
15928 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15929 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15930 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15931 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15932 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15933 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15934 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15935 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15936 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15937 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15938 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15939 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15940 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15941 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15942 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15943 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15944 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15945 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15946 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15947 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15948 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15949 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15950 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15951 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15952 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

15953 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15954 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15955 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15956 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
15957 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15958 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15959 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15960 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15961 % U+00D7 MULTIPLICATION SIGN; multiply
15962 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15963 %* \textmultiply -> \vartimes (stmaryrd)
15964 %* \textmultiply -> \MVMultiplication (marvosym)
15965 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15966 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15967 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15968 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
15969 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15970 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15971 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15972 \DeclareTextCompositeCommand{\~}{PU}{U}{\80\333}% U+00DB
15973 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15974 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15975 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15976 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15977 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15978 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15979 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15980 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15981 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15982 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15983 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
15984 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15985 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15986 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15987 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
15988 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15989 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15990 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15991 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15992 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15993 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15994 % U+00E6 LATIN SMALL LETTER AE; ae
15995 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15996 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15997 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15998 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15999 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
16000 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16001 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16002 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16003 \DeclareTextCompositeCommand{\~}{PU}{e}{\80\352}% U+00EA
16004 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16005 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16006 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16007 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16008 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16009 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute

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16010 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16011 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16012 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16013 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
16014 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
16015 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16016 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16017 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16018 % U+00F0 LATIN SMALL LETTER ETH; eth
16019 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16020 %* \dh -> \eth (wsuipa, phonetic)
16021 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16022 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16023 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16024 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
16025 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16026 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16027 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16028 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\364}% U+00F4
16029 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16030 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16031 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16032 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16033 % U+00F7 DIVISION SIGN; divide
16034 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16035 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16036 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16037 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16038 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
16039 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16040 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16041 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16042 \DeclareTextCompositeCommand{\~}{PU}{u}{\80\373}% U+00FB
16043 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16044 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16045 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16046 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16047 % U+00FE LATIN SMALL LETTER THORN; thorn;
16048 % \th, \thorn (wasysym), \textthorn (tipa)
16049 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16050 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16051 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16052 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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51.2.4 Latin Extended-A: U+0080 to U+017F

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16053 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16054 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16055 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
16056 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16057 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16058 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16059 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16060 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16061 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16062 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16063 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek

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16064 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16065 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16066 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16067 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16068 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16069 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16070 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16071 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16072 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16073 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16074 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16075 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16076 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16077 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16078 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16079 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16080 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16081 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16082 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16083 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16084 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16085 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16086 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16087 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16088 % \textcrd (tipa)
16089 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16090 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16091 %* \textcrd -> \crossd (wsuipa)
16092 % An alternate glyph with the stroke through the bowl:
16093 %* \textcrd -> \textbard (tipa)
16094 %* \textcrd -> \bard (wsuipa)
16095 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16096 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16097 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16098 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16099 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16100 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16101 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16102 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16103 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16104 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16105 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16106 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16107 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16108 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16109 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16110 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16111 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16112 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16113 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16114 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16115 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16116 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16117 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16118 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16119 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve

16120 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16121 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16122 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16123 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
16124 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16125 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16126 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16127 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
16128 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16129 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16130 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16131 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16132 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16133 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16134 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16135 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16136 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16137 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16138 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16139 %* \texthbar -> \textcrh (tipa)
16140 %* \texthbar -> \crossh (wsuipa)
16141 %* \texthbar -> \planck (phonetic)
16142 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16143 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16144 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16145 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16146 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16147 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16148 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16149 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16150 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16151 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16152 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16153 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16154 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16155 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16156 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16157 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16158 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16159 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16160 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16161 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16162 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16163 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16164 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16165 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16166 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16167 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16168 % U+0133 LATIN SMALL LIGATURE IJ; ij
16169 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16170 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16171 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16172 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16173 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16174 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135

16175 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
16176 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16177 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16178 \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`.

16179 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16180 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16181 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16182 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16183 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16184 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16185 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
16186 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16187 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16188 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16189 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16190 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16191 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16192 \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`.

16193 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
16194 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16195 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16196 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16197 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16198 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16199 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16200 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
16201 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16202 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16203 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16204 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16205 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
16206 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16207 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16208 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16209 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16210 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16211 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16212 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
16213 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
16214 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
16215 % U+014A LATIN CAPITAL LETTER ENG; Eng
16216 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
16217 % U+014B LATIN SMALL LETTER ENG; eng
16218 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
16219 %* \ng -> \eng (wsuipa)

16220 %* \ng -> \engma (phonetic)
 16221 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16222 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16223 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16224 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16225 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16226 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16227 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16228 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16229 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
 cute, Ohungarumlaut
 16230 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16231 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
 cute, ohungarumlaut
 16232 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16233 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16234 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16235 % U+0153 LATIN SMALL LIGATURE OE; oe
 16236 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16237 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16238 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16239 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16240 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16241 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
 cent
 16242 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16243 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16244 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16245 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16246 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16247 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16248 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16249 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16250 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16251 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16252 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16253 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16254 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16255 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16256 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16257 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16258 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16259 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16260 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16261 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16262 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16263 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16264 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16265 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
 cent
 16266 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 16267 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 16268 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 16269 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 16270 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 16271 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 16272 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165

16273 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 16274 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 16275 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 16276 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 16277 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 16278 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 16279 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 16280 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 16281 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 16282 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 16283 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 16284 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 16285 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 16286 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 16287 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16288 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16289 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16290 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16291 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16292 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16293 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Uddbl-
 cute, Uhungarumlaut
 16294 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16295 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; uddbl-
 cute, uhungarumlaut
 16296 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16297 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16298 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16299 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16300 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16301 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16302 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16303 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16304 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16305 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16306 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16307 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16308 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16309 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16310 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16311 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16312 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16313 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16314 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16315 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16316 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16317 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16318 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16319 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16320 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16321 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16322 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16323 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16324 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16325 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)

16326 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
16327 %* \textcrb -> \crossb (wsuipa)
16328 % An alternate glyph with the stroke through the bowl:
16329 %* \textcrb -> \textbarb (tipa)
16330 %* \textcrb -> \barb (wsuipa)
16331 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
16332 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
16333 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16334 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16335 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
16336 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16337 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
16338 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
16339 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16340 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16341 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16342 %* \textflorin -> \Florin (marvosym)
16343 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16344 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16345 %* \texthvlig -> \hv (wsuipa)
16346 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
16347 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16348 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16349 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16350 %* \texthtk -> \hausak (phonetic)
16351 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16352 % \textbarl (tipa), \barl (wsuipa)
16353 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16354 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16355 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16356 % \textcrlambda (tipa)
16357 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16358 %* \textcrlambda -> \crossnilambda (wsuipa)
16359 %* \textcrlambda -> \barlambd (phonetic)
16360 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16361 %* \textcrlambda -> \lambdash (txfonts/pxfonts)
16362 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;
16363 % \textnrleg (tipx)
16364 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16365 %* \textPUnrleg -> \textnrleg (tipx)
16366 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16367 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16368 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16369 % \textlhookt (tipa)
16370 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16371 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16372 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16373 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16374 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16375 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16376 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16377 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16378 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;

16379 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16380 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16381 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16382 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16383 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16384 % \textpipe (tipa)
16385 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16386 %* \textpipe -> \textpipevar (tipx)
16387 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16388 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16389 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16390 %* \textdoublepipe -> \textdoublepipevar (tipx)
16391 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16392 % clickalveolar; \textdoublebarpipe (tipa)
16393 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16394 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16395 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16396 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16397 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
16398 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16399 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16400 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16401 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
16402 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16403 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16404 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16405 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16406 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
16407 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16408 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16409 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16410 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
16411 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16412 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16413 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16414 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16415 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16416 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16417 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16418 %* \textgslash -> \textcrg (tipa)
16419 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16420 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16421 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcarón
16422 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16423 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16424 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16425 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcarón
16426 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16427 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16428 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16429 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16430 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16431 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16432 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16433 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0

16434 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16435 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16436 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16437 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16438 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16439 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
16440 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16441 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
16442 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16443 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16444 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16445 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16446 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16447 % *Oslashacute, Ostrokeacut
16448 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16449 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16450 % *oslashacute, ostrokeacute
16451 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16452 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16453 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16454 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16455 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16456 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16457 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16458 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16459 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16460 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16461 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16462 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
16463 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16464 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16465 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16466 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16467 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16468 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16469 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; iinverted-
breve
16470 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16471 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16472 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16473 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16474 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16475 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16476 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16477 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16478 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16479 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16480 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16481 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16482 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16483 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16484 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave

16485 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16486 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16487 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16488 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16489 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16490 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16491 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16492 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
16493 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
16494 % U+021E LATIN CAPITAL LETTER H WITH CARON
16495 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
16496 % U+021F LATIN SMALL LETTER H WITH CARON
16497 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
16498 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
16499 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
16500 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
16501 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
16502 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
16503 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
16504 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
16505 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
16506 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
16507 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
16508 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
16509 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
16510 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
16511 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
16512 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
16513 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
16514 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
16515 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
16516 % U+0233 LATIN SMALL LETTER Y WITH MACRON
16517 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
16518 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
16519 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
16520 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
16521 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
16522 % U+0237 LATIN SMALL LETTER DOTLESS J
16523 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
16524 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
16525 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
16526 %* \textPUdblig -> \textdblig (tipx)
16527 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
16528 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
16529 %* \textPUqplig -> \textqplig (tipx)
16530 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
16531 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
16532 %* \textslashc -> \textcentoldstyle (textcomp)
16533 % With bar instead of stroke:
16534 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16535 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
16536 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
16537 %* \textturna -> \inva (wasysym)

16538 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16539 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16540 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16541 %* \textscripta -> \vara (phonetic)
 16542 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16543 % \textturnscripta (tipa)
 16544 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16545 %* \textturnscripta -> \invscripta (wsuipa)
 16546 %* \textturnscripta -> \rotvara (phonetic)
 16547 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16548 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16549 %* \texthtb -> \hookb (wsuipa)
 16550 %* \texthtb -> \hausab (phonetic)
 16551 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16552 % \textopeno (tipa), \openo (wasysym)
 16553 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16554 %* \textopeno -> \varopeno (phonetic)
 16555 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16556 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16557 %* \textctc -> \curlyc (wsuipa)
 16558 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16559 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16560 %* \textrtaild -> \taild (wsuipa)
 16561 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16562 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16563 %* \texthtd -> \hookd (wsuipa)
 16564 %* \texthtd -> \hausad (phonetic)
 16565 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16566 % \textreve (tipa), \reve (wsuipa)
 16567 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16568 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16569 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16570 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16571 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16572 % \textrhookschwa (tipa)
 16573 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16574 %* \textrhookschwa -> \er (wsuipa)
 16575 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16576 % \niepsilon (wsuipa)
 16577 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16578 %* \textniepsilon -> \epsi (phonetic)
 16579 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16580 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16581 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16582 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16583 % \textrhookrevepsilon (tipa)
 16584 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
 16585 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
 16586 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16587 % \textcloserevepsilon (tipa)
 16588 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16589 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16590 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;

16591 % \textbardotlessj (tipa)
16592 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16593 %* \textbardotlessj -> \barj (phonetic)
16594 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16595 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16596 %* \texthtg -> \hookg (wsuipa)
16597 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16598 % \textscriptg (tipa), \scriptg (wsuipa)
16599 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16600 %* \textscriptg -> \varg (phonetic)
16601 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16602 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16603 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16604 % \ipagamma (wsuipa), \vod (phonetic)
16605 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16606 %* \textipagamma -> \vod (pnonetic)
16607 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16608 % \babygamma (wsuipa)
16609 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16610 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16611 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16612 %* \textturnh -> \invh (wsuipa)
16613 %* \textturnh -> \udesc (phonetic)
16614 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16615 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16616 %* \texthth -> \hookh (wsuipa)
16617 %* \texthth -> \voicedh (phonetic)
16618 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
16619 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16620 %* \texththeng -> \hookheng (wsuipa)
16621 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16622 % \textbari (tipa), \bari (wsuipa)
16623 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16624 %* \textbari -> \ibar (phonetic)
16625 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \nniota (wsuipa)
16626 \DeclareTextCommand{\textnniota}{PU}{\82\151}%* U+0269
16627 %* \textnniota -> \vari (phonetic)
16628 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16629 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16630 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16631 % \textltilde (tipa)
16632 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16633 %* \textltilde -> \tildel (wsuipa)
16634 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16635 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16636 %* \textbeltl -> \latfric (wsuipa)
16637 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16638 % \hookretroflex; \textrtaill (tipa)
16639 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16640 %* \textrtaill -> \taill (wsuipa)
16641 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16642 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16643 %* \textlyoghlig -> \lz (wsuipa)
16644 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16645 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16646 %* \textturnm -> \invm (wsuipa)

16647 %* \textturnm -> \rotm (phonetic)
 16648 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
 turned;
 16649 % \textturnmrleg (tipa)
 16650 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
 16651 %* \textturnmrleg -> \legm (wsuipa)
 16652 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
 16653 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
 16654 %* \textltailm -> \labdentalnas (wsuipa)
 16655 %* \textltailm -> \emgma (phonetic)
 16656 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
 tailn (tipa)
 16657 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
 16658 %* \textltailn -> \nj (wsuipa)
 16659 %* \textltailn -> \enya (phonetic)
 16660 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
 16661 % nhookretroflex; \textrtailn (tipa)
 16662 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
 16663 %* \textrtailn -> \tailn (wsuipa)
 16664 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
 16665 \DeclareTextCommand{\textscn}{PU}{\82\164}% U+0274
 16666 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
 16667 % LATIN CAPITAL LETTER BARRED O; obarred;
 16668 % \textbaro (tipa), \baro (wsuipa)
 16669 % But \baro from stmaryrd is different!
 16670 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
 16671 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscoelig (tipa)
 16672 \DeclareTextCommand{\textscoelig}{PU}{\82\166}% U+0276
 16673 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
 16674 % \textcloseomega (tipa)
 16675 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
 16676 %* \textcloseomega -> \closedniomega (wsuipa)
 16677 %* \textcloseomega -> \varomega (phonetic)
 16678 % U+0278 LATIN SMALL LETTER PHI; philatin; \nippi (wsuipa)
 16679 \DeclareTextCommand{\textnippi}{PU}{\82\170}% U+0278
 16680 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
 16681 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
 16682 %* \textturnr -> \invr (wsuipa)
 16683 %* \textturnr -> \rotr (phonetic)
 16684 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
 16685 % rlonglegturned; \textturnlongleg (tipa)
 16686 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
 16687 %* \textturnlongleg -> \invleg (wsuipa)
 16688 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
 16689 % \textturnrrtail (tipa)
 16690 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
 16691 %* \textturnrrtail -> \tailinvr (wsuipa)
 16692 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
 glegr (tipa)
 16693 \DeclareTextCommand{\textlongleg}{PU}{\82\174}% U+027C
 16694 %* \textlongleg -> \leg (wsuipa)
 16695 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
 16696 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
 16697 %* \textrtailr -> \tailr (wsuipa)
 16698 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
 16699 % \textfishhook (tipa)
 16700 \DeclareTextCommand{\textfishhook}{PU}{\82\176}% U+027E

16701 %* \textfishhookr -> \flapr (wsuipa)
 16702 %* \textfishhookr -> \flap (phonetic)
 16703 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
 16704 % \textlhtlongi (tipa)
 16705 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
 16706 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
 16707 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
 16708 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
 16709 % \textinvscr (tipa), \invscr (wsuipa)
 16710 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
 16711 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
 16712 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
 16713 %* \textrtails -> \tails (wsuipa)
 16714 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
 16715 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
 16716 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
 16717 % dotlessjstrokehook; \texthtbardotlessj (tipa)
 16718 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
 16719 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
 16720 % \textvibyi (tipa)
 16721 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
 16722 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
 16723 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
 16724 %* \textctesh -> \curlyesh (wsuipa)
 16725 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
 16726 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
 16727 %* \textturnt -> \clickt (wsuipa)
 16728 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
 16729 % \texttrtailt (tipa)
 16730 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
 16731 %* \texttrtailt -> \tailt (wsuipa)
 16732 % U+0289 LATIN SMALL LETTER U BAR; ubar;
 16733 % \textbaru (tipa), \baru (wsuipa)
 16734 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
 16735 %* \textbaru -> \ubar (phonetic)
 16736 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
 16737 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
 16738 %* \textniupsilon -> \rotOmega (phonetic)
 16739 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
 16740 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
 16741 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
 16742 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
 16743 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
 16744 %* \textturnv -> \invv (wsuipa)
 16745 %* \textturnv -> \pwedge (phonetic)
 16746 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
 16747 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
 16748 %* \textturnw -> \invw (wsuipa)
 16749 %* \textturnw -> \rotw (phonetic)
 16750 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
 16751 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
 16752 %* \textturny -> \invy (wsuipa)
 16753 %* \textturny -> \roty (phonetic)

16754 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
 16755 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
 16756 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
 16757 % \textrtailz (tipa)
 16758 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
 16759 %* \textrtailz -> \tailz (wsuipa)
 16760 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
 16761 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
 16762 %* \textctz -> \curlyz (wsuipa)
 16763 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
 16764 % \textyogh (tipa), \yogh (wsuipa)
 16765 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
 16766 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
 16767 % ezhcurl; \textctyogh (tipa)
 16768 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
 16769 %* \textctyogh -> \curlyyogh (wsuipa)
 16770 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
 16771 % \textglotstop (tipa), \glotstop (wsuipa)
 16772 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
 16773 %* \textglotstop -> \ejective (wsuipa)
 16774 %* \textglotstop -> \glottal (phonetic)
 16775 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
 16776 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
 16777 % \textrevglotstop (tipa), \revglotstop (wsuipa)
 16778 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
 16779 %* \textrevglotstop -> \reveject (wsuipa)
 16780 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
 16781 % \textinvglotstop (tipa), \invglotstop (wsuipa)
 16782 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
 16783 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
 16784 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
 16785 %* \textstretchc -> \clickc (wsuipa)
 16786 %* \textstretchc -> \textstretchcvar (tipx)
 16787 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
 16788 % \textbullseye (tipa)
 16789 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
 16790 %* \textbullseye -> \clickb (wsuipa)
 16791 %* \textbullseye -> \textObullseye (tipx)
 16792 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
 16793 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
 16794 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
 16795 % \textcloseepsilon (tipa)
 16796 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
 16797 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
 16798 % \texthtscg (tipa)
 16799 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
 16800 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
 16801 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 16802 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail; \textcdj (tipa)
 16803 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 16804 %* \textctj -> \textctjvar (tipx)
 16805 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
 16806 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
 16807 %* \textturnk -> \textturnsck (tipx)

16808 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
 16809 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
 16810 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 16811 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 16812 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-stroke;
 16813 % \textbarglotstop (tipa)
 16814 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 16815 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 16816 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokereversed;
 16817 % \textbarrevglotstop (tipa)
 16818 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 16819 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 16820 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 16821 %* \textdzlig -> \dz (wsupipa)
 16822 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyoghlig (tipa)
 16823 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16824 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16825 % \textdctzlig (tipa)
 16826 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16827 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16828 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16829 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
 16830 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
 16831 %* \texttshlig -> \tesh (wsuipa)
 16832 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16833 % \texttctclig (tipa)
 16834 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16835 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16836 % \textlhtlongy (tipa)
 16837 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16838 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16839 % \textvibyy (tipa)
 16840 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16841 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16842 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 16843 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16844 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16845 % \textraiseglotstop (tipa)
 16846 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 16847 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16848 % \textlptr (tipa)
 16849 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16850 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16851 % \textrptr (tipa)
 16852 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16853 % U+02C7 CARON; caron
 16854 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16855 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16856 % \textprimstress (tipa)
 16857 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 16858 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 16859 % \textsecstress (tipa)

16860 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 16861 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 16862 % \textlengthmark (tipa)
 16863 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 16864 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 16865 % \texthalflength (tipa)
 16866 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 16867 % U+02D8 BREVE; breve
 16868 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 16869 % U+02D9 DOT ABOVE; dotaccent
 16870 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 16871 % U+02DA RING ABOVE; ring
 16872 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 16873 % U+02DB OGONEK; ogonek
 16874 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 16875 % U+02DC SMALL TILDE; ilde, *tilde
 16876 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 16877 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 16878 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 16879 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 16880 % U+02F3 MODIFIER LETTER LOW RING
 16881 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 16882 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 16883 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 16884 % U+02F7 MODIFIER LETTER LOW TILDE
 16885 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 16886 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 16887 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 16888 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 16889 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

16890 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 16891 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 16892 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 16893 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 16894 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 16895 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 16896 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16897 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 16898 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 16899 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

16900 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 16901 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 16902 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 16903 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 16904 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 16905 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 16906 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 16907 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 16908 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 16909 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 16910 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos

16911 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
16912 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
16913 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
16914 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
16915 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
16916 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
16917 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
16918 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
16919 % iotadieresisistonos
16920 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
16921 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
16922 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
16923 % U+0392 GREEK CAPITAL LETTER BETA; Beta
16924 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
16925 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
16926 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
16927 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
16928 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
16929 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
16930 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
16931 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
16932 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
16933 % U+0397 GREEK CAPITAL LETTER ETA; Eta
16934 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
16935 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
16936 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
16937 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
16938 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
16939 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
16940 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
16941 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
16942 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
16943 % U+039C GREEK CAPITAL LETTER MU; Mu
16944 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
16945 % U+039D GREEK CAPITAL LETTER NU; Nu
16946 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
16947 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
16948 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
16949 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
16950 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16951 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16952 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16953 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16954 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16955 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16956 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
16957 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16958 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16959 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16960 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16961 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16962 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16963 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16964 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16965 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)

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16966 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16967 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16968 % \Omega (LaTeX)
16969 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16970 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16971 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16972 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
16973 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silondieresis
16974 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
16975 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
16976 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
16977 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilonos
16978 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
16979 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
16980 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
16981 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotonos
16982 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
16983 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
16984 % AND TONOS; upsilondieresisto
16985 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
16986 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
16987 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
16988 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
16989 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
16990 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
16991 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
16992 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
16993 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
16994 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
16995 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
16996 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
16997 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
16998 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
16999 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17000 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17001 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17002 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17003 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17004 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17005 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17006 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17007 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17008 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17009 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17010 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17011 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17012 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17013 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17014 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17015 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17016 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17017 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17018 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17019 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17020 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17021 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2

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17022 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17023 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17024 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17025 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17026 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17027 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17028 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17029 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17030 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17031 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17032 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17033 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17034 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17035 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17036 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17037 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17038 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
    silondieresis
17039 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17040 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17041 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17042 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17043 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17044 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17045 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17046 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17047 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
17048 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
17049 % U+03DB GREEK SMALL LETTER STIGMA
17050 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
17051 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17052 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17053 % U+03DD GREEK SMALL LETTER DIGAMMA
17054 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17055 %* \textdigammagreek -> \digamma (AmS)
17056 % U+03DE GREEK LETTER KOPPA; Koppagreek
17057 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17058 % U+03DF GREEK SMALL LETTER KOPPA
17059 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17060 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17061 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17062 % U+03E1 GREEK SMALL LETTER SAMPI
17063 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17064 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17065 % \backepsilon (AmS)
17066 \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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17067 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17068 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
17069 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
17070 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17071 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
17072 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17073 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402

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17074 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17075 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17076 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
17077 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17078 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17079 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17080 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17081 % Icyrillic, *afii10055
17082 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17083 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
17084 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17085 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17086 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17087 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17088 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17089 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17090 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17091 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17092 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17093 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17094 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17095 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17096 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17097 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17098 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17099 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17100 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17101 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17102 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17103 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17104 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17105 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17106 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17107 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17108 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17109 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17110 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17111 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17112 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17113 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17114 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17115 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17116 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17117 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17118 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17119 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17120 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17121 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17122 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17123 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17124 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17125 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17126 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17127 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17128 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17129 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17130 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031

17131 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17132 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17133 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17134 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17135 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17136 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17137 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17138 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17139 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17140 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17141 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17142 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17143 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17144 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17145 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17146 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17147 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17148 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17149 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17150 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17151 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17152 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17153 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17154 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17155 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17156 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17157 % Hardsigncyrillic, *afii10044
17158 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17159 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17160 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17161 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17162 % Softsigncyrillic, *afii10046
17163 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17164 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17165 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17166 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17167 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17168 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17169 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17170 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17171 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17172 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17173 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17174 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17175 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17176 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17177 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17178 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17179 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17180 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17181 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17182 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17183 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17184 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17185 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17186 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17187 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438

17188 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17189 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17190 \DeclareTextCompositeCommand{\U}{PU}{\cyr}{\84\071}% U+0439
17191 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17192 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17193 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17194 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
17195 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17196 \DeclareTextCommand{\cyr}{PU}{\84\074}% U+043C
17197 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17198 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17199 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17200 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17201 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17202 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17203 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17204 \DeclareTextCommand{\cyr}{PU}{\84\100}% U+0440
17205 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17206 \DeclareTextCommand{\cyr}{PU}{\84\101}% U+0441
17207 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17208 \DeclareTextCommand{\cyr}{PU}{\84\102}% U+0442
17209 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17210 \DeclareTextCommand{\cyr}{PU}{\84\103}% U+0443
17211 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17212 \DeclareTextCommand{\cyr}{PU}{\84\104}% U+0444
17213 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17214 \DeclareTextCommand{\cyr}{PU}{\84\105}% U+0445
17215 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17216 \DeclareTextCommand{\cyr}{PU}{\84\106}% U+0446
17217 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17218 \DeclareTextCommand{\cyr}{PU}{\84\107}% U+0447
17219 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17220 \DeclareTextCommand{\cyr}{PU}{\84\110}% U+0448
17221 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17222 \DeclareTextCommand{\cyr}{PU}{\84\111}% U+0449
17223 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17224 \DeclareTextCommand{\cyr}{PU}{\84\112}% U+044A
17225 %* \cyrhrdsn -> \hardsign (tipa)
17226 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17227 \DeclareTextCommand{\cyr}{PU}{\84\113}% U+044B
17228 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17229 \DeclareTextCommand{\cyr}{PU}{\84\114}% U+044C
17230 %* \cyrsoftsn -> \softsign (tipa)
17231 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17232 \DeclareTextCommand{\cyr}{PU}{\84\115}% U+044D
17233 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17234 \DeclareTextCommand{\cyr}{PU}{\84\116}% U+044E
17235 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17236 \DeclareTextCommand{\cyr}{PU}{\84\117}% U+044F
17237 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17238 \DeclareTextCompositeCommand{\'}{PU}{\cyr}{\84\120}% U+0450
17239 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17240 \DeclareTextCommand{\cyr}{PU}{\84\121}% U+0451
17241 \DeclareTextCompositeCommand{\"}{PU}{\cyr}{\84\121}% U+0451
17242 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17243 \DeclareTextCommand{\cyr}{PU}{\84\122}% U+0452

17244 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17245 \DeclareTextCompositeCommand{\'}{PU}{\cyr}{\84\123}% U+0453
17246 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17247 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17248 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17249 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17250 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17251 % *afii10103, icyrillic
17252 \DeclareTextCommand{\cyril}{PU}{\84\126}% U+0456
17253 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17254 \DeclareTextCommand{\cyril}{PU}{\84\127}% U+0457
17255 \DeclareTextCompositeCommand{\'}{PU}{\cyril}{\84\127}% U+0457
17256 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17257 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17258 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17259 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
17260 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17261 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17262 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17263 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17264 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17265 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17266 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17267 \DeclareTextCompositeCommand{\'}{PU}{\cyril}{\84\135}% U+045D
17268 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17269 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17270 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17271 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17272 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17273 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17274 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17275 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17276 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17277 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17278 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17279 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17280 \DeclareTextCommand{\cyrlyat}{PU}{\84\143}% U+0463
17281 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17282 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17283 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17284 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17285 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
17286 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17287 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
17288 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17289 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17290 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17291 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17292 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17293 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17294 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17295 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17296 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17297 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic

17298 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 17299 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-cyrillic
 17300 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17301 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17302 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17303 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17304 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17305 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17306 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17307 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17308 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17309 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afi10147
 17310 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17311 % U+0473 CYRILLIC SMALL LETTER FITA; *afi10195, fitacyrillic
 17312 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17313 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afi10148
 17314 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17315 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afi10196, izhitsacyrillic
 17316 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17317 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17318 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17319 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17320 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17321 % GRAVE ACCENT; izhitsadblgravecyrillic
 17322 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17323 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17324 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17325 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17326 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17327 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 17328 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17329 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17330 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17331 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 17332 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17333 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 17334 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17335 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17336 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17337 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17338 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17339 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17340 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17341 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17342 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17343 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17344 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-

acyrilliccmb
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE
\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
\84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
17345 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
17346 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
17347 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
17348 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
17349 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
17350 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
17351 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
17352 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
17353 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
17354 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
17355 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
17356 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
17357 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
cyrillic, *afii10050
17358 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
17359 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
upturncyrillic
17360 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
17361 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
cyrillic
17362 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
17363 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
17364 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
17365 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
17366 % Ghemiddlehookcyrillic
17367 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
17368 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
17369 % ghemiddlehookcyrillic
17370 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
17371 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
17372 % Zhedescendercyrillic
17373 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
17374 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
17375 % zhedescendercyrillic
17376 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
17377 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
dercyrillic
17378 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
17379 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
17380 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
cyrillic
17381 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
17382 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
17383 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
dercyrillic
17384 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
17385 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
dercyrillic
17386 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
17387 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
17388 % Kavertikalstrokecyrillic
17389 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
17390 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;

17391 % kavertikalstrokecyrillic
 17392 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17393 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17394 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17395 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17396 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 17397 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17398 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17399 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17400 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 17401 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 17402 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17403 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 17404 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17405 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17406 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17407 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17408 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17409 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 17410 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 17411 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 17412 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 17413 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 17414 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 17415 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 17416 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 17417 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
 dercyrillic
 17418 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 17419 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 17420 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
 cyrillic
 17421 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 17422 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
 17423 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
 dercyrillic
 17424 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 17425 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
 dercyrillic
 17426 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 17427 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 17428 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 17429 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 17430 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 17431 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic
 17432 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 17433 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
 traightstrokecyrillic
 17434 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 17435 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
 dercyrillic

17436 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17437 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
17438 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
17439 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17440 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
17441 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
17442 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
17443 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
17444 % Chedescendercyrillic
17445 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17446 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17447 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17448 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17449 % Cheverticalstrokecyrillic
17450 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17451 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17452 % cheverticalstrokecyrillic
17453 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17454 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17455 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17456 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17457 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17458 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17459 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17460 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17461 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
17462 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17463 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17464 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17465 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17466 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17467 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17468 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17469 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17470 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17471 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17472 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17473 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
17474 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
17475 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
17476 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
17477 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
17478 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
17479 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
17480 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
17481 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
17482 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
17483 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
17484 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
17485 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8

17486 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17487 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17488 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17489 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17490 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17491 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17492 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17493 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17494 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17495 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17496 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17497 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17498 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 17499 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
 17500 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17501 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
 17502 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17503 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17504 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17505 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17506 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevocyrillic
 17507 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17508 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevocyrillic
 17509 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17510 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17511 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17512 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17513 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17514 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17515 % Schwadieresiscyrillic
 17516 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17517 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17518 % schwadieresiscyrillic
 17519 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
 17520 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 17521 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
 17522 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 17523 \DeclareTextCompositeCommand{\"}{PU}{\cyrzh}{\84\335}% U+04DD
 17524 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 17525 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
 17526 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyril-
 lic
 17527 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
 17528 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 17529 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17530 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyril-
 lic
 17531 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 17532 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic

17533 \DeclareTextCompositeCommand{=} {PU}{\CYRI}{\84\342}% U+04E2
17534 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
17535 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\343}% U+04E3
17536 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17537 \DeclareTextCompositeCommand{=} {PU}{\CYRI}{\84\344}% U+04E4
17538 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17539 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\345}% U+04E5
17540 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17541 \DeclareTextCompositeCommand{=} {PU}{\CYRO}{\84\346}% U+04E6
17542 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
17543 \DeclareTextCompositeCommand{=} {PU}{\cyro}{\84\347}% U+04E7
17544 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17545 \DeclareTextCompositeCommand{\CYROTLD} {PU}{\84\350}% U+04E8
17546 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17547 \DeclareTextCommand{\cyrotld} {PU}{\84\351}% U+04E9
17548 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17549 % Obarreddieresiscyrillic
17550 \DeclareTextCompositeCommand{=} {PU}{\CYROTLD}{\84\352}% U+04EA
17551 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17552 % obarreddieresiscyrillic
17553 \DeclareTextCompositeCommand{=} {PU}{\cyrotld}{\84\353}% U+04EB
17554 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17555 \DeclareTextCompositeCommand{=} {PU}{\CYREREV}{\84\354}% U+04EC
17556 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17557 \DeclareTextCompositeCommand{=} {PU}{\cyreref}{\84\355}% U+04ED
17558 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17559 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
17560 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17561 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF
17562 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17563 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\360}% U+04F0
17564 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17565 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\361}% U+04F1
17566 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
garumlautcyrillic
17567 \DeclareTextCompositeCommand{\H} {PU}{\CYRU}{\84\362}% U+04F2
17568 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
garumlautcyrillic
17569 \DeclareTextCompositeCommand{\H} {PU}{\cyru}{\84\363}% U+04F3
17570 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
siscyrillic
17571 \DeclareTextCompositeCommand{=} {PU}{\CYRCH}{\84\364}% U+04F4
17572 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chediere-
siscyrillic
17573 \DeclareTextCompositeCommand{=} {PU}{\cyrch}{\84\365}% U+04F5
17574 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17575 \DeclareTextCommand{\CYRGDSC} {PU}{\84\366}% U+04F6
17576 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17577 \DeclareTextCommand{\cyrgdsc} {PU}{\84\367}% U+04F7
17578 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
17579 \DeclareTextCompositeCommand{=} {PU}{\CYRERY}{\84\370}% U+04F8
17580 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
17581 \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

17582 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK

17583 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC

17584 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK

17585 \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`.

17586 % U+05C3 HEBREW PUNCTUATION SOF PASUQ

17587 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3

17588 % U+05D0 HEBREW LETTER ALEF

17589 \DeclareTextCommand{\hebalet}{PU}{\85\320}% U+05D0

17590 % U+05D1 HEBREW LETTER BET

17591 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1

17592 % U+05D2 HEBREW LETTER GIMEL

17593 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2

17594 % U+05D3 HEBREW LETTER DALET

17595 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3

17596 % U+05D4 HEBREW LETTER HE

17597 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4

17598 % U+05D5 HEBREW LETTER VAV

17599 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5

17600 % U+05D6 HEBREW LETTER ZAYIN

17601 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6

17602 % U+05D7 HEBREW LETTER HET

17603 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7

17604 % U+05D8 HEBREW LETTER TET

17605 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8

17606 % U+05D9 HEBREW LETTER YOD

17607 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9

17608 % U+05DA HEBREW LETTER FINAL KAF

17609 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA

17610 % U+05DB HEBREW LETTER KAF

17611 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB

17612 % U+05DC HEBREW LETTER LAMED

17613 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC

17614 % U+05DD HEBREW LETTER FINAL MEM

17615 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD

17616 % U+05DE HEBREW LETTER MEM

17617 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE

17618 % U+05DF HEBREW LETTER FINAL NUN

17619 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF

17620 % U+05E0 HEBREW LETTER NUN

17621 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0

17622 % U+05E1 HEBREW LETTER SAMEKH

17623 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1

17624 % U+05E2 HEBREW LETTER AYIN

17625 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2

17626 % U+05E3 HEBREW LETTER FINAL PE

17627 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3

17628 % U+05E4 HEBREW LETTER PE
 17629 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17630 % U+05E5 HEBREW LETTER FINAL TSADI
 17631 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17632 % U+05E6 HEBREW LETTER TSADI
 17633 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17634 % U+05E7 HEBREW LETTER QOF
 17635 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17636 % U+05E8 HEBREW LETTER RESH
 17637 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17638 % U+05E9 HEBREW LETTER SHIN
 17639 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17640 %* \hebshin -> \hebsin (he8)
 17641 % U+05EA HEBREW LETTER TAV
 17642 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17643 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17644 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17645 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17646 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17647 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17648 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17649 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17650 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17651 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 17652 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 17653 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17654 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17655 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17656 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17657 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 17658 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 17659 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textsk (tipx)
 17660 \DeclareTextCommand{\textPUsk}{PU}{\9035\013}% U+1D0B
 17661 %* \textPUsk -> \textsk (tipx)
 17662 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 17663 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 17664 %* \textPUscm -> \textscm (tipx)
 17665 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 17666 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 17667 %* \textPUscp -> \textscp (tipx)
 17668 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17669 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17670 %* \textPUrevscr -> \textrevscr (tipx)
 17671 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 17672 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 17673 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17674 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 17675 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17676 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17677 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17678 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 17679 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V

17680 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 17681 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17682 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 17683 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17684 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 17685 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17686 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 17687 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17688 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 17689 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17690 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 17691 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 17692 % \barsci (wsuipa)
 17693 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 17694 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 17695 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 17696 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17697 % \barscu (wsuipa)
 17698 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17699 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 17700 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 17701 %* \textPURhooka -> \textrhooka (tipx)
 17702 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 17703 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17704 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 17705 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 17706 %* \textPURhooke -> \textrhooke (tipx)
 17707 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 17708 % \textrhookepsilon (tipx)
 17709 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 17710 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 17711 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 17712 % \textrhookopeno (tipx)
 17713 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 17714 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17715 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 17716 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 17717 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 17718 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 17719 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 17720 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 17721 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 17722 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 17723 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 17724 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 17725 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 17726 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 17727 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 17728 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 17729 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow

17730 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
17731 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
17732 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
17733 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
17734 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
17735 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
17736 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
17737 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
17738 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
17739 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17740 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
17741 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17742 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
17743 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17744 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17745 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17746 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17747 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
17748 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17749 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
17750 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17751 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17752 % Emacrongrave
17753 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17754 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17755 % emacrongrave
17756 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17757 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17758 % Emacronacute
17759 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17760 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17761 % emacronacute
17762 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17763 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17764 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17765 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17766 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17767 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17768 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17769 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17770 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17771 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17772 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17773 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17774 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17775 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17776 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
17777 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17778 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
17779 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17780 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17781 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17782 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23

17783 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17784 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17785 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17786 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17787 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17788 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
17789 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17790 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
17791 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17792 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17793 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17794 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17795 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17796 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17797 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17798 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17799 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17800 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17801 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17802 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17803 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17804 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17805 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17806 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17807 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17808 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17809 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17810 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17811 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17812 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17813 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17814 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17815 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17816 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17817 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17818 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17819 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17820 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17821 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17822 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17823 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17824 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17825 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17826 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17827 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17828 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17829 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17830 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17831 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17832 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17833 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17834 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17835 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17836 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17837 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow

17838 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17839 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17840 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17841 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17842 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17843 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17844 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17845 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17846 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17847 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17848 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17849 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17850 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17851 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17852 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17853 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17854 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17855 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17856 % Omacrongrave
17857 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17858 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17859 % omacrongrave
17860 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17861 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17862 % Omacronacute
17863 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17864 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17865 % omacronacute
17866 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17867 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17868 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17869 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17870 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17871 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17872 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17873 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17874 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17875 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17876 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17877 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17878 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17879 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17880 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17881 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17882 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17883 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17884 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17885 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17886 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17887 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17888 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17889 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17890 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17891 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17892 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62

17893 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 17894 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 17895 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 17896 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 17897 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 17898 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 17899 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 17900 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 17901 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 17902 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 17903 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 17904 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 17905 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 17906 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 17907 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 17908 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 17909 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 17910 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 17911 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 17912 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 17913 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 17914 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 17915 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 17916 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 17917 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 17918 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 17919 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 17920 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 17921 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 17922 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 17923 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 17924 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 17925 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 17926 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 17927 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 17928 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 17929 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 17930 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 17931 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 17932 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 17933 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 17934 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 17935 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 17936 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 17937 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 17938 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 17939 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 17940 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 17941 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 17942 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 17943 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent

17944 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17945 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17946 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17947 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17948 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17949 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17950 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17951 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17952 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17953 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17954 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17955 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17956 \DeclareTextCompositeCommand{¨}{PU}{X}{\9036\214}% U+1E8C
17957 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17958 \DeclareTextCompositeCommand{¨}{PU}{x}{\9036\215}% U+1E8D
17959 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17960 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17961 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17962 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17963 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17964 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
17965 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17966 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
17967 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17968 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17969 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17970 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17971 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17972 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17973 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17974 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17975 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17976 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17977 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17978 \DeclareTextCompositeCommand{¨}{PU}{t}{\9036\227}% U+1E97
17979 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17980 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17981 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17982 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17983 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
17984 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
17985 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17986 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17987 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17988 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17989 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17990 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17991 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17992 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17993 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17994 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}% U+1EBC
17995 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17996 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}% U+1EBD
17997 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
17998 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
17999 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow


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18000 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
18001 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
18002 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
18003 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
18004 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
18005 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
18006 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
18007 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
18008 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
18009 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
18010 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
18011 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
18012 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
18013 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
18014 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
18015 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
18016 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
18017 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
18018 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
18019 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
18020 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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51.2.16 General Punctuation: U+2000 to U+206F

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18021 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
18022 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
18023 % U+2013 EN DASH; endash
18024 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
18025 % U+2014 EM DASH; emdash
18026 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
18027 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
18028 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
18029 %* \textbardbl -> \textdoublevertline (tipa)
18030 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
18031 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
18032 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
18033 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
18034 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
18035 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
18036 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
18037 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
18038 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
18039 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
18040 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
18041 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
18042 % U+2020 DAGGER; dagger
18043 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
18044 %* \textdagger -> \dag (LaTeX)
18045 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
18046 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
18047 %* \textdaggerdbl -> \ddagger (LaTeX)
18048 %* \textdaggerdbl -> \ddag (LaTeX)
18049 % U+2022 BULLET; bullet
18050 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
18051 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
18052 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
18053 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
18054 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026

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18055 %* \textellipsis -> \mathellipsis
 18056 % U+2030 PER MILLE SIGN; perthousand
 18057 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18058 % U+2031 PER TEN THOUSAND SIGN
 18059 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18060 % U+2032 PRIME; minute; \prime (MnSymbol)
 18061 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18062 % U+2033 DOUBLE PRIME; \second (mathabx)
 18063 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18064 % U+2034 TRIPLE PRIME; \third (mathabx)
 18065 \DeclareTextCommand{\texttthird}{PU}{\9040\064}%* U+2034
 18066 % U+2035 REVERSED PRIME; \backprime (AmsS)
 18067 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18068 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 18069 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18070 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singright
 18071 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18072 % U+203B REFERENCE MARK; referencemark
 18073 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18074 % U+203D INTERROBANG
 18075 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18076 % U+2044 FRACTION SLASH; fraction
 18077 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18078 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18079 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18080 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18081 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18082 % U+2052 COMMERCIAL MINUS SIGN
 18083 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18084 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18085 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18086 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18087 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18088 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18089 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18090 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18091 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18092 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18093 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18094 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18095 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18096 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18097 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18098 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18099 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18100 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18101 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18102 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18103 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18104 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18105 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18106 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18107 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A

18108 % U+207B SUPERScript MINUS
18109 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
18110 % U+207C SUPERScript EQUALS SIGN; equalsuperior
18111 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
18112 % U+207D SUPERScript LEFT PARENTHESIS; parenleftsuperior
18113 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
18114 % U+207E SUPERScript RIGHT PARENTHESIS; parenrightsuperior
18115 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
18116 % U+207F SUPERScript LATIN SMALL LETTER N; nsuperior
18117 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
18118 % U+2080 SUBSCRIPT ZERO; zeroinferior
18119 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
18120 % U+2081 SUBSCRIPT ONE; oneinferior
18121 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
18122 % U+2082 SUBSCRIPT TWO; twoinferior
18123 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
18124 % U+2083 SUBSCRIPT THREE; threeinferior
18125 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
18126 % U+2084 SUBSCRIPT FOUR; fourinferior
18127 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
18128 % U+2085 SUBSCRIPT FIVE; fiveinferior
18129 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
18130 % U+2086 SUBSCRIPT SIX; sixinferior
18131 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
18132 % U+2087 SUBSCRIPT SEVEN; seveninferior
18133 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
18134 % U+2088 SUBSCRIPT EIGHT; eightinferior
18135 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
18136 % U+2089 SUBSCRIPT NINE; nineinferior
18137 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
18138 % U+208A SUBSCRIPT PLUS SIGN
18139 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
18140 % U+208B SUBSCRIPT MINUS
18141 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
18142 % U+208C SUBSCRIPT EQUALS SIGN
18143 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
18144 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
18145 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
18146 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
18147 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
18148 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
18149 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
18150 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
18151 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
18152 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
18153 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
18154 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
18155 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
18156 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
18157 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
18158 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
18159 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
18160 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
18161 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
18162 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
18163 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
18164 % U+2098 LATIN SUBSCRIPT SMALL LETTER M

18165 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18166 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18167 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18168 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18169 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18170 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18171 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18172 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18173 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18174 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18175 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18176 % U+20A4 LIRA SIGN; afii08941, *lira
 18177 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18178 % U+20A6 NAIRA SIGN
 18179 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18180 % U+20A7 PESETA SIGN; peseta
 18181 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18182 % U+20A9 WON SIGN; won
 18183 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18184 % U+20AB DONG SIGN; dong
 18185 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18186 % U+20AC EURO SIGN; *Euro, euro
 18187 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18188 %* \texteuro -> \EurDig (marvosym)
 18189 %* \texteuro -> \EURdig (marvosym)
 18190 %* \texteuro -> \EurHv (marvosym)
 18191 %* \texteuro -> \EURhv (marvosym)
 18192 %* \texteuro -> \EurCr (marvosym)
 18193 %* \texteuro -> \EURcr (marvosym)
 18194 %* \texteuro -> \EurTm (marvosym)
 18195 %* \texteuro -> \EURtm (marvosym)
 18196 %* \texteuro -> \Eur (marvosym)
 18197 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18198 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18199 %* \textDeleatur -> \Denarius (marvosym)
 18200 % U+20B1 PESO SIGN
 18201 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18202 % U+20B2 GUARANI SIGN
 18203 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18204 % U+2103 DEGREE CELSIUS; centigrade
 18205 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18206 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18207 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18208 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18209 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18210 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18211 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18212 % U+2116 NUMERO SIGN; *afii61352, numero
 18213 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18214 % U+2117 SOUND RECORDING COPYRIGHT
 18215 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18216 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);

18217 % weierstrass; \wp (LaTeX)
 18218 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18219 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18220 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18221 % U+211E PRESCRIPTION TAKE; prescription
 18222 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18223 % U+2120 SERVICE MARK
 18224 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18225 % U+2122 TRADE MARK SIGN; trademark
 18226 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18227 % U+2126 OHM SIGN; Ohm, Omega
 18228 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18229 % U+2127 INVERTED OHM SIGN
 18230 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18231 %* \textmho -> \agemO (wasysym)
 18232 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18233 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18234 % U+212B ANGSTROM SIGN; angstrom
 18235 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18236 % U+212E ESTIMATED SYMBOL; estimated
 18237 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18238 %* \textestimated -> \EstimatedSign (marvosym)
 18239 %* \textestimated -> \Ecommerce (marvosym)
 18240 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18241 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18242 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18243 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18244 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18245 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18246 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18247 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18248 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18249 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18250 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18251 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18252 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18253 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18254 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18255 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18256 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18257 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18258 % U+2150 VULGAR FRACTION ONE SEVENTH
 18259 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18260 % U+2151 VULGAR FRACTION ONE NINTH
 18261 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18262 % U+2152 VULGAR FRACTION ONE TENTH
 18263 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18264 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18265 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18266 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18267 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18268 % U+2155 VULGAR FRACTION ONE FIFTH
 18269 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18270 % U+2156 VULGAR FRACTION TWO FIFTHS
 18271 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156

18272 % U+2157 VULGAR FRACTION THREE FIFTHS
 18273 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18274 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18275 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18276 % U+2159 VULGAR FRACTION ONE SIXTH
 18277 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18278 % U+215A VULGAR FRACTION FIVE SIXTHS
 18279 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18280 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18281 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18282 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18283 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18284 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18285 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18286 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18287 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18288 % U+2184 LATIN SMALL LETTER REVERSED C
 18289 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18290 % U+2189 VULGAR FRACTION ZERO THIRDS
 18291 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18292 % U+2190 LEFTWARDS ARROW; arrowleft
 18293 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18294 % U+2191 UPWARDS ARROW; arrowup
 18295 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18296 % U+2192 RIGHTWARDS ARROW; arrowright
 18297 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18298 %* \textrightarrow -> \MVRightArrow (marvosym)
 18299 %* \textrightarrow -> \MVRightarrow (marvosym)
 18300 % U+2193 DOWNWARDS ARROW; arrowdown
 18301 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18302 %* \textdownarrow -> \MVArrowDown (marvosym)
 18303 %* \textdownarrow -> \Force (marvosym)
 18304 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18305 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18306 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18307 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18308 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18309 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18310 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18311 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18312 %* \textnearrow -> \textglobrise (tipa)
 18313 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18314 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18315 %* \textsearrow -> \textglobfall (tipa)
 18316 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 18317 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 18318 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
 18319 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
 18320 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
 18321 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
 18322 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
 18323 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
 18324 % \ntwoheadleftarrow (txfonts/pxfonts)
 18325 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
 18326 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)

18327 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18328 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18329 % \twoheadrightarrow (AmS)
18330 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18331 % \ntwoheadrightarrow (txfonts/pxfonts)
18332 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18333 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-Symbol)
18334 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18335 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18336 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18337 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18338 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18339 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18340 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18341 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18342 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18343 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18344 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18345 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18346 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18347 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18348 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18349 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrows (AmS)
18350 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\256}%* U+21AE
18351 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18352 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18353 %* \textlightning -> \Lightning (marvosym)
18354 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18355 % \dls (mathabx)
18356 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18357 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18358 % \curvearrowleft (AmS)
18359 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18360 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18361 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18362 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-barbup;
18363 % \leftharpoonup (LaTeX)
18364 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18365 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18366 % \leftharpoondown (LaTeX)
18367 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18368 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18369 % \upharpoonright (AmS)
18370 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18371 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18372 % \upharpoonleft (AmS)
18373 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18374 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-barbup
18375 % \rightharpoonup (LaTeX)
18376 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18377 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18378 % \rightharpoondown (LaTeX)
18379 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18380 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;

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18381 % \downharpoonright (AmS)
18382 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18383 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18384 % \downharpoonleft (AmS)
18385 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18386 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18387 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18388 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18389 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; arrowupleftofdown;
18390 % \updownarrows (MnSymbol)
18391 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18392 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleftoverright;
18393 % \leftrightarrows (AmS)
18394 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18395 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18396 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18397 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18398 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18399 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18400 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18401 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18402 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18403 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18404 % \leftrightharpoons (AmS);
18405 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18406 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18407 % \rightleftharpoons (LaTeX, AmS)
18408 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18409 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftdblstroke;
18410 % \nLeftarrow (AmS)
18411 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18412 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow (AmS)
18413 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18414 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightdblstroke;
18415 % \nRightarrow (AmS)
18416 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18417 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18418 % \Leftarrow (LaTeX)
18419 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18420 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18421 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18422 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18423 % \Rightarrow (LaTeX)
18424 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18425 % \textRightarrow -> \Conclusion (marvosym)
18426 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18427 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18428 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18429 % \Leftrightarrow (LaTeX)
18430 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18431 % \textLeftrightarrow -> \Equivalence (marvosym)

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18432 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
 18433 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
 18434 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
 18435 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
 18436 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
 18437 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
 18438 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
 18439 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
 18440 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
 18441 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
 18442 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
 18443 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
 18444 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
 18445 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
 18446 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
 18447 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
 18448 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
 18449 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
 18450 % U+21E0 LEFTWARDS DASHED ARROW; \dashleftarrow;
 18451 % \dashleftarrow (AmS)
 18452 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
 18453 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
 18454 % U+21E1 UPWARDS DASHED ARROW; \dashrightarrow;
 18455 % \dashrightarrow (AmS)
 18456 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
 18457 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
 18458 %* \textdasheduparrow -> \dasheduparrow (MnSymbol)
 18459 % U+21E2 RIGHTWARDS DASHED ARROW; \dashrightarrow;
 18460 % \dashrightarrow (AmS)
 18461 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
 18462 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
 18463 % U+21E3 DOWNWARDS DASHED ARROW; \dashrightarrow;
 18464 % \dashrightarrow (AmS)
 18465 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
 18466 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
 18467 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
 18468 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
 18469 % \downuparrows (MnSymbol)
 18470 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
 18471 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
 18472 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
 18473 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
 18474 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
 18475 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle (stmaryrd)
 18476 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

51.2.22 Mathematical Operators: U+2200 to U+22FF

18472 % U+2200 FOR ALL; forall; \forall (LaTeX)
 18473 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
 18474 % U+2201 COMPLEMENT; \complement (AmS)
 18475 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
 18476 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
 18477 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
 18478 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
 18479 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
 18480 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
 18481 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
 18482 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)

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18483 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18484 %* \textemptyset -> \varnothing (AmS)
18485 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18486 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18487 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18488 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18489 % U+2208 ELEMENT OF; element; \in (LaTeX)
18490 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18491 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18492 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18493 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18494 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18495 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18496 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18497 %* \textni -> \owns (mathabx)
18498 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18499 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18500 %* \textnotowner -> \notni (txfonts/pxfonts)
18501 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18502 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18503 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18504 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18505 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18506 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18507 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18508 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18509 % U+2212 MINUS SIGN; minus
18510 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18511 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18512 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18513 % U+2214 DOT PLUS; \dotplus (AmS)
18514 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18515 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18516 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18517 % \DividesNot (marvosym)
18518 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18519 % U+2216 SET MINUS; \setminus (LaTeX)
18520 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18521 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18522 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18523 % U+2218 RING OPERATOR; \circ (LaTeX)
18524 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18525 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18526 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18527 % U+221A SQUARE ROOT; radical
18528 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18529 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18530 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18531 %* \textpropto -> \varprop (wasysym)
18532 % U+221E INFINITY; infinity; \infty (LaTeX)
18533 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18534 % U+2220 ANGLE; angle; \angle (LaTeX)
18535 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18536 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18537 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18538 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18539 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222

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18540 %* \textsphericalangle -> \varangle (wasysym)
18541 %* \textsphericalangle -> \Anglesign (marvosym)
18542 %* \textsphericalangle -> \AngleSign (marvosym)
18543 % U+2223 DIVIDES; divides; \mid (LaTeX)
18544 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18545 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18546 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18547 %* \textnmid -> \notdivides (mathabx)
18548 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18549 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18550 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18551 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18552 %* \textnparallel -> nUpdownline (MnSymbol)
18553 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18554 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18555 % \owedge (stmaryrd)
18556 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18557 %* \textowedge -> \varowedge (stmaryrd)
18558 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18559 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18560 % \ovee (stmaryrd)
18561 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18562 %* \textovee -> \varovee (stmaryrd)
18563 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18564 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18565 % U+222A UNION; union; \cup (LaTeX)
18566 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18567 % U+222B INTEGRAL; integral; \int (LaTeX)
18568 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18569 %* \textint -> \varint (wasysym)
18570 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18571 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18572 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18573 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18574 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18575 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18576 %* \textoint -> \varoint (wasysym)
18577 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18578 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18579 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18580 % \ointclockwise (txfonts/pxfonts)
18581 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18582 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
    fonts/pxfonts)
18583 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18584 % U+2234 THEREFORE; therefore; \therefore (AmS)
18585 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18586 %* \texttherefore -> uptherefore (MnSymbol)
18587 % U+2235 BECAUSE; because; \because (AmS)
18588 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18589 %* \textbecause -> \downtherefore (MnSymbol)
18590 % U+2236 RATIO; \vdotdot (MnSymbol)
18591 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18592 % U+2237 PROPORTION; \squaredots (MnSymbol)
18593 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18594 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18595 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238

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18596 %* \textdotminus -> \textdotdiv (mathabx)
18597 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18598 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18599 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18600 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18601 %* \textsim -> \AC (wasysym)
18602 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18603 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18604 % \backsim (txfonts/pxfonts)
18605 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18606 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18607 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18608 %* \textwr -> \wreath (MnSymbol)
18609 % U+2241 NOT TILDE; \nsim (AmS)
18610 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18611 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18612 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18613 % \neqsim (MnSymbol)
18614 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18615 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18616 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18617 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18618 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18619 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18620 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18621 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18622 % \ncong (AmS)
18623 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18624 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18625 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18626 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18627 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18628 %* \textnapprox -> \thickapprox (txfonts/pxfonts)
18629 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18630 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18631 % \napproxeq (txfonts/pxfonts)
18632 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18633 % U+224B TRIPLE TILDE; \triple sim (MnSymbol)
18634 \DeclareTextCommand{\texttriple sim}{PU}{\9042\113}%* U+224B
18635 %* \texttriple sim -> \VHF (wasysym)
18636 % \triple sim (MnSymbol)
18637 \DeclareTextCommand{\textntriple sim}{PU}{\9042\113\83\070}%* U+224B U+0338
18638 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18639 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18640 % \backcong (MnSymbol)
18641 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18642 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18643 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18644 % \nasymp (txfonts/pxfonts)
18645 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18646 %* \textnasymp -> \notasym (mathabx)
18647 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18648 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18649 % \nBumpeq (txfonts/pxfonts)
18650 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18651 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)

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18652 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18653 % \nbumpeq (txfonts/pxfonts)
18654 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18655 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18656 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18657 % \ndoteq (MnSymbol)
18658 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18659 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18660 % \doteqdot (AmS)
18661 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18662 %* \textdoteqdot -> \Doteq (MnSymbol)
18663 % \nDoteq (MnSymbol)
18664 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18665 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18666 % \fallingdotseq (AmS)
18667 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18668 % \nfallingdotseq (MnSymbol)
18669 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18670 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
18671 % \risingdotseq (AmS)
18672 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
18673 % \nrisingdotseq (MnSymbol)
18674 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18675 % U+2254 COLON EQUALS; \colonequals (colonequals)
18676 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18677 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18678 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18679 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18680 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18681 % \neqcirc (MnSymbol)
18682 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18683 % U+2257 RING EQUAL TO; \circeq (AmS)
18684 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18685 % \ncirceq (MnSymbol)
18686 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18687 % U+2259 ESTIMATES; \hateq (MnSymbol)
18688 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18689 %* \texthateq -> \corresponds (mathabx)
18690 %* \texthateq -> \Corresponds (marvosym)
18691 % \nhateq (MnSymbol)
18692 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18693 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18694 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18695 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18696 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18697 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18698 %* \textneq -> \nequal (MnSymbol)
18699 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18700 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18701 %* \textequiv -> \Congruent (marvosym)
18702 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18703 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18704 %* \textnequiv -> \NotCongruent (marvosym)
18705 %* \textnequiv -> \notequiv (mathabx)
18706 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)

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18707 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18708 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
18709 %* \textleq -> \LessOrEqual (marvosym)
18710 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
18711 % \ge (LaTeX), \geq (LaTeX)
18712 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18713 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18714 %* \textgeq -> \LargerOrEqual (marvosym)
18715 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
18716 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18717 % \nleqq (txfonts/pxfonts)
18718 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18719 % U+2267 GREATER-THAN OVER EQUAL TO; greaterorequal; \geqq (AmS)
18720 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18721 % \ngeqq (txfonts/pxfonts)
18722 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18723 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18724 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18725 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18726 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18727 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18728 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18729 % \nll (txfonts/pxfonts)
18730 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18731 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18732 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18733 % \ngg (txfonts/pxfonts)
18734 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18735 % U+226C BETWEEN; \between (AmS)
18736 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18737 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18738 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18739 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18740 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18741 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18742 % \nleq (AmS)
18743 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18744 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18745 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18746 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18747 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18748 %* \textlessim -> \apprle (wasysym)
18749 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18750 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18751 %* \textgtrsim -> \apprge (wasysym)
18752 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
18753 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18754 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
18755 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18756 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18757 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18758 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18759 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277

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18760 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
 fonts/pxfonts)
 18761 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
 18762 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
 fonts/pxfonts)
 18763 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
 18764 % U+227A PRECEDES; precedes; \prec (LaTeX)
 18765 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
 18766 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
 18767 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
 18768 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
 18769 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
 18770 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
 18771 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
 18772 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
 18773 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
 18774 % \nprecsim (txfonts/pxfonts)
 18775 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
 18776 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
 18777 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
 18778 % \nsuccsim (txfonts/pxfonts)
 18779 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
 18780 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
 18781 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
 18782 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
 18783 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
 18784 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
 18785 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
 18786 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
 18787 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
 18788 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
 18789 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
 18790 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
 18791 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
 18792 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
 18793 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
 18794 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
 18795 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
 18796 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
 18797 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
 18798 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
 18799 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
 18800 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
 neq (AmS)
 18801 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
 18802 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
 neq (AmS)
 18803 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
 18804 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
 18805 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
 18806 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
 18807 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
 18808 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
 18809 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
 18810 % \nsqsubset (txfonts/pxfonts)
 18811 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
 18812 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)

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18813 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18814 % \nsqsupset (txfonts/pxfonts)
18815 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18816 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18817 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18818 % \nsqsubseteq (txfonts/pxfonts)
18819 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18820 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18821 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18822 % \nsqsupseteq (txfonts/pxfonts)
18823 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18824 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18825 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18826 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18827 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18828 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18829 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18830 %* \textoplus -> \varoplus (stmaryrd)
18831 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18832 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18833 %* \textominus -> \varominus (stmaryrd)
18834 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18835 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18836 %* \textotimes -> \varotimes (stmaryrd)
18837 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18838 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18839 %* \textoslash -> \varoslash (stmaryrd)
18840 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18841 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18842 %* \textodot -> \varodot (stmaryrd)
18843 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18844 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18845 %* \textcircledcirc -> \ocirc (mathabx)
18846 %* \textcircledcirc -> \varocircle (stmaryrd)
18847 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18848 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18849 %* \textcircledast -> \varoast (stmaryrd)
18850 %* \textcircledast -> \oasterisk (mathabx)
18851 % U+229D CIRCLED DASH; \circleddash (AmS)
18852 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18853 % U+229E SQUARED PLUS; \boxplus (AmS)
18854 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18855 % U+229F SQUARED MINUS; \boxminus (AmS)
18856 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18857 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18858 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18859 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18860 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18861 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18862 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18863 %* \textvdash -> \rightvdash (MnSymbol)
18864 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
18865 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18866 %* \textdashv -> \leftvdash (MnSymbol)
18867 % \ndashv (mathabx)
18868 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18869 %* \textndashv -> \nleftvdash (MnSymbol)

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18870 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
18871 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18872 %* \texttop -> \downvdash (MnSymbol)
18873 % \downvdash (MnSymbol)
18874 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18875 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18876 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18877 %* \textbot -> \upvdash (MnSymbol)
18878 % \upvdash (MnSymbol)
18879 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18880 %* \textnupvdash -> \nperp (MnSymbol)
18881 % U+22A8 TRUE; \vdash (AmS)
18882 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18883 %* \textvDash -> \models (LaTeX)
18884 %* \textvDash -> \rightmodels (MnSymbol)
18885 % U+22A9 FORCES; \Vdash (AmS)
18886 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18887 %* \textVdash -> \rightVdash (MnSymbol)
18888 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18889 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18890 % \nVdash (mathabx)
18891 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18892 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18893 % \VDash (mathabx)
18894 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18895 %* \textVDash -> \rightModels (MnSymbol)
18896 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18897 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18898 %* \textnvdash -> \nrightvdash (MnSymbol)
18899 % U+22AD NOT TRUE; \nvDash (AmS)
18900 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18901 %* \textnvDash -> \nrightmodels (MnSymbol)
18902 %* \textnvDash -> \nmodels (MnSymbol)
18903 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18904 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18905 %* \textnVdash -> \nrightVdash (MnSymbol)
18906 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18907 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18908 %* \textnVDash -> \nrightModels (MnSymbol)
18909 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18910 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18911 %* \textlhd -> \lessclosed (MnSymbol)
18912 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18913 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18914 %* \textrhd -> \gtrclosed (MnSymbol)
18915 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18916 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18917 %* \textunlhd -> \leqclosed (MnSymbol)
18918 %* \textunlhd -> \trianglelefteq (MnSymbol)
18919 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18920 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18921 %* \textunrhd -> \geqclosed (MnSymbol)
18922 %* \textunrhd -> \trianglerighteq (MnSymbol)
18923 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18924 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6

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18925 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18926 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18927 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18928 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18929 % U+22BB XOR; \veebar (AmS)
18930 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18931 % U+22BC NAND; \barwedge (mathabx)
18932 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18933 % U+22C6 STAR OPERATOR; \star (LaTeX)
18934 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18935 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18936 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18937 % U+22C8 BOWTIE; \bowtie (LaTeX)
18938 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18939 %* \textbowtie -> \Bowtie (wasysym)
18940 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18941 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18942 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18943 % \rtimes (AmS)
18944 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18945 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18946 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18947 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18948 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18949 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18950 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18951 % \nbacksimeq (txfonts/pxfonts)
18952 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18953 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18954 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18955 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18956 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18957 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18958 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18959 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18960 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18961 % \nSubset (txfonts/pxfonts)
18962 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18963 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18964 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18965 % \nSupset (txfonts/pxfonts)
18966 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18967 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18968 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18969 %* \textCap -> \doublecap (mathabx)
18970 % U+22D3 DOUBLE UNION; \Cup (AmS)
18971 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18972 %* \textCup -> \doublecup (mathabx)
18973 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18974 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18975 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18976 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18977 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18978 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18979 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18980 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18981 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)

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18982 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18983 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18984 % \lesseqgtr (AmS)
18985 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18986 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18987 % \gtreqless (AmS)
18988 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18989 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18990 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18991 % \ncurlyeqprec (mathabx)
18992 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18993 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18994 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18995 % \ncurlyeqsucc (mathabx)
18996 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18997 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18998 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18999 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19000 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19001 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19002 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19003 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19004 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19005 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19006 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19007 % \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19008 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19009 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19010 % \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19011 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19012 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19013 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19014 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19015 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19016 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19017 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19018 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19019 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19020 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19021 % \textntriangleleft -> \nlessclosed (MnSymbol)
19022 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)
19023 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19024 % \textntriangleright -> \ngtrclosed (MnSymbol)
19025 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19026 % \ntrianglelefteq (AmS)
19027 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19028 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19029 % \ntrianglerighteq (AmS)
19030 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19031 % \textntrianglerighteq -> \textngeqclosed
19032 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
19033 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19034 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)

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19035 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19036 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19037 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19038 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19039 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19040 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19041 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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51.2.23 Miscellaneous Technical: U+2300 to U+23FF

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19042 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19043 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19044 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
19045 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19046 % U+2311 SQUARE LOZENGE; \wasylounge (wasysym)
19047 \DeclareTextCommand{\textwasylounge}{PU}{\9043\021}%* U+2311
19048 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19049 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19050 % U+231A WATCH; \clock (wasysym)
19051 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19052 %* \textclock -> \Clocklogo (marvosym)
19053 %* \textclock -> \ClockLogo (marvosym)
19054 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19055 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19056 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19057 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19058 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19059 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19060 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19061 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19062 % U+2322 FROWN; \frown (LaTeX)
19063 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19064 % U+2323 SMILE; \smile (LaTeX)
19065 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19066 % U+2328 KEYBOARD; \Keyboard (marvosym)
19067 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19068 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \angle (LaTeX)
19069 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19070 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \angle (LaTeX)
19071 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
19072 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19073 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19074 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (mar-
      vosym)
19075 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19076 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
19077 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
19078 %* \textstmaryrdbaro -> \baro (stmaryrd)
19079 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
19080 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
19081 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
19082 % \notbackslash (wasysym)
19083 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
19084 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
      slash (mathabx)
19085 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
19086 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
19087 % \APLleftarrowbox (wasysym)

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19088 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19089 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19090 % \APLrightrightarrowbox (wasysym)
 19091 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19092 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
 19093 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19094 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19095 % \APLdownarrowbox (wasysym)
 19096 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19097 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19098 % \APLinput (wasysym)
 19099 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19100 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19101 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19102 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19103 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19104 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19105 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19106 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19107 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19108 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19109 % \ForwardToIndex (marvosym)
 19110 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19111 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19112 % \RewindToIndex (marvosym)
 19113 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19114 % U+2422 BLANK SYMBOL
 19115 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19116 % U+2423 OPEN BOX; blank
 19117 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19118 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19119 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19120 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19121 % U+2460 CIRCLED DIGIT ONE; onecircle
 19122 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19123 % U+2461 CIRCLED DIGIT TWO; twocircle
 19124 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19125 % U+2462 CIRCLED DIGIT THREE; threecircle
 19126 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19127 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19128 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19129 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19130 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19131 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19132 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19133 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
 19134 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19135 % U+2467 CIRCLED DIGIT EIGHT; eightcircle

19136 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
19137 % U+2468 CIRCLED DIGIT NINE; ninecircle
19138 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
19139 % U+2469 CIRCLED NUMBER TEN; tencircle
19140 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
19141 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
19142 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
19143 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
19144 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
19145 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
19146 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
19147 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
19148 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
19149 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
19150 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
19151 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
19152 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
19153 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
19154 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
19155 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
19156 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
19157 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
19158 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
19159 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
19160 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
19161 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
19162 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
19163 % \CircledA (marvosym)
19164 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
19165 %* \textCircledA -> \CleaningA
19166 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
19167 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
19168 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
19169 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
19170 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
19171 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
19172 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
19173 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
19174 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
19175 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
19176 % \CleaningF (marvosym)
19177 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
19178 % \CleaningFF (marvosym)
19179 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
19180 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
19181 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
19182 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
19183 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
19184 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
19185 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
19186 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
19187 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
19188 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
19189 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
19190 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
19191 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
19192 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle

19193 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
19194 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
19195 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
19196 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
19197 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
19198 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
19199 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
19200 % \CleaningP (marvosym)
19201 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
19202 % \CleaningPP (marvosym)
19203 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
19204 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
19205 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
19206 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
19207 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
19208 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
19209 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
19210 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
19211 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
19212 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
19213 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
19214 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
19215 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
19216 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
19217 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
19218 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
19219 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
19220 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
19221 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
19222 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
19223 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
19224 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
19225 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
19226 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
19227 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
19228 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
19229 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
19230 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
19231 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
19232 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
19233 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
19234 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
19235 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
19236 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
19237 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
19238 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
19239 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
19240 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
19241 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
19242 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
19243 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
19244 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
19245 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
19246 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
19247 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
19248 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
19249 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC

19250 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19251 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19252 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19253 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19254 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19255 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19256 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19257 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19258 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19259 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19260 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19261 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19262 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19263 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19264 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19265 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19266 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19267 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19268 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19269 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19270 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19271 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19272 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19273 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19274 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19275 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19276 % U+24EA CIRCLED DIGIT ZERO
 19277 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19278 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19279 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19280 %* \textCuttingLine -> \Kutline (marvosym)
 19281 %* \textCuttingLine -> \CutLine (marvosym)
 19282 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19283 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19284 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19285 %* \textUParrow -> \MoveUp (marvosym)
 19286 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19287 % \bigtriangleup (LaTeX)
 19288 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19289 %* \textbigtriangleup -> \APLup (wasysym)
 19290 %* \textbigtriangleup -> \Bleech (marvosym)
 19291 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19292 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19293 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19294 % whiterightpointingtriangle; \triangleright (LaTeX)
 19295 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19296 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19297 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19298 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19299 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19300 %* \textDOWNarrow -> \MoveDown (marvosym)


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19301 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
      angle;
19302 % \bigtriangledown (LaTeX)
19303 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19304 %* \textbigtriangledown -> \APLdown (wasysym)
19305 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19306 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19307 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
      striction);
19308 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19309 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19310 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19311 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19312 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19313 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19314 %* \textdiamond -> \Diamond (wasysym)
19315 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19316 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19317 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19318 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19319 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19320 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19321 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19322 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19323 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19324 % \boxbar (stmaryrd)
19325 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19326 % U+25EF LARGE CIRCLE; largecircle
19327 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19328 %* \textbigcircle -> \varbigcirc (stmaryrd)
19329 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19330 % U+2601 CLOUD; \Cloud (ifsym)
19331 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19332 % U+2605 BLACK STAR; \FiveStar (bbding)
19333 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19334 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19335 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19336 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19337 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19338 %* \textPhone -> \Telefon (marvosym)
19339 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19340 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19341 %* \textboxempty -> \Box (wasysym)
19342 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19343 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19344 %* \textCheckedbox -> \CheckedBox (marvosym)
19345 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19346 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19347 %* \textCrossedbox -> \XBox (wasysym)
19348 %* \textCrossedbox -> \CrossedBox (marvosym)
19349 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19350 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19351 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
19352 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19353 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)

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19354 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19355 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
19356 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19357 %* \textHandLeft -> \rightpointleft (fourier)
19358 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
19359 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19360 %* \textHandRight -> \leftpointright (fourier)
19361 %* \textHandRight -> \PointingHand (marvosym)
19362 %* \textHandRight -> \Pointinghand (marvosym)
19363 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19364 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19365 %* \textRadioactivity -> \Radiation (ifsym)
19366 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19367 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19368 % U+2625 ANKH; \Ankh (marvosym)
19369 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19370 % U+262F YIN YANG; \YinYang (marvosym)
19371 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19372 %* \textYinYang -> \Yinyang (marvosym)
19373 %* \textYinYang -> \YingYang (marvosym)
19374 %* \textYinYang -> \Yingyang (marvosym)
19375 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19376 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19377 %* \textfrownie -> \Frowny (marvosym)
19378 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19379 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19380 %* \textsmiley -> \Smiley (marvosym)
19381 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19382 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19383 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19384 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19385 %* \textsun -> \Sun (marvosym)
19386 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19387 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19388 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19389 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19390 % U+263F MERCURY; \mercury (wasysym)
19391 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19392 %* \textmercury -> \Mercury (marvosym)
19393 % U+2640 FEMALE SIGN; female; \female (wasysym)
19394 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19395 %* \textPUfemale -> \textfemale (tipx)
19396 %* \textPUfemale -> \female (wasysym)
19397 %* \textPUfemale -> \venus (wasysym)
19398 %* \textPUfemale -> \Venus (marvosym)
19399 %* \textPUfemale -> \Female (marvosym)
19400 % U+2641 EARTH; \earth (wasysym)
19401 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19402 %* \textearth -> \Earth (marvosym)
19403 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19404 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19405 %* \textmale -> \mars (wasysym)
19406 %* \textmale -> \Mars (marvosym)
19407 %* \textmale -> \Male (marvosym)
19408 % U+2643 JUPITER; \jupiter (wasysym)
19409 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19410 %* \textjupiter -> \Jupiter (marvosym)

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19411 % U+2644 SATURN; \saturn (wasysym)
19412 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19413 %* \textsaturn -> \Saturn (marvosym)
19414 % U+2645 URANUS; \uranus (wasysym)
19415 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19416 %* \texturanus -> \Uranus (marvosym)
19417 % U+2646 NEPTUNE; \neptune (wasysym)
19418 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19419 %* \textneptune -> \Neptune (marvosym)
19420 % U+2647 PLUTO; \pluto (wasysym)
19421 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19422 %* \textpluto -> \Pluto (marvosym)
19423 % U+2648 ARIES; \aries (wasysym)
19424 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19425 %* \textaries -> \Aries (marvosym)
19426 % U+2649 TAURUS; \taurus (wasysym)
19427 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19428 %* \texttaurus -> \Taurus (marvosym)
19429 % U+264A GEMINI; \gemini (wasysym)
19430 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19431 %* \textgemini -> \Gemini (marvosym)
19432 % U+264B CANCER; \cancer (wasysym)
19433 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19434 %* \textcancer -> \Cancer (marvosym)
19435 % U+264C LEO; \leo (wasysym)
19436 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19437 %* \textleo -> \Leo (marvosym)
19438 % U+264D VIRGO; \virgo (wasysym)
19439 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19440 %* \textvirgo -> \Virgo (marvosym)
19441 % U+264E LIBRA; \libra (wasysym)
19442 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19443 %* \textlibra -> \Libra (marvosym)
19444 % U+264F SCORPIO; \scorpio (wasysym)
19445 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19446 %* \textscorpio -> \Scorpio (marvosym)
19447 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19448 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19449 %* \textsagittarius -> \Sagittarius (marvosym)
19450 % U+2651 CAPRICORN; \capricornus (wasysym)
19451 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19452 %* \textcapricornus -> \Capricorn (marvosym)
19453 % U+2652 AQUARIUS; \aquarius (wasysym)
19454 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19455 %* \textaquarius -> \Aquarius (marvosym)
19456 % U+2653 PISCES; \pisces (wasysym)
19457 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19458 %* \textpisces -> \Pisces (marvosym)
19459 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19460 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19461 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19462 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19463 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19464 %* \textheartsuitwhite -> \Heart (marvosym)
19465 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19466 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19467 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662

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19468 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19469 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19470 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19471 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19472 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19473 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19474 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19475 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19476 % U+2666 BLACK DIAMOND SUIT; diamond
19477 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19478 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19479 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19480 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19481 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19482 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19483 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19484 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19485 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19486 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19487 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19488 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19489 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19490 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19491 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19492 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19493 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19494 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19495 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19496 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19497 %* \textrecycle -> \Recycling (marvosym)
19498 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19499 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19500 % U+2691 BLACK FLAG; \Flag (ifsym)
19501 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19502 %* \textFlag -> \VarFlag (ifsym)
19503 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19504 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19505 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19506 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19507 %* \textdsmilitary -> \textxswup (fourier)
19508 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19509 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19510 % U+2696 SCALES; \dsjuridical (dictsym)
19511 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
19512 % U+2697 ALEMBIC; \dschemical (dictsym)
19513 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
19514 % U+2698 FLOWER; \dsbiological (dictsym)
19515 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
19516 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
19517 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
19518 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19519 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
19520 % U+26A0 WARNING SIGN; \danger (fourier)
19521 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
19522 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19523 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2

19524 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19525 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19526 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19527 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19528 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19529 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19530 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19531 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19532 % U+26AD MARRIAGE SYMBOL
 19533 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19534 % U+26AE DIVORCE SYMBOL
 19535 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19536 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19537 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19538 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19539 % U+26B9 SEXTILE; \hexstar (wasysym)
 19540 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19541 % U+26BD SOCCER BALL; \Football (marvosym)
 19542 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19543 %* \textSoccerBall -> \Football (marvosym)
 19544 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19545 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19546 % U+26C6 RAIN; \Rain (ifsym)
 19547 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19548 % U+26D4 NO ENTRY; \noway (fourier)
 19549 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19550 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19551 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19552 % U+26FA TENT; \Tent (ifsym)
 19553 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19554 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbling)
 19555 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19556 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19557 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19558 % U+2702 BLACK SCISSORS; \ScissorRight (bbling)
 19559 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19560 %* \textScissorRight -> \RightScissors (marvosym)
 19561 %* \textScissorRight -> \Leftscissors (marvosym)
 19562 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbling)
 19563 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19564 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbling)
 19565 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19566 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbling)
 19567 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19568 % U+2707 TAPE DRIVE; \Tape (bbling)
 19569 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19570 % U+2708 AIRPLANE; \Plane (bbling)
 19571 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19572 % U+2709 ENVELOPE; \Envelope (bbling),
 19573 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19574 %* \textEnvelope -> \Letter (marvosym)
 19575 % U+270C VICTORY HAND; \Peace (bbling)
 19576 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19577 % U+270D WRITING HAND; \WritingHand (marvosym)

19578 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
19579 %* \textWritingHand -> \Writinghand (marvosym)
19580 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbding)
19581 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
19582 % U+270F PENCIL; \PencilRight (bbding)
19583 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
19584 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bbding)
19585 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
19586 % U+2711 WHITE NIB; \NibRight (bbding)
19587 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
19588 % U+2712 BLACK NIB; \NibSolidRight (bbding)
19589 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
19590 % U+2713 CHECK MARK; checkmark; \Checkmark (bbding)
19591 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
19592 %* \textCheckmark -> \checkmark (MnSymbol)
19593 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bbding)
19594 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
19595 % U+2715 MULTIPLICATION X; \XSolid (bbding)
19596 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
19597 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bbding)
19598 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
19599 % U+2717 BALLOT X; \XSolidBrush (bbding)
19600 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
19601 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bbding)
19602 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
19603 % U+271A HEAVY GREEK CROSS; \Plus (bbding)
19604 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
19605 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bbding)
19606 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
19607 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bbding)
19608 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
19609 % U+271D LATIN CROSS; \Cross (bbding)
19610 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
19611 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bbding)
19612 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
19613 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bbding)
19614 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
19615 % U+2720 MALTESE CROSS; \CrossMaltese (bbding)
19616 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
19617 % U+2721 STAR OF DAVID; \DavidStar (bbding)
19618 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
19619 %* \textDavidStar -> \davidstar (wasysym)
19620 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bbding)
19621 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
19622 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bbding)
19623 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
19624 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bbding)
19625 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
19626 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bbding)
19627 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
19628 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bbding)
19629 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
19630 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bbding)
19631 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
19632 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bbding)
19633 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A

19634 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19635 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19636 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19637 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19638 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19639 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19640 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19641 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19642 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19643 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19644 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19645 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19646 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19647 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19648 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19649 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19650 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19651 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19652 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19653 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19654 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19655 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19656 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19657 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19658 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19659 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19660 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19661 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19662 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19663 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19664 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19665 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19666 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19667 % \SixFlowerOpenCenter (bding)
 19668 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19669 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19670 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19671 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19672 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19673 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19674 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19675 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19676 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19677 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19678 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19679 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19680 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19681 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19682 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19683 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)

19684 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19685 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19686 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19687 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19688 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19689 % U+2747 SPARKLE; \Sparkle (bding)
 19690 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19691 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19692 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19693 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19694 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19695 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19696 % \EightFlowerPetalRemoved (bding)
 19697 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19698 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19699 % \EightAsterisk (bding)
 19700 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19701 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19702 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19703 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19704 % \SquareShadowBottomRight (bding)
 19705 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19706 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19707 % \SquareShadowTopRight (bding)
 19708 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19709 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19710 % \SquareCastShadowBottomRight (bding)
 19711 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19712 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19713 % \SquareCastShadowTopRight (bding)
 19714 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19715 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-
 ding)
 19716 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19717 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 19718 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19719 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 19720 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19721 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 19722 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19723 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19724 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19725 % \notperp (mathabx)
 19726 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19727 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19728 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19729 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19730 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19731 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19732 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19733 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19734 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19735 %* \textlbrackdbl -> \llbracket (stmaryrd)
 19736 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19737 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7

19738 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19739 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
19740 % \circlearrowleft (AmS)
19741 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
19742 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
19743 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
19744 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
19745 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
19746 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
19747 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
19748 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
19749 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
19750 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
19751 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
19752 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
19753 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
19754 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)
19755 \DeclareTextCommand{\textLonglefttrightarrow}{PU}{\9047\372}%* U+27FA
19756 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
19757 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
19758 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
from (stmaryrd)
19759 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
19760 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
sto (stmaryrd)
19761 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

19762 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
bol)
19763 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
19764 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
bol)
19765 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
19766 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
19767 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
19768 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
19769 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
19770 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
19771 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
19772 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
19773 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
19774 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
19775 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
19776 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
19777 % \rcurvearrowne (MnSymbol)
19778 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
19779 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
WARDS;
19780 % \lcurvearrowse (MnSymbol)
19781 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
19782 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
WARDS;
19783 % \lcurvearrowsw (MnSymbol)
19784 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936

19785 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 19786 % \rcurvearrowse (MnSymbol)
 19787 \DeclareTextCommand{\texttrcurvearrowse}{PU}{\9051\067}%* U+2937
 19788 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 19789 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 19790 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 19791 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 19792 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 19793 % \rcurvearrowdown (MnSymbol)
 19794 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
 19795 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
 19796 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
 19797 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)
 19798 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 19799 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 19800 % \rcurvearrowright (MnSymbol)
 19801 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 19802 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
 poon (mathabx)
 19803 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 19804 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 poon (mathabx)
 19805 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 19806 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 19807 % \updownharpoonrightleft (MnSymbol)
 19808 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 19809 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 19810 % \updownharpoonleftright (MnSymbol)
 19811 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 19812 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 19813 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 19814 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 19815 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 19816 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 19817 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 19818 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 19819 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 19820 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 19821 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19822 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 19823 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 19824 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 19825 % \leftbarharpoon (mathabx)
 19826 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 19827 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 19828 % LONG DASH; \barleftharpoon (mathabx)
 19829 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19830 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19831 % LONG DASH; \rightbarharpoon (mathabx)
 19832 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19833 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19834 % LONG DASH; \barrightharpoon (mathabx)

19835 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19836 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19837 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19838 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19839 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19840 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19841 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19842 % U+297F DOWN FISH TAIL
 19843 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19844 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19845 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 19846 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19847 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19848 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19849 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19850 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19851 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19852 %* \textobar -> \textvarobar (stmaryrd)
 19853 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19854 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19855 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19856 %* \textobslash -> \obackslash (mathabx)
 19857 %* \textobslash -> \varobslash (stmaryrd)
 19858 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19859 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19860 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19861 %* \textobot -> \odplus (ulsy)
 19862 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 19863 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19864 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19865 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19866 %* \textolessthan -> \varolessthan (stmaryrd)
 19867 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19868 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19869 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19870 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19871 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19872 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19873 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 19874 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19875 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19876 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19877 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19878 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19879 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19880 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19881 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19882 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19883 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19884 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19885 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

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19886 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
19887 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
19888 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
19889 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
19890 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
19891 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
19892 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
19893 %   pxfonts, wasysym)
19894 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
19895 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
19896 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
19897 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
19898 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
19899 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
19900 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
19901 %* \textminusdot -> \divdot (mathabx)
19902 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (math-
19903 %   abx)
19903 \DeclareTextCommand{\textdotimes}{PU}{\9052\060}%* U+2A30
19904 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
19905 %   \dtimes (mathdesign)
19906 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
19907 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
19908 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
19909 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
19910 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
19911 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
19912 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
19913 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
19914 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
19915 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
19916 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
19917 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19918 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19919 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19920 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19921 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19922 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19923 %* \textdoublevee -> \merge (stmaryrd)
19924 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19925 %   \doublebarwedge (AmS)
19926 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19927 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19928 %   \veedoublebar (mahtabx)
19929 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19930 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19931 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19932 % \neqdot (MnSymbol)
19933 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19934 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19935 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19936 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19937 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19938 % \nleqslant (txfonts/pxfonts)
19939 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19940 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)

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19941 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19942 % \ngeqslant (txfonts/pxfonts)
19943 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19944 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19945 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19946 % \nlessapprox (txfonts/pxfonts)
19947 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19948 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19949 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19950 % \ngtrapprox (txfonts/pxfonts)
19951 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19952 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19953 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19954 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19955 % \gneq (AmS)
19956 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19957 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
19958 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
19959 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
19960 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
19961 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN;
19962 % \lesseqgtr (AmS)
19963 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
19964 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN;
19965 % \gtreqless (AmS)
19966 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
19967 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
19968 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
19969 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
19970 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
19971 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
19972 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
19973 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
19974 \DeclareTextCommand{\textrightangle}{PU}{\9052\247}%* U+2AA7
19975 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
Symbol)
19976 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
19977 % \npreceq (txfonts/pxfonts)
19978 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
19979 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
Symbol)
19980 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
19981 % \nsucceq (txfonts/pxfonts)
19982 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
19983 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
neq (mathabx)
19984 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
19985 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
neq (mathabx)
19986 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
19987 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
19988 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
19989 % \npreceqq (txfonts/pxfonts)
19990 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
19991 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
19992 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
19993 % \nsucceqq (txfonts/pxfonts)

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19994 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 19995 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 19996 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 19997 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succeqq (txfonts/pxfonts)
 19998 \DeclareTextCommand{\textsucceqq}{PU}{\9052\266}%* U+2AB6
 19999 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20000 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20001 % \nprecapprox (txfonts/pxfonts)
 20002 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20003 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20004 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20005 % \nsuccapprox (txfonts/pxfonts)
 20006 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20007 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20008 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20009 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20010 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20011 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20012 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20013 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20014 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20015 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20016 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20017 % \nsupseteqq (mathabx)
 20018 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20019 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20020 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20021 %* \textdashV -> \leftVdash (MnSymbol)
 20022 % \ndashV (mathabx)
 20023 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20024 %* \textndashV -> \nleftVdash (MnSymbol)
 20025 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20026 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20027 %* \textDashv -> \leftmodels (MnSymbol)
 20028 % \nDashv (mathabx)
 20029 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20030 %* \textnDashv -> \nleftmodels (MnSymbol)
 20031 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20032 % \DashV (mathabx)
 20033 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20034 %* \textDashV -> \leftModels (MnSymbol)
 20035 % \nDashV (mathabx)
 20036 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20037 %* \textnDashV -> \nleftModels (MnSymbol)
 20038 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20039 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20040 % \ndownmodels (MnSymbol)
 20041 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20042 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20043 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20044 % \nupmodels (MnSymbol)
 20045 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20046 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20047 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20048 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;

20049 % \interleave (stmaryrd)
 20050 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20051 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20052 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20053 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20054 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20055 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20056 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20057 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20058 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20059 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20060 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20061 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20062 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20063 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20064 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20065 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20066 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20067 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20068 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20069 % \textdownstep (tipa)
 20070 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20071 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20072 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20073 %* \textPUheng -> \textheng (tipx)
 20074 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20075 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20076 %* \textPULhookfour -> \textlhookfour (tipx)
 20077 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20078 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20079 %* \textPUscf -> \textscf (tipx)
 20080 % U+A735 LATIN SMALL LETTER AO; \textao (tipx)
 20081 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20082 %* \textPUaolig -> \textao (tipx)
 20083 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20084 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20085 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20086 \DeclareTextCommand{\textcircumlowlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20087 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20088 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20089 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20090 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20091 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)

20092 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20093 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20094 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20095 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20096 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20097 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20098 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20099 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20100 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20101 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20102 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20103 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20104 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20105 %* \textfullnote -> \Ganz (harmony)
 20106 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20107 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20108 %* \texthalfnote -> \Halb (harmony)
 20109 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20110 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20111 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20112 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20113 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20114 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20115 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20116 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20117 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20118 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20119 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20120 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20121 % U+1F468 MAN; \ManFace (marvosym)
 20122 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20123 % U+1F469 WOMAN; \WomanFace (marvosym)
 20124 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20125 %* \textWomanFace -> \Womanface (marvosym)
 20126 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20127 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20128 %* \textFax -> \Faxmachine (marvosym)
 20129 % U+1F525 FIRE; \Fire (ifsym)
 20130 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20131 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20132 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20133 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20134 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20135 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20136 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20137 \DeclareTextCommand{\SS}{PU}{SS}%
 20138 % \textcopyleft (textcomp)
 20139 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20140 % \ccnc (ccllicenses)
 20141 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20142 % \ccnd (ccllicenses)


```

20143 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20144 % \ccsa (ccllicenses)
20145 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20146 % \Info (marvosym, china2e)
20147 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20148 % \CESign (marvosym)
20149 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20150 %* \textCESign -> \CEsign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20151 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20152 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20153 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20154 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20155 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20156 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20157 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20158 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%
Aliases (math names)
20159 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20160 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20161 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20162 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20163 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20164 \puenc)

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20165 \*puvnenc)
20166 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20167 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20168 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20169 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20170 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20171 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20172 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20173 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20174 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20175 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20176 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20177 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20178 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20179 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20180 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
20181 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20182 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20183 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20184 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20185 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}% U+1EB1
20186 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20187 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20188 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5

```

20189 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20190 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20191 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20192 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20193 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20194 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20195 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
 20196 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20197 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20198 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20199 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20200 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20201 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20202 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20203 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20204 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20205 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
 20206 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20207 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20208 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20209 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20210 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
 20211 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20212 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20213 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20214 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20215 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20216 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20217 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20218 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20219 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20220 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}% U+1EDD
 20221 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20222 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20223 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20224 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20225 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 20226 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20227 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20228 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20229 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20230 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}% U+1EEB
 20231 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20232 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20233 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20234 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20235 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 20236 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20237 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20238 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20239 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20240 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}% U+00C0
 20241 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20242 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20243 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20244 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20245 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}% U+1EB0

20246 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20247 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20248 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20249 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20250 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20251 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20252 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20253 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20254 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20255 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}% U+00C8
 20256 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20257 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20258 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20259 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20260 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20261 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20262 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20263 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20264 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20265 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}% U+00CC
 20266 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20267 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20268 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20269 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20270 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}% U+00D2
 20271 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20272 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20273 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20274 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20275 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20276 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20277 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20278 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20279 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20280 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}% U+1EDC
 20281 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20282 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20283 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20284 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20285 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
 20286 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20287 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20288 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20289 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20290 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}% U+1EEA
 20291 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
 20292 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
 20293 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
 20294 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 20295 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
 20296 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
 20297 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 20298 </puvnenc>

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```
20299 \DeclareTextCommand{*puarenc}
20300 % U+0621;afii57409;ARABIC LETTER HAMZA
20301 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20302 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20303 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20304 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20305 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20306 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20307 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20308 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20309 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20310 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20311 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20312 % U+0627;afii57415;ARABIC LETTER ALEF
20313 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20314 % U+0628;afii57416;ARABIC LETTER BEH
20315 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20316 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20317 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20318 % U+062A;afii57418;ARABIC LETTER TEH
20319 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20320 % U+062B;afii57419;ARABIC LETTER THEH
20321 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20322 % U+062C;afii57420;ARABIC LETTER JEEM
20323 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20324 % U+062D;afii57421;ARABIC LETTER HAH
20325 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20326 % U+062E;afii57422;ARABIC LETTER KHAH
20327 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20328 % U+062F;afii57423;ARABIC LETTER DAL
20329 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20330 % U+0630;afii57424;ARABIC LETTER THAL
20331 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20332 % U+0631;afii57425;ARABIC LETTER REH
20333 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20334 % U+0632;afii57426;ARABIC LETTER ZAIN
20335 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20336 % U+0633;afii57427;ARABIC LETTER SEEN
20337 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
20338 % U+0634;afii57428;ARABIC LETTER SHEEN
20339 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
20340 % U+0635;afii57429;ARABIC LETTER SAD
20341 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
20342 % U+0636;afii57430;ARABIC LETTER DAD
20343 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
20344 % U+0637;afii57431;ARABIC LETTER TAH
20345 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
20346 % U+0638;afii57432;ARABIC LETTER ZAH
20347 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
20348 % U+0639;afii57433;ARABIC LETTER AIN
20349 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
20350 % U+063A;afii57434;ARABIC LETTER GHAIN
20351 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
20352 % U+0640;afii57440;ARABIC TATWEEL
```

20353 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20354 % U+0641;afii57441;ARABIC LETTER FEH
 20355 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20356 % U+0642;afii57442;ARABIC LETTER QAF
 20357 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20358 % U+0643;afii57443;ARABIC LETTER KAF
 20359 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20360 % U+0644;afii57444;ARABIC LETTER LAM
 20361 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20362 % U+0645;afii57445;ARABIC LETTER MEEM
 20363 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20364 % U+0646;afii57446;ARABIC LETTER NOON
 20365 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20366 % U+0647;afii57470;ARABIC LETTER HEH
 20367 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20368 % U+0648;afii57448;ARABIC LETTER WAW
 20369 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20370 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20371 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20372 % U+064A;afii57450;ARABIC LETTER YEH
 20373 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20374 % U+064B;afii57451;ARABIC FATHATAN
 20375 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20376 % U+064C;afii57452;ARABIC DAMMATAN
 20377 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20378 % U+064D;afii57453;ARABIC KASRATAN
 20379 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20380 % U+064E;afii57454;ARABIC FATHA
 20381 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20382 % U+064F;afii57455;ARABIC DAMMA
 20383 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20384 % U+0650;afii57456;ARABIC KASRA
 20385 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20386 % U+0651;afii57457;ARABIC SHADDA
 20387 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20388 % U+0652;afii57458;ARABIC SUKUN
 20389 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20390 % U+067E ARABIC LETTER PEH; afii57506
 20391 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20392 % U+0686 ARABIC LETTER TCHEH; afii57507
 20393 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20394 % U+0698 ARABIC LETTER JEH; afii57508
 20395 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20396 % U+06A9 ARABIC LETTER KEHEH
 20397 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20398 % U+06AF ARABIC LETTER GAF; afii57509
 20399 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20400 % U+06CC ARABIC LETTER FARSI YEH
 20401 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20402 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20403 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20404 % U+200D ZERO WIDTH JOINER; afii301
 20405 \DeclareTextCommand{\noboundary}{PU}{\9040\015}% U+200D
 20406 </puarenc>

```

20407 \psdextra
20408 \Hy@VersionCheck{psdextra.def}
20409 \newcommand*{\psdmapshortnames}{%
20410   \let\MVPlus\textMVPlus
20411   \let\MVComma\textMVComma
20412   \let\MVMinus\textMVMinus
20413   \let\MVPeriod\textMVPeriod
20414   \let\MVDivision\textMVDivision
20415   \let\MVZero\textMVZero
20416   \let\MVOne\textMVOne
20417   \let\MVTwo\textMVTwo
20418   \let\MVThree\textMVThree
20419   \let\MVFour\textMVFour
20420   \let\MVFive\textMVFive
20421   \let\MVSix\textMVSix
20422   \let\MVSeven\textMVSeven
20423   \let\MVEight\textMVEight
20424   \let\MVNine\textMVNine
20425   \let\MVAt\textMVAt
20426   \let\copyright\textcopyright
20427   \let\twosuperior\texttwosuperior
20428   \let\threesuperior\textthreesuperior
20429   \let\onesuperior\textonesuperior
20430   \let\Thorn\textThorn
20431   \let\thorn\textthorn
20432   \let\hbar\texthbar
20433   \let\hausA\texthausA
20434   \let\hausD\texthausD
20435   \let\hausK\texthausK
20436   \let\barl\textbarl
20437   \let\inve\textinve
20438   \let\slashc\textslashc
20439   \let\scripta\textscripta
20440   \let\openo\textopeno
20441   \let\rtaild\textrtaild
20442   \let\reve\textreve
20443   \let\schwa\textschwa
20444   \let\niepsilon\textniepsilon
20445   \let\revepsilon\textrevepsilon
20446   \let\rhookrevepsilon\texthookrevepsilon
20447   \let\scriptg\textscriptg
20448   \let\scg\textscg
20449   \let\ipagamma\textipagamma
20450   \let\babygamma\textbabygamma
20451   \let\bari\textbari
20452   \let\niiota\textniiota
20453   \let\sci\textsci
20454   \let\scn\textscn
20455   \let\niphi\textniphi
20456   \let\longleg\textlongleg
20457   \let\scr\textscr
20458   \let\invscr\textinvscr
20459   \let\esh\textesh
20460   \let\baru\textbaru
20461   \let\niupsilon\textniupsilon
20462   \let\scriptv\textscriptv
20463   \let\turnv\textturnv

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20464 \let\turnw\textturnw
 20465 \let\turny\textturny
 20466 \let\scy\textscy
 20467 \let\yogh\textyogh
 20468 \let\glotstop\textglotstop
 20469 \let\revglotstop\textrevglotstop
 20470 \let\invglotstop\textinvglotstop
 20471 \let\Gamma\textGamma
 20472 \let\Delta\textDelta
 20473 \let\Theta\textTheta
 20474 \let\Lambda\textLambda
 20475 \let\Xi\textXi
 20476 \let\Pi\textPi
 20477 \let\Sigma\textSigma
 20478 \let\Upsilon\textUpsilon
 20479 \let\Phi\textPhi
 20480 \let\Psi\textPsi
 20481 \let\Omega\textOmega
 20482 \let\alpha\textalpha
 20483 \let\beta\textbeta
 20484 \let\gamma\textgamma
 20485 \let\delta\textdelta
 20486 \let\epsilon\textepsilon
 20487 \let\zeta\textzeta
 20488 \let\eta\texteta
 20489 \let\theta\texttheta
 20490 \let\iota\textiota
 20491 \let\kappa\textkappa
 20492 \let\lambda\textlambda
 20493 \let\mu\textmu
 20494 \let\nu\textnu
 20495 \let\xi\textxi
 20496 \let\pi\textpi
 20497 \let\rho\rho
 20498 \let\varsigma\textvarsigma
 20499 \let\sigma\textsigma
 20500 \let\tau\texttau
 20501 \let\upsilon\textupsilon
 20502 \let\phi\textphi
 20503 \let\chi\textchi
 20504 \let\psi\textpsi
 20505 \let\omega\textomega
 20506 \let\scd\textscd
 20507 \let\scu\textscu
 20508 \let\iinferior\textinferior
 20509 \let\rinferior\textinferior
 20510 \let\uiinferior\textinferior
 20511 \let\vinferior\textinferior
 20512 \let\betainferior\textbetainferior
 20513 \let\gammainferior\textgammainferior
 20514 \let\rhoinferior\textrhoinferior
 20515 \let\phiinferior\textphiinferior
 20516 \let\chiinferior\textchiinferior
 20517 \let\barsci\textbarsci
 20518 \let\barp\textbarp
 20519 \let\barscu\textbarscu
 20520 \let\htrtaild\texthtrtaild

20521 \let\dagger\textdagger
 20522 \let\bullet\textbullet
 20523 \let\hdotfor\textthdotfor
 20524 \let\prime\textprime
 20525 \let\second\textsecond
 20526 \let\third\textthird
 20527 \let\backprime\textbackprime
 20528 \let\lefttherefore\textlefttherefore
 20529 \let\fourth\textfourth
 20530 \let\diamonddots\textdiamonddots
 20531 \let\zerosuperior\textzerosuperior
 20532 \let\isuperior\textisuperior
 20533 \let\foursuperior\textfoursuperior
 20534 \let\fivesuperior\textfivesuperior
 20535 \let\sixsuperior\textsixsuperior
 20536 \let\sevensuperior\textsevensuperior
 20537 \let\eightsuperior\texteightsuperior
 20538 \let\ninesuperior\textninesuperior
 20539 \let\plussuperior\textplussuperior
 20540 \let\minussuperior\textminussuperior
 20541 \let>equalsuperior\textequalsuperior
 20542 \let\parenleftsuperior\textparenleftsuperior
 20543 \let\parenrightsuperior\textparenrightsuperior
 20544 \let\nsuperior\textnsuperior
 20545 \let\zeroinferior\textzeroinferior
 20546 \let\oneinferior\textoneinferior
 20547 \let\twoinferior\texttwoinferior
 20548 \let\threeinferior\textthreeinferior
 20549 \let\fourinferior\textfourinferior
 20550 \let\fiveinferior\textfiveinferior
 20551 \let\sixinferior\textsixinferior
 20552 \let\seveninferior\textseveninferior
 20553 \let\eightinferior\texteightinferior
 20554 \let\nineinferior\textnineinferior
 20555 \let\plusinferior\textplusinferior
 20556 \let\minusinferior\textminusinferior
 20557 \let>equalsinferior\textequalsinferior
 20558 \let\parenleftinferior\textparenleftinferior
 20559 \let\parenrightinferior\textparenrightinferior
 20560 \let\ainferior\textainferior
 20561 \let\einferior\texteinferior
 20562 \let\oinferior\textoinferior
 20563 \let\xinferior\textxinferior
 20564 \let\schwainferior\textschwainferior
 20565 \let\hinferior\texthinferior
 20566 \let\kinferior\textkinferior
 20567 \let\linferior\textlinferior
 20568 \let\mininferior\textmininferior
 20569 \let\ninferior\textninferior
 20570 \let\pinferior\textpinferior
 20571 \let\sinferior\textsinferior
 20572 \let\tinferior\texttinferior
 20573 \let\Deleatur\textDeleatur
 20574 \let\hslash\texthslash
 20575 \let\Im\textIm
 20576 \let\ell\textell
 20577 \let\wp\textwp

20578 \let\Re\textRe
 20579 \let\mho\textmho
 20580 \let\riota\textriota
 20581 \let\Finv\textFinv
 20582 \let\aleph\textaleph
 20583 \let\beth\textbeth
 20584 \let\gimel\textgimel
 20585 \let\daleth\textdaleth
 20586 \let\xfax\textfax
 20587 \let\Game\textGame
 20588 \let\leftarrow\textleftarrow
 20589 \let\uparrow\textuparrow
 20590 \let\rightarrow\textrightarrow
 20591 \let\downarrow\textdownarrow
 20592 \let\leftrightarrow\textleftrightarrow
 20593 \let\updownarrow\textupdownarrow
 20594 \let\nwarrow\textnwarrow
 20595 \let\nearrow\textnearrow
 20596 \let\searrow\textsearrow
 20597 \let\swarrow\textswarrow
 20598 \let\nleftarrow\textnleftarrow
 20599 \let\nrightarrow\textnrightarrow
 20600 \let\twoheadleftarrow\texttwoheadleftarrow
 20601 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20602 \let\twoheaduparrow\texttwoheaduparrow
 20603 \let\twoheadrightarrow\texttwoheadrightarrow
 20604 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20605 \let\twoheaddownarrow\texttwoheaddownarrow
 20606 \let\leftarrowtail\textleftarrowtail
 20607 \let\rightarrowtail\textrightarrowtail
 20608 \let\mapsto\textmapsto
 20609 \let\hookleftarrow\texthookleftarrow
 20610 \let\hookrightarrow\texthookrightarrow
 20611 \let\looparrowleft\textlooparrowleft
 20612 \let\looparrowright\textlooparrowright
 20613 \let\leftrightharpoonup\textleftrightharpoonup
 20614 \let\lightning\textlightning
 20615 \let\dlsh\textdlsh
 20616 \let\curvearrowleft\textcurvearrowleft
 20617 \let\curvearrowright\textcurvearrowright
 20618 \let\leftharpoonup\textleftharpoonup
 20619 \let\leftharpoondown\textleftharpoondown
 20620 \let\upharpoonright\textupharpoonright
 20621 \let\upharpoonleft\textupharpoonleft
 20622 \let\rightarpoonup\textrightarpoonup
 20623 \let\rightarpoondown\textrightarpoondown
 20624 \let\downharpoonright\textdownharpoonright
 20625 \let\downharpoonleft\textdownharpoonleft
 20626 \let\rightleftarrows\textrightleftarrows
 20627 \let\updownarrows\textupdownarrows
 20628 \let\leftrightarrows\textleftrightarrows
 20629 \let\leftleftarrows\textleftleftarrows
 20630 \let\upuparrows\textupuparrows
 20631 \let\righttrightarrows\textrighttrightarrows
 20632 \let\downdownarrows\textdowndownarrows
 20633 \let\leftrightharpoons\textleftrightharpoons
 20634 \let\rightleftharpoons\textrightleftharpoons

20635 $\backslash\text{let}\backslash\text{nLeftarrow}\backslash\text{textnLeftarrow}$
 20636 $\backslash\text{let}\backslash\text{nLeftrightarrow}\backslash\text{textnLeftrightarrow}$
 20637 $\backslash\text{let}\backslash\text{nRrightarrow}\backslash\text{textnRrightarrow}$
 20638 $\backslash\text{let}\backslash\text{Leftarrow}\backslash\text{textLeftarrow}$
 20639 $\backslash\text{let}\backslash\text{Uparrow}\backslash\text{textUparrow}$
 20640 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20641 $\backslash\text{let}\backslash\text{Downarrow}\backslash\text{textDownarrow}$
 20642 $\backslash\text{let}\backslash\text{Leftrightarrow}\backslash\text{textLeftrightarrow}$
 20643 $\backslash\text{let}\backslash\text{Updownarrow}\backslash\text{textUpdownarrow}$
 20644 $\backslash\text{let}\backslash\text{Nwarrow}\backslash\text{textNwarrow}$
 20645 $\backslash\text{let}\backslash\text{Nearrow}\backslash\text{textNearrow}$
 20646 $\backslash\text{let}\backslash\text{Searrow}\backslash\text{textSearrow}$
 20647 $\backslash\text{let}\backslash\text{Swarrow}\backslash\text{textSwarrow}$
 20648 $\backslash\text{let}\backslash\text{Lleftarrow}\backslash\text{textLleftarrow}$
 20649 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20650 $\backslash\text{let}\backslash\text{leftsquigarrow}\backslash\text{textleftsquigarrow}$
 20651 $\backslash\text{let}\backslash\text{rightsquigarrow}\backslash\text{textrightsquigarrow}$
 20652 $\backslash\text{let}\backslash\text{dashleftarrow}\backslash\text{texdashleftarrow}$
 20653 $\backslash\text{let}\backslash\text{dasheduparrow}\backslash\text{texdasheduparrow}$
 20654 $\backslash\text{let}\backslash\text{dashrightarrow}\backslash\text{texdashrightarrow}$
 20655 $\backslash\text{let}\backslash\text{dasheddownarrow}\backslash\text{texdasheddownarrow}$
 20656 $\backslash\text{let}\backslash\text{pointer}\backslash\text{textpointer}$
 20657 $\backslash\text{let}\backslash\text{downuparrows}\backslash\text{texdownuparrows}$
 20658 $\backslash\text{let}\backslash\text{leftarrowtriangle}\backslash\text{textleftarrowtriangle}$
 20659 $\backslash\text{let}\backslash\text{rightarrowtriangle}\backslash\text{textrightarrowtriangle}$
 20660 $\backslash\text{let}\backslash\text{leftrightarrowtriangle}\backslash\text{textleftrightarrowtriangle}$
 20661 $\backslash\text{let}\backslash\text{forall}\backslash\text{textforall}$
 20662 $\backslash\text{let}\backslash\text{complement}\backslash\text{textcomplement}$
 20663 $\backslash\text{let}\backslash\text{partial}\backslash\text{textpartial}$
 20664 $\backslash\text{let}\backslash\text{exists}\backslash\text{textexists}$
 20665 $\backslash\text{let}\backslash\text{nexists}\backslash\text{textnexists}$
 20666 $\backslash\text{let}\backslash\text{emptyset}\backslash\text{textemptyset}$
 20667 $\backslash\text{let}\backslash\text{triangle}\backslash\text{texttriangle}$
 20668 $\backslash\text{let}\backslash\text{nabla}\backslash\text{texnabla}$
 20669 $\backslash\text{let}\backslash\text{in}\backslash\text{textin}$
 20670 $\backslash\text{let}\backslash\text{notin}\backslash\text{textnotin}$
 20671 $\backslash\text{let}\backslash\text{smallin}\backslash\text{textsmallin}$
 20672 $\backslash\text{let}\backslash\text{ni}\backslash\text{textni}$
 20673 $\backslash\text{let}\backslash\text{notowner}\backslash\text{textnotowner}$
 20674 $\backslash\text{let}\backslash\text{smallowns}\backslash\text{textsmallowns}$
 20675 $\backslash\text{let}\backslash\text{prod}\backslash\text{textprod}$
 20676 $\backslash\text{let}\backslash\text{amalg}\backslash\text{textamalg}$
 20677 $\backslash\text{let}\backslash\text{sum}\backslash\text{textsum}$
 20678 $\backslash\text{let}\backslash\text{mp}\backslash\text{textmp}$
 20679 $\backslash\text{let}\backslash\text{dotplus}\backslash\text{texdotplus}$
 20680 $\backslash\text{let}\backslash\text{Divides}\backslash\text{textDivides}$
 20681 $\backslash\text{let}\backslash\text{DividesNot}\backslash\text{textDividesNot}$
 20682 $\backslash\text{let}\backslash\text{setminus}\backslash\text{textsetminus}$
 20683 $\backslash\text{let}\backslash\text{ast}\backslash\text{textast}$
 20684 $\backslash\text{let}\backslash\text{circ}\backslash\text{textcirc}$
 20685 $\backslash\text{let}\backslash\text{surd}\backslash\text{textsurd}$
 20686 $\backslash\text{let}\backslash\text{propto}\backslash\text{textpropto}$
 20687 $\backslash\text{let}\backslash\text{infty}\backslash\text{textinfty}$
 20688 $\backslash\text{let}\backslash\text{angle}\backslash\text{textangle}$
 20689 $\backslash\text{let}\backslash\text{measuredangle}\backslash\text{textmeasuredangle}$
 20690 $\backslash\text{let}\backslash\text{sphericalangle}\backslash\text{textsphericalangle}$
 20691 $\backslash\text{let}\backslash\text{mid}\backslash\text{textmid}$

20692 $\backslash\mathrm{let}\backslash\mathrm{nmid}\backslash\mathrm{textnmid}$
 20693 $\backslash\mathrm{let}\backslash\mathrm{parallel}\backslash\mathrm{textparallel}$
 20694 $\backslash\mathrm{let}\backslash\mathrm{nparallel}\backslash\mathrm{textnparallel}$
 20695 $\backslash\mathrm{let}\backslash\mathrm{wedge}\backslash\mathrm{textwedge}$
 20696 $\backslash\mathrm{let}\backslash\mathrm{owedge}\backslash\mathrm{textowedge}$
 20697 $\backslash\mathrm{let}\backslash\mathrm{vee}\backslash\mathrm{textvee}$
 20698 $\backslash\mathrm{let}\backslash\mathrm{ovee}\backslash\mathrm{textovee}$
 20699 $\backslash\mathrm{let}\backslash\mathrm{cap}\backslash\mathrm{textcap}$
 20700 $\backslash\mathrm{let}\backslash\mathrm{cup}\backslash\mathrm{textcup}$
 20701 $\backslash\mathrm{let}\backslash\mathrm{int}\backslash\mathrm{textint}$
 20702 $\backslash\mathrm{let}\backslash\mathrm{iint}\backslash\mathrm{textiint}$
 20703 $\backslash\mathrm{let}\backslash\mathrm{iiint}\backslash\mathrm{textiiint}$
 20704 $\backslash\mathrm{let}\backslash\mathrm{ooint}\backslash\mathrm{textoint}$
 20705 $\backslash\mathrm{let}\backslash\mathrm{ooint}\backslash\mathrm{textoiint}$
 20706 $\backslash\mathrm{let}\backslash\mathrm{oointclockwise}\backslash\mathrm{textointclockwise}$
 20707 $\backslash\mathrm{let}\backslash\mathrm{oointctr}\backslash\mathrm{textointctr}\backslash\mathrm{clockwise}$
 20708 $\backslash\mathrm{let}\backslash\mathrm{therefore}\backslash\mathrm{texttherefore}$
 20709 $\backslash\mathrm{let}\backslash\mathrm{because}\backslash\mathrm{textbecause}$
 20710 $\backslash\mathrm{let}\backslash\mathrm{vdots}\backslash\mathrm{textvdots}$
 20711 $\backslash\mathrm{let}\backslash\mathrm{squaredots}\backslash\mathrm{textsquaredots}$
 20712 $\backslash\mathrm{let}\backslash\mathrm{dotminus}\backslash\mathrm{textdotminus}$
 20713 $\backslash\mathrm{let}\backslash\mathrm{eqcolon}\backslash\mathrm{texteqcolon}$
 20714 $\backslash\mathrm{let}\backslash\mathrm{sim}\backslash\mathrm{texts}\backslash\mathrm{sim}$
 20715 $\backslash\mathrm{let}\backslash\mathrm{backsim}\backslash\mathrm{textbacksim}$
 20716 $\backslash\mathrm{let}\backslash\mathrm{nbacksim}\backslash\mathrm{textnbacksim}$
 20717 $\backslash\mathrm{let}\backslash\mathrm{wr}\backslash\mathrm{textwr}$
 20718 $\backslash\mathrm{let}\backslash\mathrm{nsim}\backslash\mathrm{textnsim}$
 20719 $\backslash\mathrm{let}\backslash\mathrm{eqsim}\backslash\mathrm{texteqsim}$
 20720 $\backslash\mathrm{let}\backslash\mathrm{neqsim}\backslash\mathrm{textneqsim}$
 20721 $\backslash\mathrm{let}\backslash\mathrm{simeq}\backslash\mathrm{textsimeq}$
 20722 $\backslash\mathrm{let}\backslash\mathrm{nsimeq}\backslash\mathrm{textnsimeq}$
 20723 $\backslash\mathrm{let}\backslash\mathrm{cong}\backslash\mathrm{textcong}$
 20724 $\backslash\mathrm{let}\backslash\mathrm{ncong}\backslash\mathrm{textncong}$
 20725 $\backslash\mathrm{let}\backslash\mathrm{approx}\backslash\mathrm{textapprox}$
 20726 $\backslash\mathrm{let}\backslash\mathrm{napprox}\backslash\mathrm{textnapprox}$
 20727 $\backslash\mathrm{let}\backslash\mathrm{approxeq}\backslash\mathrm{textapproxeq}$
 20728 $\backslash\mathrm{let}\backslash\mathrm{napproxeq}\backslash\mathrm{textnapproxeq}$
 20729 $\backslash\mathrm{let}\backslash\mathrm{triplesim}\backslash\mathrm{texttriplesim}$
 20730 $\backslash\mathrm{let}\backslash\mathrm{ntriplesim}\backslash\mathrm{textntriplesim}$
 20731 $\backslash\mathrm{let}\backslash\mathrm{backcong}\backslash\mathrm{textbackcong}$
 20732 $\backslash\mathrm{let}\backslash\mathrm{nbackcong}\backslash\mathrm{textnbackcong}$
 20733 $\backslash\mathrm{let}\backslash\mathrm{asympt}\backslash\mathrm{textasympt}$
 20734 $\backslash\mathrm{let}\backslash\mathrm{nasympt}\backslash\mathrm{textnasympt}$
 20735 $\backslash\mathrm{let}\backslash\mathrm{Bumpeq}\backslash\mathrm{textBumpeq}$
 20736 $\backslash\mathrm{let}\backslash\mathrm{nBumpeq}\backslash\mathrm{textnBumpeq}$
 20737 $\backslash\mathrm{let}\backslash\mathrm{bumpeq}\backslash\mathrm{textbumpeq}$
 20738 $\backslash\mathrm{let}\backslash\mathrm{nbumpeq}\backslash\mathrm{textnbumpeq}$
 20739 $\backslash\mathrm{let}\backslash\mathrm{doteq}\backslash\mathrm{textdoteq}$
 20740 $\backslash\mathrm{let}\backslash\mathrm{ndoteq}\backslash\mathrm{textndoteq}$
 20741 $\backslash\mathrm{let}\backslash\mathrm{doteqdot}\backslash\mathrm{textdoteqdot}$
 20742 $\backslash\mathrm{let}\backslash\mathrm{nDoteq}\backslash\mathrm{textnDoteq}$
 20743 $\backslash\mathrm{let}\backslash\mathrm{fallingdoteq}\backslash\mathrm{textfallingdoteq}$
 20744 $\backslash\mathrm{let}\backslash\mathrm{nfalingdoteq}\backslash\mathrm{textnfalingdoteq}$
 20745 $\backslash\mathrm{let}\backslash\mathrm{risingdoteq}\backslash\mathrm{textrisingdoteq}$
 20746 $\backslash\mathrm{let}\backslash\mathrm{nrisingdoteq}\backslash\mathrm{textnrisingdoteq}$
 20747 $\backslash\mathrm{let}\backslash\mathrm{colonequals}\backslash\mathrm{textcolonequals}$
 20748 $\backslash\mathrm{let}\backslash\mathrm{equalscolon}\backslash\mathrm{textequalscolon}$

20749 `\let\eqcirc\texteqcirc`
 20750 `\let\neqcirc\textneqcirc`
 20751 `\let\circeq\textcirceq`
 20752 `\let\ncirceq\textncirceq`
 20753 `\let\hateq\texthateq`
 20754 `\let\nhateq\textnhateq`
 20755 `\let\triangleq\texttriangleq`
 20756 `\let\neq\textneq`
 20757 `\let\ne\textne`
 20758 `\let\equiv\textequiv`
 20759 `\let\nequiv\textnequiv`
 20760 `\let\leq\textleq`
 20761 `\let\le\textle`
 20762 `\let\geq\textgeq`
 20763 `\let\ge\textge`
 20764 `\let\leqq\textleqq`
 20765 `\let\leqq\textnleqq`
 20766 `\let\geqq\textgeqq`
 20767 `\let\ngeqq\textngeqq`
 20768 `\let\lneqq\textlneqq`
 20769 `\let\gneqq\textgneqq`
 20770 `\let\ll\textll`
 20771 `\let\nll\textnll`
 20772 `\let\gg\textgg`
 20773 `\let\ngg\textngg`
 20774 `\let\between\textbetween`
 20775 `\let\nless\textnless`
 20776 `\let\ngtr\textngtr`
 20777 `\let\nleq\textnleq`
 20778 `\let\ngeq\textngeq`
 20779 `\let\lesssim\textlesssim`
 20780 `\let\gtrsim\textgtrsim`
 20781 `\let\nlesssim\textnlesssim`
 20782 `\let\ngtrsim\textngtrsim`
 20783 `\let\lessgtr\textlessgtr`
 20784 `\let\gtrless\textgtrless`
 20785 `\let\ngtrless\textngtrless`
 20786 `\let\nlessgtr\textnlessgtr`
 20787 `\let\prec\textprec`
 20788 `\let\succ\textsucc`
 20789 `\let\preccurlyeq\textpreccurlyeq`
 20790 `\let\succcurlyeq\textsucccurlyeq`
 20791 `\let\precsim\textprecsim`
 20792 `\let\mprecsim\textmprecsim`
 20793 `\let\succsim\textsuccsim`
 20794 `\let\msuccsim\textmsuccsim`
 20795 `\let\mprec\textmprec`
 20796 `\let\msucc\textmsucc`
 20797 `\let\subset\textsubset`
 20798 `\let\supset\textsupset`
 20799 `\let\subset\textsubset`
 20800 `\let\supset\textsupset`
 20801 `\let\subseteq\textsubseteq`
 20802 `\let\supseteq\textsupseteq`
 20803 `\let\subset\textsubset`
 20804 `\let\supseteq\textsupseteq`
 20805 `\let\subsetneq\textsubsetneq`

20806 $\backslash\text{let}\backslash\text{supsetneq}\backslash\text{textsupsetneq}$
 20807 $\backslash\text{let}\backslash\text{cupdot}\backslash\text{textcupdot}$
 20808 $\backslash\text{let}\backslash\text{cupplus}\backslash\text{textcupplus}$
 20809 $\backslash\text{let}\backslash\text{sqsubset}\backslash\text{textsqsubset}$
 20810 $\backslash\text{let}\backslash\text{nsqsubset}\backslash\text{textnsqsubset}$
 20811 $\backslash\text{let}\backslash\text{sqsupset}\backslash\text{textsqsupset}$
 20812 $\backslash\text{let}\backslash\text{nsqsupset}\backslash\text{textnsqsupset}$
 20813 $\backslash\text{let}\backslash\text{sqsubseteq}\backslash\text{textsqsubseteq}$
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 20815 $\backslash\text{let}\backslash\text{sqsupseteq}\backslash\text{textsqsupseteq}$
 20816 $\backslash\text{let}\backslash\text{nsqsupseteq}\backslash\text{textnsqsupseteq}$
 20817 $\backslash\text{let}\backslash\text{sqcap}\backslash\text{textsqcap}$
 20818 $\backslash\text{let}\backslash\text{sqcup}\backslash\text{textsqcup}$
 20819 $\backslash\text{let}\backslash\text{oplus}\backslash\text{textoplus}$
 20820 $\backslash\text{let}\backslash\text{ominus}\backslash\text{textominus}$
 20821 $\backslash\text{let}\backslash\text{otimes}\backslash\text{textotimes}$
 20822 $\backslash\text{let}\backslash\text{oslash}\backslash\text{textoslash}$
 20823 $\backslash\text{let}\backslash\text{odot}\backslash\text{textodot}$
 20824 $\backslash\text{let}\backslash\text{circledcirc}\backslash\text{textcircledcirc}$
 20825 $\backslash\text{let}\backslash\text{circledast}\backslash\text{textcircledast}$
 20826 $\backslash\text{let}\backslash\text{circleddash}\backslash\text{textcircleddash}$
 20827 $\backslash\text{let}\backslash\text{boxplus}\backslash\text{textboxplus}$
 20828 $\backslash\text{let}\backslash\text{boxminus}\backslash\text{textboxminus}$
 20829 $\backslash\text{let}\backslash\text{boxtimes}\backslash\text{textboxtimes}$
 20830 $\backslash\text{let}\backslash\text{boxdot}\backslash\text{textboxdot}$
 20831 $\backslash\text{let}\backslash\text{vdash}\backslash\text{textvdash}$
 20832 $\backslash\text{let}\backslash\text{dashv}\backslash\text{textdashv}$
 20833 $\backslash\text{let}\backslash\text{ndashv}\backslash\text{textndashv}$
 20834 $\backslash\text{let}\backslash\text{top}\backslash\text{texttop}$
 20835 $\backslash\text{let}\backslash\text{ndownvdash}\backslash\text{textndownvdash}$
 20836 $\backslash\text{let}\backslash\text{bot}\backslash\text{textbot}$
 20837 $\backslash\text{let}\backslash\text{nupvdash}\backslash\text{textnupvdash}$
 20838 $\backslash\text{let}\backslash\text{vDash}\backslash\text{textvDash}$
 20839 $\backslash\text{let}\backslash\text{Vdash}\backslash\text{textVdash}$
 20840 $\backslash\text{let}\backslash\text{Vvdash}\backslash\text{textVvdash}$
 20841 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{textnVdash}$
 20842 $\backslash\text{let}\backslash\text{VDash}\backslash\text{textVDash}$
 20843 $\backslash\text{let}\backslash\text{nvDash}\backslash\text{textnvDash}$
 20844 $\backslash\text{let}\backslash\text{nvDash}\backslash\text{textnvDash}$
 20845 $\backslash\text{let}\backslash\text{nVdash}\backslash\text{textnVdash}$
 20846 $\backslash\text{let}\backslash\text{nVDash}\backslash\text{textnVDash}$
 20847 $\backslash\text{let}\backslash\text{lhs}\backslash\text{textrhs}$
 20848 $\backslash\text{let}\backslash\text{rhd}\backslash\text{textrhd}$
 20849 $\backslash\text{let}\backslash\text{unlhd}\backslash\text{textunlhd}$
 20850 $\backslash\text{let}\backslash\text{unrhd}\backslash\text{textunrhd}$
 20851 $\backslash\text{let}\backslash\text{multimapdotbothA}\backslash\text{textmultimapdotbothA}$
 20852 $\backslash\text{let}\backslash\text{multimapdotbothB}\backslash\text{textmultimapdotbothB}$
 20853 $\backslash\text{let}\backslash\text{multimap}\backslash\text{textmultimap}$
 20854 $\backslash\text{let}\backslash\text{veebar}\backslash\text{textveebar}$
 20855 $\backslash\text{let}\backslash\text{barwedge}\backslash\text{textbarwedge}$
 20856 $\backslash\text{let}\backslash\text{star}\backslash\text{textstar}$
 20857 $\backslash\text{let}\backslash\text{divideontimes}\backslash\text{textdivideontimes}$
 20858 $\backslash\text{let}\backslash\text{bowtie}\backslash\text{textbowtie}$
 20859 $\backslash\text{let}\backslash\text{ltimes}\backslash\text{textrimes}$
 20860 $\backslash\text{let}\backslash\text{rtimes}\backslash\text{textrimes}$
 20861 $\backslash\text{let}\backslash\text{leftthreetimes}\backslash\text{textleftthreetimes}$
 20862 $\backslash\text{let}\backslash\text{rightthreetimes}\backslash\text{textrightthreetimes}$

20863 $\backslash\text{let}\backslash\text{backsimeq}\backslash\text{textbacksimeq}$
 20864 $\backslash\text{let}\backslash\text{nbacksimeq}\backslash\text{textnbacksimeq}$
 20865 $\backslash\text{let}\backslash\text{curlyvee}\backslash\text{textcurlyvee}$
 20866 $\backslash\text{let}\backslash\text{curlywedge}\backslash\text{textcurlywedge}$
 20867 $\backslash\text{let}\backslash\text{Subset}\backslash\text{textSubset}$
 20868 $\backslash\text{let}\backslash\text{nSubset}\backslash\text{textnSubset}$
 20869 $\backslash\text{let}\backslash\text{Supset}\backslash\text{textSupset}$
 20870 $\backslash\text{let}\backslash\text{nSupset}\backslash\text{textnSupset}$
 20871 $\backslash\text{let}\backslash\text{Cap}\backslash\text{textCap}$
 20872 $\backslash\text{let}\backslash\text{Cup}\backslash\text{textCup}$
 20873 $\backslash\text{let}\backslash\text{pitchfork}\backslash\text{textpitchfork}$
 20874 $\backslash\text{let}\backslash\text{lessdot}\backslash\text{textlessdot}$
 20875 $\backslash\text{let}\backslash\text{gtrdot}\backslash\text{textgtrdot}$
 20876 $\backslash\text{let}\backslash\text{lll}\backslash\text{textlll}$
 20877 $\backslash\text{let}\backslash\text{ggg}\backslash\text{textggg}$
 20878 $\backslash\text{let}\backslash\text{lesseqgtr}\backslash\text{textlesseqgtr}$
 20879 $\backslash\text{let}\backslash\text{gtreqless}\backslash\text{textgtreqless}$
 20880 $\backslash\text{let}\backslash\text{curlyeqprec}\backslash\text{textcurlyeqprec}$
 20881 $\backslash\text{let}\backslash\text{ncurlyeqprec}\backslash\text{textncurlyeqprec}$
 20882 $\backslash\text{let}\backslash\text{curlyeqsucc}\backslash\text{textcurlyeqsucc}$
 20883 $\backslash\text{let}\backslash\text{ncurlyeqsucc}\backslash\text{textncurlyeqsucc}$
 20884 $\backslash\text{let}\backslash\text{npreccurlyeq}\backslash\text{textnpreccurlyeq}$
 20885 $\backslash\text{let}\backslash\text{nsucccurlyeq}\backslash\text{textnsucccurlyeq}$
 20886 $\backslash\text{let}\backslash\text{nqsubseteq}\backslash\text{textnqsubseteq}$
 20887 $\backslash\text{let}\backslash\text{nqsupseteq}\backslash\text{textnqsupseteq}$
 20888 $\backslash\text{let}\backslash\text{sqsubsetneq}\backslash\text{textsqsubsetneq}$
 20889 $\backslash\text{let}\backslash\text{sqsupsetneq}\backslash\text{textsqsupsetneq}$
 20890 $\backslash\text{let}\backslash\text{lnsim}\backslash\text{textlnsim}$
 20891 $\backslash\text{let}\backslash\text{gnsim}\backslash\text{textgnsim}$
 20892 $\backslash\text{let}\backslash\text{precnsim}\backslash\text{textprecnsim}$
 20893 $\backslash\text{let}\backslash\text{succnsim}\backslash\text{textsuccnsim}$
 20894 $\backslash\text{let}\backslash\text{ntriangleleft}\backslash\text{textntriangleleft}$
 20895 $\backslash\text{let}\backslash\text{ntriangleright}\backslash\text{textntriangleright}$
 20896 $\backslash\text{let}\backslash\text{ntrianglelefteq}\backslash\text{textntrianglelefteq}$
 20897 $\backslash\text{let}\backslash\text{ntrianglerighteq}\backslash\text{textntrianglerighteq}$
 20898 $\backslash\text{let}\backslash\text{vdots}\backslash\text{textvdots}$
 20899 $\backslash\text{let}\backslash\text{cdots}\backslash\text{textcdots}$
 20900 $\backslash\text{let}\backslash\text{udots}\backslash\text{textudots}$
 20901 $\backslash\text{let}\backslash\text{ddots}\backslash\text{textddots}$
 20902 $\backslash\text{let}\backslash\text{barin}\backslash\text{textbarin}$
 20903 $\backslash\text{let}\backslash\text{diameter}\backslash\text{textdiameter}$
 20904 $\backslash\text{let}\backslash\text{backneg}\backslash\text{textbackneg}$
 20905 $\backslash\text{let}\backslash\text{wasylozenge}\backslash\text{textwasylozenge}$
 20906 $\backslash\text{let}\backslash\text{invbackneg}\backslash\text{textinvbackneg}$
 20907 $\backslash\text{let}\backslash\text{clock}\backslash\text{textclock}$
 20908 $\backslash\text{let}\backslash\text{ulcorner}\backslash\text{textulcorner}$
 20909 $\backslash\text{let}\backslash\text{urcorner}\backslash\text{texturcorner}$
 20910 $\backslash\text{let}\backslash\text{llcorner}\backslash\text{textllcorner}$
 20911 $\backslash\text{let}\backslash\text{lrcorner}\backslash\text{textlrcorner}$
 20912 $\backslash\text{let}\backslash\text{frown}\backslash\text{textfrown}$
 20913 $\backslash\text{let}\backslash\text{smile}\backslash\text{textsmile}$
 20914 $\backslash\text{let}\backslash\text{Keyboard}\backslash\text{textKeyboard}$
 20915 $\backslash\text{let}\backslash\text{langle}\backslash\text{textlangle}$
 20916 $\backslash\text{let}\backslash\text{rangle}\backslash\text{textrangle}$
 20917 $\backslash\text{let}\backslash\text{APLinv}\backslash\text{textAPLinv}$
 20918 $\backslash\text{let}\backslash\text{Tumbler}\backslash\text{textTumbler}$
 20919 $\backslash\text{let}\backslash\text{notslash}\backslash\text{textnotslash}$

20920 \let\notbackslash\textnotbackslash
 20921 \let\boxbackslash\textboxbackslash
 20922 \let\APLleftarrowbox\textAPLleftarrowbox
 20923 \let\APLrightarrowbox\textAPLrightarrowbox
 20924 \let\APLuparrowbox\textAPLuparrowbox
 20925 \let\APLdownarrowbox\textAPLdownarrowbox
 20926 \let\APLinput\textAPLinput
 20927 \let\Request\textRequest
 20928 \let\Beam\textBeam
 20929 \let\hexagon\texthexagon
 20930 \let\APLbox\textAPLbox
 20931 \let\ForwardToIndex\textForwardToIndex
 20932 \let\RewindToIndex\textRewindToIndex
 20933 \let\bbslash\textbbslash
 20934 \let\CircledA\textCircledA
 20935 \let\CleaningF\textCleaningF
 20936 \let\CleaningFF\textCleaningFF
 20937 \let\CleaningP\textCleaningP
 20938 \let\CleaningPP\textCleaningPP
 20939 \let\CuttingLine\textCuttingLine
 20940 \let\UParrow\textUParrow
 20941 \let\bigtriangleup\textbigtriangleup
 20942 \let\Forward\textForward
 20943 \let\triangleright\texttriangleright
 20944 \let\RHD\textRHD
 20945 \let\DOWNarrow\textDOWNarrow
 20946 \let\bigtriangledown\textbigtriangledown
 20947 \let\Rewind\textRewind
 20948 \let\triangleleft\texttriangleleft
 20949 \let\LHD\textLHD
 20950 \let\diamond\textdiamond
 20951 \let\lozenge\textlozenge
 20952 \let\LEFTCIRCLE\textLEFTCIRCLE
 20953 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20954 \let\openbullet\textopenbullet
 20955 \let\boxbar\textboxbar
 20956 \let\bigcircle\textbigcircle
 20957 \let\Cloud\textCloud
 20958 \let\FiveStar\textFiveStar
 20959 \let\FiveStarOpen\textFiveStarOpen
 20960 \let\Phone\textPhone
 20961 \let\boxempty\textboxempty
 20962 \let\Checkedbox\textCheckedbox
 20963 \let\Crossedbox\textCrossedbox
 20964 \let\Coffeecup\textCoffeecup
 20965 \let\HandCuffLeft\textHandCuffLeft
 20966 \let\HandCuffRight\textHandCuffRight
 20967 \let\HandLeft\textHandLeft
 20968 \let\HandRight\textHandRight
 20969 \let\Radioactivity\textRadioactivity
 20970 \let\Biohazard\textBiohazard
 20971 \let\Ankh\textAnkh
 20972 \let\YinYang\textYinYang
 20973 \let\frownie\textfrownie
 20974 \let\smiley\textsmiley
 20975 \let\blacksmiley\textblacksmiley
 20976 \let\sun\textsun

20977 \let\leftmoon\textleftmoon
 20978 \let\rightmoon\textrightmoon
 20979 \let\mercury\textmercury
 20980 \let\earth\textearth
 20981 \let\male\textmale
 20982 \let\jupiter\textjupiter
 20983 \let\saturn\textsaturn
 20984 \let\uranus\texturanus
 20985 \let\neptune\textneptune
 20986 \let\pluto\textpluto
 20987 \let\aries\textaries
 20988 \let\taurus\texttaurus
 20989 \let\gemini\textgemini
 20990 \let\cancer\textcancer
 20991 \let\leo\textleo
 20992 \let\virgo\textvirgo
 20993 \let\libra\textlibra
 20994 \let\scorpio\textscorpio
 20995 \let\sagittarius\textsagittarius
 20996 \let\capricornus\textcapricornus
 20997 \let\aquarius\textaquarius
 20998 \let\pisces\textpisces
 20999 \let\quaternote\textquaternote
 21000 \let\twonotes\texttwonotes
 21001 \let\sixteenthnote\textsixteenthnote
 21002 \let\flat\textflat
 21003 \let\natural\textnatural
 21004 \let\sharp\textsharp
 21005 \let\recycle\textrecycle
 21006 \let\Wheelchair\textWheelchair
 21007 \let\Flag\textFlag
 21008 \let\MineSign\textMineSign
 21009 \let\ds\textds
 21010 \let\dsmedical\textdsmedical
 21011 \let\dsjuridical\textdsjuridical
 21012 \let\dschemical\textdschemical
 21013 \let\dsbiological\textdsbiological
 21014 \let\dscommercial\textdscommercial
 21015 \let\manstar\textmanstar
 21016 \let\danger\textdanger
 21017 \let\FemaleFemale\textFemaleFemale
 21018 \let\MaleMale\textMaleMale
 21019 \let\FemaleMale\textFemaleMale
 21020 \let\Hermaphrodite\textHermaphrodite
 21021 \let\Neutral\textNeutral
 21022 \let\hexstar\texthexstar
 21023 \let\SunCloud\textSunCloud
 21024 \let\Rain\textRain
 21025 \let\noway\textnoway
 21026 \let\Mountain\textMountain
 21027 \let\Tent\textTent
 21028 \let\ScissorRight\textScissorRight
 21029 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21030 \let\ScissorHollowRight\textScissorHollowRight
 21031 \let\PhoneHandset\textPhoneHandset
 21032 \let\Tape\textTape
 21033 \let\Plane\textPlane

21034 \let\Envelope\textEnvelope
 21035 \let\Peace\textPeace
 21036 \let\WritingHand\textWritingHand
 21037 \let\PencilRightDown\textPencilRightDown
 21038 \let\PencilRight\textPencilRight
 21039 \let\PencilRightUp\textPencilRightUp
 21040 \let\NibRight\textNibRight
 21041 \let\NibSolidRight\textNibSolidRight
 21042 \let\Checkmark\textCheckmark
 21043 \let\CheckmarkBold\textCheckmarkBold
 21044 \let\XSolid\textXSolid
 21045 \let\XSolidBold\textXSolidBold
 21046 \let\XSolidBrush\textXSolidBrush
 21047 \let\PlusOutline\textPlusOutline
 21048 \let\Plus\textPlus
 21049 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21050 \let\PlusCenterOpen\textPlusCenterOpen
 21051 \let\Cross\textCross
 21052 \let\CrossOpenShadow\textCrossOpenShadow
 21053 \let\CrossOutline\textCrossOutline
 21054 \let\CrossMaltese\textCrossMaltese
 21055 \let\DavidStar\textDavidStar
 21056 \let\FourAsterisk\textFourAsterisk
 21057 \let\JackStar\textJackStar
 21058 \let\JackStarBold\textJackStarBold
 21059 \let\ClowerTips\textClowerTips
 21060 \let\FourStar\textFourStar
 21061 \let\FourStarOpen\textFourStarOpen
 21062 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21063 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21064 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21065 \let\FiveStarOutline\textFiveStarOutline
 21066 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21067 \let\FiveStarConvex\textFiveStarConvex
 21068 \let\FiveStarShadow\textFiveStarShadow
 21069 \let\AsteriskBold\textAsteriskBold
 21070 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21071 \let\EightStarTaper\textEightStarTaper
 21072 \let\EightStarConvex\textEightStarConvex
 21073 \let\SixStar\textSixStar
 21074 \let\EightStar\textEightStar
 21075 \let\EightStarBold\textEightStarBold
 21076 \let\TwelveStar\textTwelveStar
 21077 \let\SixteenStarLight\textSixteenStarLight
 21078 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21079 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21080 \let\Asterisk\textAsterisk
 21081 \let\SixFlowerAlternate\textSixFlowerAlternate
 21082 \let\FiveFlowerPetal\textFiveFlowerPetal
 21083 \let\FiveFlowerOpen\textFiveFlowerOpen
 21084 \let\EightFlowerPetal\textEightFlowerPetal
 21085 \let\SunshineOpenCircled\textSunshineOpenCircled
 21086 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21087 \let\SnowflakeChevron\textSnowflakeChevron
 21088 \let\Snowflake\textSnowflake
 21089 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21090 \let\Sparkle\textSparkle

21091 \let\SparkleBold\textSparkleBold
 21092 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21093 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21094 \let\EightAsterisk\textEightAsterisk
 21095 \let\CircleShadow\textCircleShadow
 21096 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21097 \let\SquareTopRight\textSquareTopRight
 21098 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21099 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21100 \let\DiamandSolid\textDiamandSolid
 21101 \let\RectangleThin\textRectangleThin
 21102 \let\Rectangle\textRectangle
 21103 \let\RectangleBold\textRectangleBold
 21104 \let\perp\textperp
 21105 \let\notperp\textnotperp
 21106 \let\veedot\textveedot
 21107 \let\wedgedot\textwedgedot
 21108 \let\leftspoon\textleftspoon
 21109 \let\lbrackdbl\textlbrackdbl
 21110 \let\rbrackdbl\textrbrackdbl
 21111 \let\circlearrowleft\textcirclearrowleft
 21112 \let\circlearrowright\textcirclearrowright
 21113 \let\longleftarrow\textlongleftarrow
 21114 \let\longrightarrow\textlongrightarrow
 21115 \let\longleftarrow\textlongleftarrow
 21116 \let\Longleftarrow\textLongleftarrow
 21117 \let\Longrightarrow\textLongrightarrow
 21118 \let\Longleftarrow\textLongleftarrow
 21119 \let\longmapsto\textlongmapsto
 21120 \let\Longmapsfrom\textLongmapsfrom
 21121 \let\Longmapsto\textLongmapsto
 21122 \let\nwsearrow\textnwsearrow
 21123 \let\neswarrow\textneswarrow
 21124 \let\lhooknarrow\textlhooknarrow
 21125 \let\rhooknarrow\texthooknarrow
 21126 \let\lhooksearrow\textlhooksearrow
 21127 \let\rhooksearrow\texthooksearrow
 21128 \let\leadsto\textleadsto
 21129 \let\rcurvearrowne\textrcurvearrowne
 21130 \let\lcurvearrowse\textlcurvearrowse
 21131 \let\lcurvearrowsw\textlcurvearrowsw
 21132 \let\rcurvearrowse\textrcurvearrowse
 21133 \let\lcurvearrowdown\textlcurvearrowdown
 21134 \let\rcurvearrowdown\textrcurvearrowdown
 21135 \let\rcurvearrowleft\textrcurvearrowleft
 21136 \let\rcurvearrowright\textrcurvearrowright
 21137 \let\leftrightharpoon\textleftrightharpoon
 21138 \let\rightrightarpoon\textrightleftharpoon
 21139 \let\updownharpoonrightleft\textupdownharpoonrightleft
 21140 \let\updownharpoonleftright\textupdownharpoonleftright
 21141 \let\leftleftharpoons\textleftleftharpoons
 21142 \let\upupharpoons\textupupharpoons
 21143 \let\rightrightarpoons\textrighttrightarpoons
 21144 \let\downdownharpoons\textdowndownharpoons
 21145 \let\leftbarharpoon\textleftbarharpoon
 21146 \let\barleftharpoon\textbarleftharpoon
 21147 \let\rightbarharpoon\textrightbarharpoon

21148 $\backslash\text{let}\backslash\text{barrightharpoon}\backslash\text{textbarrightharpoon}$
 21149 $\backslash\text{let}\backslash\text{updownharpoons}\backslash\text{textupdownharpoons}$
 21150 $\backslash\text{let}\backslash\text{downupharpoons}\backslash\text{textdownupharpoons}$
 21151 $\backslash\text{let}\backslash\text{moo}\backslash\text{textmoo}$
 21152 $\backslash\text{let}\backslash\text{llparenthesis}\backslash\text{textllparenthesis}$
 21153 $\backslash\text{let}\backslash\text{rrparenthesis}\backslash\text{textrrparenthesis}$
 21154 $\backslash\text{let}\backslash\text{invdiameter}\backslash\text{textinvdiameter}$
 21155 $\backslash\text{let}\backslash\text{obar}\backslash\text{textobar}$
 21156 $\backslash\text{let}\backslash\text{obslash}\backslash\text{textobslash}$
 21157 $\backslash\text{let}\backslash\text{obot}\backslash\text{textobot}$
 21158 $\backslash\text{let}\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 21159 $\backslash\text{let}\backslash\text{olessthan}\backslash\text{textolessthan}$
 21160 $\backslash\text{let}\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 21161 $\backslash\text{let}\backslash\text{boxslash}\backslash\text{textboxslash}$
 21162 $\backslash\text{let}\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 21163 $\backslash\text{let}\backslash\text{boxast}\backslash\text{textboxast}$
 21164 $\backslash\text{let}\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 21165 $\backslash\text{let}\backslash\text{boxbox}\backslash\text{textboxbox}$
 21166 $\backslash\text{let}\backslash\text{Valve}\backslash\text{textValve}$
 21167 $\backslash\text{let}\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 21168 $\backslash\text{let}\backslash\text{shuffle}\backslash\text{textshuffle}$
 21169 $\backslash\text{let}\backslash\text{uplus}\backslash\text{textuplus}$
 21170 $\backslash\text{let}\backslash\text{bigdoublewedge}\backslash\text{textbigdoublewedge}$
 21171 $\backslash\text{let}\backslash\text{bigdoublevee}\backslash\text{textbigdoublevee}$
 21172 $\backslash\text{let}\backslash\text{Join}\backslash\text{textJoin}$
 21173 $\backslash\text{let}\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 21174 $\backslash\text{let}\backslash\text{circplus}\backslash\text{textcircplus}$
 21175 $\backslash\text{let}\backslash\text{minusdot}\backslash\text{textminusdot}$
 21176 $\backslash\text{let}\backslash\text{dotimes}\backslash\text{textdotimes}$
 21177 $\backslash\text{let}\backslash\text{dtimes}\backslash\text{textdtimes}$
 21178 $\backslash\text{let}\backslash\text{odiv}\backslash\text{textodiv}$
 21179 $\backslash\text{let}\backslash\text{invneg}\backslash\text{textinvneg}$
 21180 $\backslash\text{let}\backslash\text{sqdoublecap}\backslash\text{textsdoublecap}$
 21181 $\backslash\text{let}\backslash\text{capdot}\backslash\text{textcapdot}$
 21182 $\backslash\text{let}\backslash\text{sqdoublecup}\backslash\text{textsdoublecup}$
 21183 $\backslash\text{let}\backslash\text{doublewedge}\backslash\text{texdoublewedge}$
 21184 $\backslash\text{let}\backslash\text{doublevee}\backslash\text{texdoublevee}$
 21185 $\backslash\text{let}\backslash\text{doublebarwedge}\backslash\text{texdoublebarwedge}$
 21186 $\backslash\text{let}\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 21187 $\backslash\text{let}\backslash\text{eqdot}\backslash\text{texteqdot}$
 21188 $\backslash\text{let}\backslash\text{neqdot}\backslash\text{textneqdot}$
 21189 $\backslash\text{let}\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 21190 $\backslash\text{let}\backslash\text{leqslant}\backslash\text{textleqslant}$
 21191 $\backslash\text{let}\backslash\text{nleqslant}\backslash\text{textnleqslant}$
 21192 $\backslash\text{let}\backslash\text{geqslant}\backslash\text{textgeqslant}$
 21193 $\backslash\text{let}\backslash\text{ngeqslant}\backslash\text{textngeqslant}$
 21194 $\backslash\text{let}\backslash\text{lessapprox}\backslash\text{textlessapprox}$
 21195 $\backslash\text{let}\backslash\text{nlessapprox}\backslash\text{textnlessapprox}$
 21196 $\backslash\text{let}\backslash\text{gtrapprox}\backslash\text{textgtrapprox}$
 21197 $\backslash\text{let}\backslash\text{ngtrapprox}\backslash\text{textngtrapprox}$
 21198 $\backslash\text{let}\backslash\text{lneq}\backslash\text{textlneq}$
 21199 $\backslash\text{let}\backslash\text{gneq}\backslash\text{textgneq}$
 21200 $\backslash\text{let}\backslash\text{lnapprox}\backslash\text{textlnapprox}$
 21201 $\backslash\text{let}\backslash\text{gnapprox}\backslash\text{textgnapprox}$
 21202 $\backslash\text{let}\backslash\text{lesseqqgtr}\backslash\text{textlesseqqgtr}$
 21203 $\backslash\text{let}\backslash\text{gtreqqless}\backslash\text{textgtreqqless}$
 21204 $\backslash\text{let}\backslash\text{eqslantless}\backslash\text{teqslantless}$

21205 \let\eqslantgtr\texteqslantgtr
 21206 \let\leftslice\textleftslice
 21207 \let\rightslice\textrightslice
 21208 \let\preceq\textpreceq
 21209 \let\npreceq\textnpreceq
 21210 \let\succeq\textsucceq
 21211 \let\nsucceq\textnsucceq
 21212 \let\precneq\textprecneq
 21213 \let\succneq\textsuccneq
 21214 \let\preceqq\textpreceqq
 21215 \let\npreceqq\textnpreceqq
 21216 \let\succeqq\textsucceqq
 21217 \let\nsucceqq\textnsucceqq
 21218 \let\precneqq\textprecneqq
 21219 \let\succneqq\textsuccneqq
 21220 \let\precapprox\textprecapprox
 21221 \let\nprecapprox\textnprecapprox
 21222 \let\succapprox\textsuccapprox
 21223 \let\nsuccapprox\textnsuccapprox
 21224 \let\precnapprox\textprecnapprox
 21225 \let\succnapprox\textsuccnapprox
 21226 \let\subseteqq\textsubseteqq
 21227 \let\nsubseteqq\textnsubseteqq
 21228 \let\supseteqq\textsupseteqq
 21229 \let\nsupseteqq\textnsupseteqq
 21230 \let\dashV\textdashV
 21231 \let\ndashV\textndashV
 21232 \let\Dashv\textDashv
 21233 \let\ndashv\textndashv
 21234 \let\DashV\textDashV
 21235 \let\ndashV\textndashV
 21236 \let\downmodels\textdownmodels
 21237 \let\ndownmodels\textndownmodels
 21238 \let\upmodels\textupmodels
 21239 \let\nupmodels\textnupmodels
 21240 \let\upspoon\textupspoon
 21241 \let\interleave\textinterleave
 21242 \let\slash\textslash
 21243 \let\pentagon\textpentagon
 21244 \let\varhexagon\textvarhexagon
 21245 \let\jinferior\textjinferior
 21246 \let\slashdiv\textslashdiv
 21247 \let\fivedots\textfivedots
 21248 \let\oo\textoo
 21249 \let\GaPa\textGaPa
 21250 \let\HaPa\textHaPa
 21251 \let\ViPa\textViPa
 21252 \let\AcPa\textAcPa
 21253 \let\SePa\textSePa
 21254 \let\ZwPa\textZwPa
 21255 \let\fullnote\textfullnote
 21256 \let\halfnote\texthalfnote
 21257 \let\Vier\textVier
 21258 \let\Acht\textAcht
 21259 \let\Sech\textSech
 21260 \let\Zwdr\textZwdr
 21261 \let\Mundus\textMundus

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21262 \let\Moon\textMoon
21263 \let\ManFace\textManFace
21264 \let\WomanFace\textWomanFace
21265 \let\Fax\textFax
21266 \let\Fire\textFire
21267 \let\Bicycle\textBicycle
21268 \let\Gentsroom\textGentsroom
21269 \let\Ladiesroom\textLadiesroom
21270 \let\ccnc\textccnc
21271 \let\ccsa\textccsa
21272 \let\Info\textInfo
21273 \let\CESign\textCESign
21274 \let\neg\textneg
21275 \let\times\texttimes
21276 \let\div\textdiv
21277 \let\pm\textpm
21278 \let\cdot\textcdot
21279 }% \psdmapshortnames
21280 \newcommand*{\psdaliasnames}{%
21281 \let\epsdice\HyPsd@DieFace
21282 \let\fcdice\HyPsd@DieFace
21283 \let\MoonPha\HyPsd@MoonPha
21284 \let\mathdollar\textdollar
21285 \let\EyesDollar\textdollar
21286 \let\binampersand\textampersand
21287 \let\with\textampersand
21288 \let\mathunderscore\textunderscore
21289 \let\textvertline\textbar
21290 \let\mathsterling\textsterling
21291 \let\pounds\textsterling
21292 \let\brokenvert\textbrokenbar
21293 \let\mathsection\textsection
21294 \let\S\textsection
21295 \let\mathparagraph\textparagraph
21296 \let\MultiplicationDot\textperiodcentered
21297 \let\Squaredot\textperiodcentered
21298 \let\vartimes\textmultiply
21299 \let\MVMultiplication\textmultiply
21300 \let\eth\dh
21301 \let\crossd\textcrd
21302 \let\textbard\textcrd
21303 \let\bard\textcrd
21304 \let\textcrh\textthbar
21305 \let\crossh\textthbar
21306 \let\planck\textthbar
21307 \let\eng\ng
21308 \let\engma\ng
21309 \let\crossb\textcrb
21310 \let\textbarb\textcrb
21311 \let\barb\textcrb
21312 \let\Florin\textflorin
21313 \let\hv\texthvlig
21314 \let\hausak\textthk
21315 \let\crossnilambda\textcrlambda
21316 \let\barlambda\textcrlambda
21317 \let\lambdabar\textcrlambda
21318 \let\lambdaslash\textcrlambda

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21319 \let\textnrleg\textPUnrleg
 21320 \let\textpipevar\textpipe
 21321 \let\textdoublepipevar\textdoublepipe
 21322 \let\textdoublebarpipevar\textdoublebarpipe
 21323 \let\textcrg\textgslash
 21324 \let\textdblig\textPUdblig
 21325 \let\textqplig\textPUqplig
 21326 \let\textcentoldstyle\textslashc
 21327 \let\textbarc\textslashc
 21328 \let\inva\textturna
 21329 \let\vara\textscripta
 21330 \let\invscripta\textturnscripta
 21331 \let\rotvara\textturnscripta
 21332 \let\hookb\texthtb
 21333 \let\hausab\texthtb
 21334 \let\varopeno\textopeno
 21335 \let\curlyc\textctc
 21336 \let\taild\textrtaild
 21337 \let\hookd\texthtd
 21338 \let\hausad\texthtd
 21339 \let\er\textrhooschwa
 21340 \let\epsi\textniepsilon
 21341 \let\hookrepsilon\textrhoorepsilon
 21342 \let\closedrepsilon\textcloserepsilon
 21343 \let\barj\textbardotlessj
 21344 \let\hookg\texthtg
 21345 \let\varg\textscriptg
 21346 \let\vod\textipagamma
 21347 \let\invh\textturnh
 21348 \let\udesc\textturnh
 21349 \let\hookh\texthth
 21350 \let\voicedh\texthth
 21351 \let\hookheng\texththeng
 21352 \let\ibar\textbari
 21353 \let\vari\textniota
 21354 \let\tildel\texttilde
 21355 \let\latfric\textbeltl
 21356 \let\tail\textrtail
 21357 \let\lz\textlyoghlig
 21358 \let\invm\textturnm
 21359 \let\rotm\textturnm
 21360 \let\legm\textturnmrleg
 21361 \let\labdentalnas\textltailm
 21362 \let\emgma\textltailm
 21363 \let\nj\textltailn
 21364 \let\enya\textltailn
 21365 \let\tailn\textrtailn
 21366 \let\closedniomega\textcloseomega
 21367 \let\varomega\textcloseomega
 21368 \let\invr\textturnr
 21369 \let\rotr\textturnr
 21370 \let\invlegr\textturnlonglegr
 21371 \let\tailinvr\textturnrrtail
 21372 \let\legr\textlonglegr
 21373 \let\tailr\textrtailr
 21374 \let\flapr\textfishhookr
 21375 \let\flap\textfishhookr

21376 \let\tails\textrtails
 21377 \let\curlyesh\textctesh
 21378 \let\clickt\textturnt
 21379 \let\tailt\textrtailt
 21380 \let\ubar\textbaru
 21381 \let\rotOmega\textniupsilon
 21382 \let\invv\textturnv
 21383 \let\pwedge\textturnv
 21384 \let\invw\textturnw
 21385 \let\rotw\textturnw
 21386 \let\invy\textturny
 21387 \let\roty\textturny
 21388 \let\tailz\textrtailz
 21389 \let\curlyz\textctz
 21390 \let\curlyyogh\textctyogh
 21391 \let\ejective\textglotstop
 21392 \let\glottal\textglotstop
 21393 \let\reveject\textrevglotstop
 21394 \let\clickc\textstretchc
 21395 \let\textstretchcvar\textstretchc
 21396 \let\clickb\textbullseye
 21397 \let\textObullseye\textbullseye
 21398 \let\textctjvar\textctj
 21399 \let\textturnsck\textturnk
 21400 \let\dz\textdzlig
 21401 \let\tesh\textteshlig
 21402 \let\digamma\textdigammagreek
 21403 \let\hardsign\cyrhrdsn
 21404 \let\softsign\cyrsoftsn
 21405 \let\hebsin\hebshin
 21406 \let\textsck\textPUscck
 21407 \let\textscm\textPUscm
 21408 \let\textscp\textPUscp
 21409 \let\textrevscr\textPUrevscr
 21410 \let\textrhooka\textPURhooka
 21411 \let\textrhooke\textPURhooka
 21412 \let\textrhookepsilon\textPURhookepsilon
 21413 \let\textrhookopeno\textPURhookopeno
 21414 \let\textdoublevertline\textbardbl
 21415 \let\dag\textdagger
 21416 \let\ddagger\textdaggerdbl
 21417 \let\ddag\textdaggerdbl
 21418 \let\mathellipsis\textellipsis
 21419 \let\EurDig\texteuro
 21420 \let\EURdig\texteuro
 21421 \let\EurHv\texteuro
 21422 \let\EURhv\texteuro
 21423 \let\EurCr\texteuro
 21424 \let\EURcr\texteuro
 21425 \let\EurTm\texteuro
 21426 \let\EURtm\texteuro
 21427 \let\Eur\texteuro
 21428 \let\Denarius\textDeleatur
 21429 \let\agemO\textmho
 21430 \let\EstimatedSign\textestimated
 21431 \let\Ecommerce\textestimated
 21432 \let\bindnasrepma\textinvamp

21433 \let\parr\textinvamp
 21434 \let\MVRightArrow\extrightarrow
 21435 \let\MVRightarrow\extrightarrow
 21436 \let\MVArrowDown\textdownarrow
 21437 \let\Force\textdownarrow
 21438 \let\textglobrise\textnearrow
 21439 \let\textglobfall\textsearrow
 21440 \let\Lightning\textlightning
 21441 \let\Conclusion\textrightarrow
 21442 \let\dashedleftarrow\textdashleftarrow
 21443 \let\dashedrightarrow\textdashrightarrow
 21444 \let\varnothing\textemptyset
 21445 \let\owns\textni
 21446 \let\notni\textnotowner
 21447 \let\varprop\textpropto
 21448 \let\varangle\textsphericalangle
 21449 \let\Anglesign\textsphericalangle
 21450 \let\AngleSign\textsphericalangle
 21451 \let\notdivides\textnmid
 21452 \let\varowedge\textowedge
 21453 \let\varovee\textovee
 21454 \let\varint\textint
 21455 \let\varoint\textoint
 21456 \let\downtherefore\textbecause
 21457 \let\textdotdiv\textdotminus
 21458 \let\AC\textsim
 21459 \let\wreath\textwr
 21460 \let\nthickapprox\textnapprox
 21461 \let\VHF\texttriplesim
 21462 \let\notasymp\textnasyp
 21463 \let\Doteq\textdoteqdot
 21464 \let\corresponds\texthateq
 21465 \let\Corresponds\texthateq
 21466 \let\nequal\textneq
 21467 \let\Congruent\textequiv
 21468 \let\NotCongruent\textnequiv
 21469 \let\notequiv\textnequiv
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 21471 \let\LargerOrEqual\textgeq
 21472 \let\apprle\textlessim
 21473 \let\apprge\textgtrsim
 21474 \let\varoplus\textoplus
 21475 \let\varominus\textominus
 21476 \let\varotimes\textotimes
 21477 \let\varoslash\textoslash
 21478 \let\varodot\textodot
 21479 \let\ocirc\textcircledcirc
 21480 \let\varocircle\textcircledcirc
 21481 \let\varoast\textcircledast
 21482 \let\oasterisk\textcircledast
 21483 \let\rightvdash\textvdash
 21484 \let\leftvdash\textdashv
 21485 \let\nleftvdash\textndashv
 21486 \let\downvdash\texttop
 21487 \let\upvdash\textbot
 21488 \let\nperp\textnupvdash
 21489 \let\models\textvDash

21490 \let\rightmodels\textvDash
 21491 \let\rightVdash\textVdash
 21492 \let\rightModels\textVDash
 21493 \let\trightvdash\textnvdash
 21494 \let\trightmodels\textnvDash
 21495 \let\ntmodels\textnvDash
 21496 \let\trightVdash\textnVdash
 21497 \let\trightModels\textnVDash
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 21499 \let\gtrclosed\textrhd
 21500 \let\leqclosed\textunlhd
 21501 \let\trianglelefteq\textunlhd
 21502 \let\geqclosed\textunrhd
 21503 \let\trianglerighteq\textunrhd
 21504 \let\Bowtie\textbowtie
 21505 \let\varcurlyvee\textcurlyvee
 21506 \let\varcurlywedge\textcurlywedge
 21507 \let\doublecap\textCap
 21508 \let\doublecup\textCup
 21509 \let\varsqsubsetneq\textsqsubsetneq
 21510 \let\varsqsupsetneq\textsqsupsetneq
 21511 \let\lessclosed\textntriangleleft
 21512 \let\ngtrclosed\textntriangleright
 21513 \let\Clocklogo\textclock
 21514 \let\ClockLogo\textclock
 21515 \let\baro\textstmaryrdbaro
 21516 \let\varparallelinv\textbbslash
 21517 \let\CleaningA\textCircledA
 21518 \let\Kutline\textCuttingLine
 21519 \let\CutLine\textCuttingLine
 21520 \let\Cutline\textCuttingLine
 21521 \let\MoveUp\textUParrow
 21522 \let\APLup\textbigtriangleup
 21523 \let\Bleech\textbigtriangleup
 21524 \let\MoveDown\textDOWNarrow
 21525 \let\APLdown\textbigtriangledown
 21526 \let\Diamond\textdiamond
 21527 \let\varbigcirc\textbigcircle
 21528 \let\Telefon\textPhone
 21529 \let\Box\textboxempty
 21530 \let\CheckedBox\textCheckedbox
 21531 \let\XBox\textCrossedbox
 21532 \let\CrossedBox\textCrossedbox
 21533 \let\rightpointleft\textHandLeft
 21534 \let\leftpointright\textHandRight
 21535 \let\PointingHand\textHandRight
 21536 \let\Pointinghand\textHandRight
 21537 \let\Radiation\textRadioactivity
 21538 \let\Yinyang\textYinYang
 21539 \let\YingYang\textYinYang
 21540 \let\Yingyang\textYinYang
 21541 \let\Frowny\textfrownie
 21542 \let\Smiley\textsmiley
 21543 \let\Sun\textsun
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 21545 \let\textfemale\textPUfemale
 21546 \let\female\textPUfemale

21547 \let\venus\textPUfemale
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 21568 \let\Capricorn\textcapricornus
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 21572 \let\Heart\textheartsuitwhite
 21573 \let\heartsuit\textheartsuitwhite
 21574 \let\diamondsuit\textdiamondsuitwhite
 21575 \let\clubsuit\textclubsuitblack
 21576 \let\eighthnote\textmusicalnote
 21577 \let\Recycling\textrecycle
 21578 \let\VarFlag\textFlag
 21579 \let\textxswup\textdsmilitary
 21580 \let\textuncrfemale\textPUuncrfemale
 21581 \let\Football\textSoccerBall
 21582 \let\CutLeft\textScissorRightBrokenBottom
 21583 \let\Cutright\textScissorRightBrokenBottom
 21584 \let\RightScissors\textScissorRight
 21585 \let\Leftscissors\textScissorRight
 21586 \let\Letter\textEnvelope
 21587 \let\Writinghand\textWritingHand
 21588 \let\checkmark\textCheckmark
 21589 \let\DavidStar\textDavidStar
 21590 \let\llbracket\textlbrackdbl
 21591 \let\rrbracket\textrrbrackdbl
 21592 \let\RightTorque\textlcurvearrowdown
 21593 \let\Righttorque\textlcurvearrowdown
 21594 \let\LeftTorque\textrcurvearrowdown
 21595 \let\Lefttorque\textrcurvearrowdown
 21596 \let\textvarobar\textobar
 21597 \let\circledbslash\textobslash
 21598 \let\obackslash\textobslash
 21599 \let\varobslash\textobslash
 21600 \let\odplus\textobot
 21601 \let\varolessthan\textolessthan
 21602 \let\varogreaterthan\textogreaterthan
 21603 \let\divdot\textminusdot

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21604 \let\doublesqcap\textsqdoublecap
21605 \let\doublesqcup\textsqdoublecup
21606 \let\merge\textdoublevee
21607 \let\leftVdash\textdashV
21608 \let\nleftVdash\textndashV
21609 \let\leftmodels\textDashv
21610 \let\nleftmodels\textnDashv
21611 \let\leftModels\textDashV
21612 \let\nleftModels\textnDashV
21613 \let\varparallel\textsslash
21614 \let\textheng\textPUheng
21615 \let\textlhookfour\textPUlhookfour
21616 \let\textscf\textPUscf
21617 \let\textaolig\textPUaolig
21618 \let\Ganz\textfullnote
21619 \let\Halb\texthalfnote
21620 \let\Womanface\textWomanFace
21621 \let\Faxmachine\textFax
21622 \let\CEsign\textCESign
21623 }% \psdaliasnames
21624 </psdextra>

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52 End of file hyccheck.tex

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21625 <*check>
21626 \typeout{}
21627 \begin{document}
21628 \end{document}
21629 </check>

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