

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 <*check>
2 \documentclass{article}
3 \makeatletter
```

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

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

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

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

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

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

`\HyC@checkPackage`

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

```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a 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}[2010/10/25]
236 \RequirePackage{ifpdf}[2006/02/20]
237 \RequirePackage{pdftexcmds}[2009/04/10]
238 \@ifpackagelater{pdftexcmds}{2010/11/04}{%}{%
239 \ltx@ifundefined{pdfdraftmode}{%
240 \let\pdf@ifdraftmode\ltx@secondoftwo
241 }{%
242 \ifpdf
243 \def\pdf@ifdraftmode{%
244 \ifnum\pdfdraftmode=\ltx@one
245 \expandafter\ltx@firstoftwo
246 \else
247 \expandafter\ltx@secondoftwo
248 \fi
249 }%
250 \else
251 \let\pdf@ifdraftmode\ltx@secondoftwo
252 \fi
253 }%
254 }

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

```

```

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

```

4.2 Version check

\Hy@VersionChecked

```

276 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

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

```

\Hy@@VersionCheck

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

4.3 Checks with regular expressions

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

4.4 Compatibility with format dumps

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

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

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

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

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

`\Hy@AtEndOfPackage`

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

`\Hy@AtBeginDocumentHook`

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

`\Hy@AtEndOfPackageHook`

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

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

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

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

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

4.5 Switches

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

```

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

```

Defaults for the switches are now set.

```

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

```



```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

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

```

5.1 Macros for recursions

```

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

```

5.2 Babel's protection of shorthand characters

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

\Hy@safe@activesfalse

```

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

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

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

`\hypercalcbp`

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

```

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

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

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

```
528 \begingroup
```

6.2.1 Preprocessing

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

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

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

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

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

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

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

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

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

```

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

```

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

```

546 \@inmathwarn\pdfstringdef

```

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

```

547 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

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

```

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

```

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

```

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

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

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

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

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

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

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

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

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

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

```

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

```

Package pifont.

```

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

```

Environments.

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

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

```

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

```

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

```

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

Package `german`.

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

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

Package `FrenchPro`. This package uses:

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

AMS classes.

657 `\HyPsd@AMSclassfix`

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

658 `\let\hspace\HyPsd@hspace`

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

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

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

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

Miscellaneous commands.

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

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

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

Patch for cjk bookmarks.

```
674 \HyPsd@CJKhook
```

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

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

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

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

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

Package xspace.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

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

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

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

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

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

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

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

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

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

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

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

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

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

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

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

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

```

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

```

6.2.3 Postprocessing

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

```

712 \ifx#1\@empty
713 \else

```

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

- T_EX 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 T_EX's argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by a marker for the xspace support.
- T_EX silently removes the outermost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

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

```

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

```

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

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

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

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

```

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

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

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

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

```

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

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

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

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

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

```

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

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

```

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

```

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

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

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

```

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

```

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

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

```

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

```

```

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

```

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

```

771 \let\HyPsd@empty\@empty

```

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

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

```

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

```

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

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

```

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

```

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

```

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

```

Try conversion back to PDFDocEncoding.

```

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

```

```

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

```

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

```

819   \pdfstringdefPostHook#1%
820 \endgroup
821 }

```

`\Hy@pdfstringdef`

```

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

```

6.3 Encodings

6.3.1 XeTeX

```

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

```

```

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

```

6.3.2 Workaround for package linguex

```

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

```



```

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

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

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

```

```

959 \catcode125 2 % }
960 \makeatletter
961 }

```

`\Hy@RestoreCatcodeSettings`

```

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

```

6.3.4 PD1 encoding

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

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

```

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

```

6.3.5 PU encoding

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

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

```

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

```

`\HyPsd@LoadExtra`

```

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

```

```

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

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

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

```

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

```

6.4.2 Hooks for `\pdfstringdef`

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

```

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

```

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

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

```

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

```

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

```

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

```

`\HyPsd@DisableCommands`

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

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

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

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

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

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

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

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

6.5.2 Babel languages

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

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

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

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

```

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

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

```

```

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

```

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

```

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

```

```

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

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

```

```

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

```



```

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

```

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

```

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

```

6.5.3 CJK patch

```

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

```

\HyPsd@CJKhook

```

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

```

6.5.4 CJK bookmarks

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

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

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

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

```

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

```

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

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

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

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

6.5.5 CJK unicode

`\HyPsd@CJKhook@unicode`

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

\HyPsd@CJK@Unicode

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

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

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

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

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

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

```

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

```

```

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

```

```

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

```

```

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

```

6.5.6 \@inmathwarn-Patch

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

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

```

\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}

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

\HyPsd@add@accent

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

```

6.5.7 Unexpandable spaces

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

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

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

```

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

```

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

```

1670 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

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

```

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

```

6.5.9 \hspace fix

\HyPsd@hspace

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

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

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

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

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

6.5.10 Fix for AMS classes

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

6.5.11 Reference commands

\HyPsd@href

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

`\HyPsd@@autorefname`

```

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

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

```

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

```

```

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

```

6.5.13 \ifnextchar

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

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

```

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

```

6.5.14 \@protected@testoptifnextchar

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

```

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

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

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

```

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

```

6.6.2 Protecting spaces

```

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

```

```

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

```

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

```

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

```

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

```

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

```

Remove mask.

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

```

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

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

```

```

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

```

6.6.3 Remove grouping braces

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

```

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

```

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

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

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

```

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

```



```

1922 \fi
1923 \Hy@ReturnEnd
1924 }

```

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

```

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

```

6.6.4 Catcode check

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`.

```

1931 \catcode'\Q=\active
1932 \let Q\ltx@empty
1933 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1934 \global\let\HyPsd@Rest\relax
1935 \ifcat\relax\noexpand#1\relax
1936 \ifx#1\protect
1937 \else
1938 \ifx#1\penalty
1939 \setbox\z@=\hbox{%
1940 \afterassignment\HyPsd@AfterCountRemove
1941 \count@=#2\HyPsd@End
1942 }%
1943 \else
1944 \ifx#1\kern
1945 \setbox\z@=\hbox{%
1946 \afterassignment\HyPsd@AfterDimenRemove
1947 \dimen@=#2\HyPsd@End
1948 }%
1949 \else
1950 \ifx#1\hskip
1951 \setbox\z@=\hbox{%
1952 \afterassignment\HyPsd@AfterSkipRemove
1953 \skip@=#2\HyPsd@End
1954 }%
1955 \else
1956 \HyPsd@CatcodeWarning{#1}%
1957 \fi

```

```

1958     \fi
1959     \fi
1960     \fi
1961 \else
1962   \ifcat\noexpand#1\noexpandQ% active character
1963     \expandafter\expandafter\expandafter\def
1964       \expandafter\expandafter\expandafter\HyPsd@String
1965       \expandafter\expandafter\expandafter{%
1966         \expandafter\HyPsd@String\string#1%
1967       }%
1968 \else
1969   \ifcat#1A% letter
1970     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1971       \HyPsd@String#1%
1972     }%
1973 \else
1974   \ifcat#1 % SPACE
1975     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1976       \HyPsd@String\HyPsd@SPACEOPTI
1977     }%
1978 \else
1979   \ifcat$#1%
1980     \HyPsd@CatcodeWarning{math shift}%
1981 \else
1982   \ifcat&#1%
1983     \HyPsd@CatcodeWarning{alignment tab}%
1984 \else
1985   \ifcat^#1%
1986     \HyPsd@CatcodeWarning{superscript}%
1987 \else
1988   \ifcat_#1%
1989     \HyPsd@CatcodeWarning{subscript}%
1990 \else
1991   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1992     \HyPsd@String#1%
1993   }%
1994   \fi
1995   \fi
1996   \fi
1997   \fi
1998   \fi
1999   \fi
2000   \fi
2001 \fi
2002 \ifx\HyPsd@Rest\relax
2003   \ifx\scrollmode#2\scrollmode
2004     \else
2005       \Hy@ReturnAfterFiFiEnd{%
2006         \HyPsd@CheckCatcodes#2\HyPsd@end
2007       }%
2008     \fi
2009   \else
2010     \ifx\HyPsd@Rest\@empty
2011       \else
2012         \Hy@ReturnAfterFiFiEnd{%
2013           \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@end
2014         }%

```

```

2015 \fi
2016 \fi
2017 \Hy@ReturnEnd
2018 }
2019 \catcode'\Q=11 %

```

Remove counts, dimens, skips.

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

```

2020 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2021 \gdef\HyPsd@Rest{#1}%
2022 }

```

`\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.

```

2023 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
2024 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2025 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2026 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2027 \else
2028 \ifdim\dimen@=\z@
2029 \else
2030 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2031 \fi
2032 \gdef\HyPsd@Rest{#1}%
2033 \fi
2034 }

```

`\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).

```

2035 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
2036 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2037 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2038 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2039 \else
2040 \ifdim\skip@=\z@
2041 \else
2042 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2043 \fi
2044 \gdef\HyPsd@Rest{#1}%
2045 \fi
2046 }

```

Catcode warnings.

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

```

2047 \def\HyPsd@CatcodeWarning#1{%
2048 \HyPsd@Warning{%
2049 Token not allowed in a PDF string (%
2050 \ifHy@unicode
2051 Unicode%
2052 \else
2053 PDFDocEncoding%
2054 \fi

```

```

2055 ):%
2056 \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
2057 }%
2058 }
2059 \beginingroup
2060 \catcode'\|=0 %
2061 \catcode'\|=12 %
2062 \gdef\HyPsd@RemoveCmdPrefix#1{%
2063   \expandafter\HyPsd@@RemoveCmdPrefix
2064     \string#1|\@empty\<>-|\@empty|\@empty
2065 }%
2066 \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
2067 \endgroup

```

\HyPsd@RemoveSpaceWarning

```

2068 \def\HyPsd@RemoveSpaceWarning#1{%
2069   \HyPsd@Warning{%
2070     Token not allowed in a PDF string (%
2071     \ifHy@unicode
2072       Unicode%
2073     \else
2074       PDFDocEncoding%
2075     \fi
2076   ):%
2077   \MessageBreak #1\MessageBreak
2078   removed%
2079 }%
2080 }

```

\HyPsd@ReplaceSpaceWarning

```

2081 \def\HyPsd@ReplaceSpaceWarning#1{%
2082   \HyPsd@Warning{%
2083     Token not allowed in a PDF string (%
2084     \ifHy@unicode
2085       Unicode%
2086     \else
2087       PDFDocEncoding%
2088     \fi
2089   ):%
2090   \MessageBreak #1\MessageBreak
2091   replaced by space%
2092 }%
2093 }

```

6.6.5 Check for wrong glyphs

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

```

2094 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2095   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2096     \HyPsd@String#1%
2097   }%
2098   \ifx\|#2\|
2099   \else
2100     \ltx@ReturnAfterFi{%
2101       \HyPsd@GlyphProcessWarning#2\@empty
2102     }%

```

```

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

```

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`.

```

2125 \def\HyPsd@spaceopti#1{ % first space
2126 \ifx\HyPsd@spaceopti#1%
2127 \040%
2128 \else
2129 #1%
2130 \fi
2131 }%

```

6.6.6 Replacing tokens

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

- `#1` Exact the tokens that should be replaced.
- `#2` The replacement (don't need to be expanded).
- `#3` Command with the string.

```

2132 \def\HyPsd@Subst#1#2#3{%
2133 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2134 \fi
2135 ##1%
2136 \ifx\scrollmode##2\scrollmode
2137 \else
2138 #2%
2139 \HyPsd@@ReplaceFi##2\END
2140 \fi
2141 }%
2142 \xdef#3{%

```

```

2143 \iftrue
2144 \expandafter\HyPsd@@ReplaceFi#3#1\END
2145 \fi
2146 }%
2147 }

```

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

```

2148 \def\HyPsd@StringSubst#1{%
2149 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2150 }

```

`\HyPsd@EscapeTeX`

```

2151 \begingroup
2152 \lccode'\!='\%%
2153 \lccode'\|='\%%
2154 \lccode'\(='\{%
2155 \lccode'\)='\}%
2156 \lccode'0=\ltx@zero
2157 \lccode'1=\ltx@zero
2158 \lccode'3=\ltx@zero
2159 \lccode'4=\ltx@zero
2160 \lccode'5=\ltx@zero
2161 \lccode'7=\ltx@zero
2162 \lowercase{\endgroup
2163 \def\HyPsd@EscapeTeX#1{%
2164 \HyPsd@Subst!{|045}#1%
2165 \HyPsd@Subst({|173}#1%
2166 \HyPsd@Subst){|175}#1%
2167 }%
2168 }

```

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.

```

2169 \def\HyPsd@doxspace#1{%
2170 \ifx#1\relax\else
2171 \ifx#1.\else
2172 \ifx#1:\else
2173 \ifx#1,\else
2174 \ifx#1;\else
2175 \ifx#1!\else
2176 \ifx#1?\else
2177 \ifx#1/\else
2178 \ifx#1-\else
2179 \ifx#1'\else
2180 \HyPsd@SPACEOPTI
2181 \fi
2182 \fi
2183 \fi
2184 \fi
2185 \fi
2186 \fi
2187 \fi

```

```

2188  \fi
2189  \fi
2190  \fi
2191  #1%
2192 }%

```

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.

```

2193 \beginingroup
2194 \catcode'\|=0 %
2195 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

2196 |gdef|HyPsd@ConvertToUnicode#1{%
2197 |xdef#1{%
2198 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2199 }%
2200 |ifx#1|@empty
2201 |else
2202 |xdef#1{%
2203 \376\377%
2204 #1%
2205 }%
2206 |fi
2207 }%

```

\HyPsd@DoConvert

```

2208 |gdef|HyPsd@DoConvert#1{%
2209 |ifx#1|@empty
2210 |else
2211 |ltx@ReturnAfterFi{%
2212 |ifx#1\%%
2213 \%%
2214 |expandafter|HyPsd@DoEscape
2215 |else
2216 |HyPsd@Char{#1}%
2217 |expandafter|HyPsd@DoConvert
2218 |fi
2219 }%
2220 |fi
2221 }%

```

\HyPsd@DoEscape

```

2222 |gdef|HyPsd@DoEscape#1{%
2223 |ifx#19%
2224 |expandafter|HyPsd@GetTwoBytes
2225 |else
2226 |ltx@ReturnAfterFi{%
2227 |ifx#18%
2228 00%
2229 |expandafter|HyPsd@GetTwoBytes
2230 |else
2231 #1%
2232 |expandafter|HyPsd@GetOneByte

```

```

2233     |fi
2234   }%
2235   |fi
2236 }%

```

`\HyPsd@GetTwoBytes`

```

2237 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2238   #1\#2#3#4%
2239   |HyPsd@DoConvert
2240 }%

```

`\HyPsd@GetOneByte`

```

2241 |gdef|HyPsd@GetOneByte#1#2{%
2242   #1#2%
2243   |HyPsd@DoConvert
2244 }%
2245 |endgroup

```

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

```

2246 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2247   \xdef#4{#4#1#2}%
2248   \HyPsd@@ConvertToUnicode#3\END#4%
2249 }

```

`\HyPsd@Char`

```

2250 \begingroup
2251   \catcode0=9 %
2252   \catcode'\^=7 %
2253   \catcode'\^^=12 %
2254   \def\x{^^^0000}%
2255 \expandafter\endgroup
2256 \ifx\x\@empty
2257   \def\HyPsd@Char#1{%
2258     \ifnum'#1<128 %
2259       \@backslashchar 000#1%
2260     \else
2261       \ifnum'#1<65536 %
2262         \expandafter\HyPsd@CharTwoByte\number'#1!%
2263       \else
2264         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2265         \intcalcSub{'#1}{65536}!%
2266       \fi
2267     \fi
2268   }%
2269 \def\HyPsd@CharTwoByte#1!{%
2270   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2271   \IntCalcDiv#1!256!!%
2272   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2273   \IntCalcMod#1!256!!%
2274 }%
2275 \def\HyPsd@CharOctByte#1!{%
2276   \@backslashchar
2277   \IntCalcDiv#1!64!%
2278   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2279   \IntCalcMod#1!8!%
2280 }%

```



```

2281 \def\HyPsd@CharSurrogate#1!{%
2282   \@backslashchar 33%
2283   \IntCalcDiv#1!262144!%
2284   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2285   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2286   \@backslashchar 33%
2287   \expandafter\expandafter\expandafter\IntCalcAdd
2288   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2289   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2290   \IntCalcMod#1!256!!%
2291 }%
2292 \else
2293 \def\HyPsd@Char#1{%
2294   \@backslashchar 000#1%
2295 }%
2296 \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`

```

2297 \begingroup\expandafter\expandafter\expandafter\endgroup
2298 \expandafter\ifx\csname numexpr\endcsname\relax
2299   \let\HyPsd@UTFviii\relax
2300 \else
2301   \begingroup
2302     \lccode'\~='^^f4\relax
2303     \lowercase{\endgroup
2304       \def\HyPsd@UTFviii{%
2305         \let\UTFviii@two@octets\HyPsd@UTFviii@two
2306         \let\UTFviii@three@octets\HyPsd@UTFviii@three
2307         \let\UTFviii@four@octets\HyPsd@UTFviii@four
2308         \ifx~\HyPsd@UTFviii@ccxliv@undef
2309           \let~\HyPsd@UTFviii@ccxliv@def
2310         \fi
2311         \let\unichar\HyPsd@unichar
2312       }%
2313     }%
2314     \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2315     \edef\HyPsd@UTFviii@ccxliv@def{%
2316       \noexpand\UTFviii@four@octets\string ^^f4%
2317     }%

```

The two octet form of UTF-8 110aaabb (A) and 10ccdd (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.

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

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

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

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

$$(5)$$

```

2318 \def\HyPsd@UTFviii@two#1#2{%
2319 \expandafter\HyPsd@UTFviii@@two
2320 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
2321 \number'#1\expandafter|
2322 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
2323 \number'#2 \@nil
2324 }%
2325 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2326 \expandafter\8%
2327 \number\numexpr #1-48\expandafter\relax
2328 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2329 \number\numexpr #3-8*%
2330 \number\dimexpr.125\dimexpr'#3sp\relax\relax\expandafter\relax
2331 \number\numexpr #4-8*#3\relax
2332 }%
```

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

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

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

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

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

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

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

$$(12)$$

```

2333 \def\HyPsd@UTFviii@three#1#2#3{%
2334 \expandafter\HyPsd@UTFviii@@three
2335 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
2336 \number'#1\expandafter|
2337 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
2338 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
2339 \number'#2\expandafter|
2340 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
2341 \number'#3 \@nil
2342 }%
2343 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2344 \expandafter\9%
2345 \number\numexpr #1-56\expandafter\relax
2346 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2347 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2348 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2349 \number\numexpr #6-16\expandafter\relax
2350 \number\numexpr #7-8*#6\relax
2351 }%
```

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

```

2352 \def\HyPsd@UTFviii@four#1#2{%
2353   \expandafter\HyPsd@@UTFviii@four\number
2354   \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2355   \expandafter|\number
2356   \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2357 }%
2358 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2359   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2360   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2361   \ifodd#2 %
2362     \number\numexpr(#2-1)/2\relax
2363   \else
2364     \number\numexpr#2/2\relax
2365   \fi
2366   \number\numexpr\ifodd#2 4+\fi
2367   \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2368   \933%
2369   \expandafter\HyPsd@@@UTFviii@four\number
2370   \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2371 }%
2372 \def\HyPsd@@@UTFviii@four#1|#2{%
2373   \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2374   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2375   \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2376   \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2377 }%

```

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

```

2378 \def\HyPsd@unichar#1{%
2379   \ifHy@unicode
2380     \ifnum#1>"10FFFF %
2381       \HyPsd@UnicodeReplacementCharacter % illegal
2382     \else
2383       \ifnum#1>"FFFF %

```

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

```

2384   \expandafter\HyPsd@unichar\expandafter{%
2385     \number\numexpr 55296+%
2386     \dimexpr.0009765625\dimexpr\number#1sp-\p@
2387     \relax\relax\relax
2388   }%

```

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

```

2389   \expandafter\HyPsd@unichar\expandafter{%
2390     \number\numexpr#1-9216%
2391     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2392     \relax\relax\relax
2393   }%
2394   \else
2395     \ifnum#1>"7FFF %
2396     \9%
2397     \expandafter\HyPsd@unichar@first@byte\expandafter{%
2398       \number
2399       \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2400     }%

```

```

2401     \else
2402     \8%
2403     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2404     \fi
2405     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2406     \number
2407     \numexpr#1-256*\number
2408     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2409     }%
2410     \fi
2411     \fi
2412     \else
2413     .% unsupported (Unicode -> PDF Doc Encoding)
2414     \fi
2415     }%
2416     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2417     \def\HyPsd@unichar@first@byte#1{%
2418     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2419     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2420     \number
2421     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2422     \relax\relax\relax
2423     }%
2424     }%
2425     \def\HyPsd@unichar@second@byte#1{%
2426     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2427     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2428     \number
2429     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2430     \relax\relax\relax
2431     }%
2432     }%
2433     \def\HyPsd@unichar@octtwo#1{%
2434     \number\dimexpr.125\dimexpr#1sp\relax\relax
2435     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2436     \relax\relax\relax
2437     }%
2438     \fi

```

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

```

2439 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2440 \ifx\@gobble#1%
2441 \else
2442 [Please insert \textbackslash PrerenderUnicode%
2443 \textbraceleft#1\textbraceright\space
2444 into preamble]%
2445 \fi
2446 }%

```

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`.

```

2447 \def\HyPsd@DieFace#1{%
2448   \ifHy@unicode
2449     \ifnum#1<1 %
2450       \HyPsd@UnicodeReplacementCharacter
2451     \else
2452       \ifnum#1>6 %
2453         \9046\205%
2454         \expandafter\expandafter\expandafter
2455         \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2456       \else
2457         \9046\20\intcalcDec{#1}%
2458       \fi
2459     \fi
2460   \else
2461     .% Die faces are not part of PDFDocEncoding
2462   \fi
2463 }
```

`\HyPsd@DieFaceLarge`

```

2464 \def\HyPsd@DieFaceLarge#1!{%
2465   \ifnum#1>6 %
2466     \expandafter\ltx@firstoftwo
2467   \else
2468     \expandafter\ltx@secondoftwo
2469   \fi
2470   {%
2471     \9046\205%
2472     \expandafter\expandafter\expandafter
2473     \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2474   }{%
2475     \9046\20\IntCalcDec#1!%
2476   }%
2477 }
```

6.6.11 Support for moon phases of package china2e

```

2478 \def\HyPsd@MoonPha#1{%
2479   \ifcase\intcalcNum{#1} %
2480     \HyPsd@UnicodeReplacementCharacter
2481   \or % 1
2482   % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2483   \9330\074\9337\032%
2484   \or % 2
2485   \HyPsd@UnicodeReplacementCharacter
2486   \or % 3
2487   % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2488   \9330\074\9337\035%
2489   \or % 4
2490   % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2491   \9330\074\9337\034%
2492   \else
2493     \HyPsd@UnicodeReplacementCharacter
2494   \fi
2495 }
```

2496 %* \HyPsd@MoonPha -> \MoonPha

6.6.12 Support for package pifont

\HyPsd@ding

```
2497 \def\HyPsd@ding#1{%
2498   \ifHy@unicode
2499     \ifnum#1<32 %
2500       \HyPsd@UnicodeReplacementCharacter
2501     \else
2502       \ifnum#1>254 %
2503         \HyPsd@UnicodeReplacementCharacter
2504       \else
2505         \ifnum#1<127 %
2506           \expandafter\expandafter\expandafter
2507             \HyPsd@@ding\intcalcNum{#1}!%
2508         \else
2509           \ifnum#1>160 %
2510             \expandafter\expandafter\expandafter
2511               \HyPsd@@ding\intcalcNum{#1}!%
2512           \else
2513             \HyPsd@UnicodeReplacementCharacter
2514           \fi
2515         \fi
2516       \fi
2517     \fi
2518   \else
2519     .% Dingbats are not part of PDFDocEncoding
2520   \fi
2521 }
```

\HyPsd@@ding

```
2522 \def\HyPsd@@ding#1!{%
2523   \ltx@ifundefined{HyPsd@ding@#1}{%
2524     \ifnum#1<127 %
2525       \9047%
2526       \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2527     \else
2528       \ifnum#1<168 %
2529         \9047\14\IntCalcSub#1!160!%
2530       \else
2531         \ifnum#1>181 %
2532           \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2533         \else
2534           % 172..181 -> U+2460..U+2469
2535           \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2536         \fi
2537       \fi
2538     \fi
2539   }{%
2540     \csname HyPsd@ding@#1\endcsname
2541   }%
2542 }

2543 \@namedef{HyPsd@ding@32}{\space}
2544 % U+260E BLACK TELEPHONE
2545 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2546 % U+261B BLACK RIGHT POINTING INDEX
```

```

2547 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2548 % U+261E WHITE RIGHT POINTING INDEX
2549 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2550 % U+2605 BLACK STAR
2551 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2552 % U+25CF BLACK CIRCLE
2553 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2554 % U+25A0 BLACK SQUARE
2555 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2556 % U+25B2 BLACK UP-POINTING TRIANGLE
2557 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2558 % U+25BC BLACK DOWN-POINTING TRIANGLE
2559 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2560 % U+25C6 BLACK DIAMOND
2561 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2562 % U+25D7 RIGHT HALF BLACK CIRCLE
2563 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2564 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2565 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2566 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2567 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2568 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2569 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2570 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2571 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2572 \@ifclassloaded{memoir}{%
2573   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2574 }{}

```

7.2 Package subfigure

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

```

2575 \@ifpackageloaded{subfigure}{%
2576   \ltx@ifundefined{sub@label}{%
2577     \Hy@hypertextnamesfalse
2578   }{%
2579     \renewcommand*{\sub@label}[1]{%
2580       \@bsphack
2581       \subfig@oldlabel{#1}%
2582       \if@filesw
2583         \begingroup
2584         \edef\@currentlabstr{%
2585           \expandafter\strip@prefix\meaning\@currentlabelname
2586         }%
2587         \protected@write\@auxout{}{%
2588           \string\newlabel{sub@#1}{%
2589             {\@nameuse{\@thesub\@capytype}}%
2590             {\thepage}%
2591           }%
2592           \expandafter\strip@period\@currentlabstr
2593           \relax.\relax\@@@%
2594         }%

```

```

2595         {\@currentHref}%
2596     }%
2597 }%
2598 }%
2599 \endgroup
2600 \fi
2601 \@esphack
2602 }%
2603 \@ifpackagelater{subfigure}{2002/03/26}{\%
2604     \providecommand*\@toclevel@subfigure}{1}%
2605     \providecommand*\@toclevel@subtable}{1}%
2606 }%
2607 }%
2608 }{}

```

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:

```

2609 \ltx@ifundefined{XR@addURL}{\%
2610 }{}%

```

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.

```

2611 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2612 \def\xr@dURL#1#2#3#4#5\\{\%
2613     {#1}{#2}%
2614     \if!#4!%
2615     \else
2616         {#3}{#4}{\xr@URL}%
2617     \fi
2618 }%
2619 }

2620 \def\Hy@true{true}
2621 \def\Hy@false{false}

```

Providing dummy definitions.

```

2622 \let\literalps@out\@gobble
2623 \newcommand\pdfbookmark[3]{}
2624 \def\Acrobatmenu#1#2{\leavevmode#2}
2625 \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


```

2626 \let\HyperRaiseLinkHook\@empty
2627 \def\HyperRaiseLinkDefault{\baselineskip}
\HyperRaiseLinkHook allows the user to reassign \HyperRaiseLinkLength.

```

```

2628 \newcount\Hy@SavedSpaceFactor
2629 \def\Hy@SaveSpaceFactor{%
2630   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2631 }
2632 \def\Hy@RestoreSpaceFactor{%
2633   \relax
2634   \ifhmode
2635     \ifnum\Hy@SavedSpaceFactor>\z@
2636       \spacefactor=\Hy@SavedSpaceFactor
2637     \fi
2638   \fi
2639 }
2640 \def\Hy@SaveSavedSpaceFactor{%
2641   \edef\Hy@RestoreSavedSpaceFactor{%
2642     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2643   }%
2644 }
2645 \def\Hy@raisedlink#1{%
2646   \ifvmode
2647     #1%
2648   \else
2649     \Hy@SaveSpaceFactor
2650     \penalty\@M
2651     \smash{%
2652       \begingroup
2653         \let\HyperRaiseLinkLength\@tempdima
2654         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2655         \HyperRaiseLinkHook
2656       \expandafter\endgroup
2657       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2658         \Hy@RestoreSpaceFactor
2659         #1%
2660         \Hy@SaveSpaceFactor
2661       }%
2662     }%
2663   \Hy@RestoreSpaceFactor
2664   \fi
2665 }

```

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

```

2666 \def\Hy@SaveLastskip{%
2667   \let\Hy@RestoreLastskip\relax
2668   \ifvmode
2669     \ifdim\lastskip=\z@
2670       \let\Hy@RestoreLastskip\nobreak
2671     \else
2672       \begingroup
2673         \skip@=-\lastskip
2674       \edef\x{%
2675         \endgroup
2676         \def\noexpand\Hy@RestoreLastskip{%
2677           \noexpand\ifvmode
2678             \noexpand\nobreak
2679             \vskip\the\skip@

```

```

2680         \vskip\the\lastskip\relax
2681         \noexpand\fi
2682     }%
2683 }%
2684 \x
2685 \fi
2686 \else
2687 \ifhmode
2688 \ifdim\lastskip=\z@
2689 \let\Hy@RestoreLastskip\nobreak
2690 \else
2691 \begingroup
2692 \skip@=-\lastskip
2693 \edef\x{%
2694 \endgroup
2695 \def\noexpand\Hy@RestoreLastskip{%
2696 \noexpand\ifhmode
2697 \noexpand\nobreak
2698 \hskip\the\skip@
2699 \hskip\the\lastskip\relax
2700 \noexpand\fi
2701 }%
2702 }%
2703 \x
2704 \fi
2705 \fi
2706 \fi
2707 }%

```

9 Options

```

2708 \SetupKeyvalOptions{%
2709 family=Hyp,%
2710 prefix=HyOpt%
2711 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```

2712 \def\IfHyperBooleanExists#1{%
2713 \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2714 \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2715 }%
2716 }

2717 \@namedef{KV@Hyp@stoppearly@default}{ }

```

`\IfHyperBoolean`

```

2718 \def\IfHyperBoolean#1{%
2719 \IfHyperBooleanExists{#1}{%
2720 \csname ifHy@#1\endcsname
2721 \expandafter\ltx@firstoftwo
2722 \else
2723 \expandafter\ltx@secondoftwo
2724 \fi
2725 }\ltx@secondoftwo
2726 }

```

\Hy@boolkey

```
2727 \def\Hy@boolkey#1#2{%
2728   \edef\Hy@tempa{#2}%
2729   \lowercase\expandafter{%
2730     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2731   }%
2732   \ifx\Hy@tempa\@empty
2733     \let\Hy@tempa\Hy@true
2734   \fi
2735   \ifx\Hy@tempa\Hy@true
2736   \else
2737     \ifx\Hy@tempa\Hy@false
2738     \else
2739       \let\Hy@tempa\relax
2740     \fi
2741   \fi
2742   \ifx\Hy@tempa\relax
2743     \Hy@WarnOptionValue{#2}{#1}{‘true’ or ‘false’}%
2744   \else
2745     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2746     \csname Hy@#1\Hy@tempa\endcsname
2747   \fi
2748 }
```

\Hy@WarnOptionValue

```
2749 \def\Hy@WarnOptionValue#1#2#3{%
2750   \Hy@Warning{%
2751     Unexpected value ‘#1’\MessageBreak
2752     of option ‘#2’ instead of\MessageBreak
2753     #3%
2754   }%
2755 }
```

\Hy@DisableOption

```
2756 \def\Hy@DisableOption#1{%
2757   \ltx@ifundefined{KV@Hyp@#1@default}{%
2758     \define@key{Hyp}{#1}%
2759   }{%
2760     \define@key{Hyp}{#1}[]%
2761   }%
2762   {\Hy@WarnOptionDisabled{#1}}%
2763 }
```

\Hy@WarnOptionDisabled

```
2764 \def\Hy@WarnOptionDisabled#1{%
2765   \Hy@Warning{%
2766     Option ‘#1’ has already been used,\MessageBreak
2767     setting the option has no effect%
2768   }%
2769 }
```

\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.

```
2770 \def\Hy@CheckOptionValue#1#2#3{%
2771   \begingroup
2772   \edef\x{#1}%
```

```

2773 \@onelevel@sanitize\x
2774 \let\y=y%
2775 \def\do##1##2{%
2776   \def\z{##1}%
2777   \@onelevel@sanitize\z
2778   \ifx\x\z
2779     \let\y=n%
2780     \let\do\@gobbletwo
2781   \fi
2782 }%
2783 #3%
2784 \ifx\y y%
2785   \def\do##1##2{%
2786     * '##1'%
2787     \ifx\\##2\\\else\space(##2)\fi
2788     \MessageBreak
2789   }%
2790 \Hy@Warning{%
2791   Values of option '#2':\MessageBreak
2792   #3%
2793   * An empty value disables the option.\MessageBreak
2794   Unknown value '\x'%
2795 }%
2796 \fi
2797 \endgroup
2798 }

```

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

```

2799 \def\Hy@DefNameKey#1{%
2800   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2801 }

```

\Hy@@DefNameKey #1: macro for value storage
 #2: option name
 #3: \do list with known values.

```

2802 \def\Hy@@DefNameKey#1#2#3{%
2803   \define@key{Hyp}{#2}{%
2804     \edef#1{##1}%
2805     \ifx#1\@empty
2806     \else
2807       \Hy@CheckOptionValue{##1}{#2}{#3}%
2808     \fi
2809   }%
2810   \let#1\@empty
2811 }

```

\Hy@UseNameKey

```

2812 \def\Hy@UseNameKey#1#2{%
2813   \ifx#2\@empty
2814   \else
2815     /#1/#2%
2816   \fi
2817 }

```

9.2 Defining the options

```

2818 \define@key{Hyp}{implicit}[true]{%
2819   \Hy@boolkey{implicit}{#1}%
2820 }
2821 \define@key{Hyp}{draft}[true]{%
2822   \Hy@boolkey{draft}{#1}%
2823 }
2824 \define@key{Hyp}{final}[true]{%
2825   \Hy@boolkey{final}{#1}%
2826 }
2827 \let\KV@Hyp@nolinks\KV@Hyp@draft

2828 \def\Hy@ObsoletePaperOption#1{%
2829   \Hy@WarningNoLine{%
2830     Option ‘#1’ is no longer used%
2831   }%
2832   \define@key{Hyp}{#1}[true]{}%
2833 }
2834 \def\Hy@temp#1{%
2835   \define@key{Hyp}{#1}[true]{%
2836     \Hy@ObsoletePaperOption{#1}%
2837   }%
2838 }
2839 \Hy@temp{a4paper}
2840 \Hy@temp{a5paper}
2841 \Hy@temp{b5paper}
2842 \Hy@temp{letterpaper}
2843 \Hy@temp{legalpaper}
2844 \Hy@temp{executivepaper}

2845 \define@key{Hyp}{setpagesize}[true]{%
2846   \Hy@boolkey{setpagesize}{#1}%
2847 }
2848 \define@key{Hyp}{debug}[true]{%
2849   \Hy@boolkey{debug}{#1}%
2850 }
2851 \define@key{Hyp}{linktocpage}[true]{%
2852   \Hy@boolkey{linktocpage}{#1}%
2853   \ifHy@linktocpage
2854     \let\Hy@linktoc\Hy@linktoc@page
2855   \else
2856     \let\Hy@linktoc\Hy@linktoc@section
2857   \fi
2858 }
2859 \chardef\Hy@linktoc@none=0 %
2860 \chardef\Hy@linktoc@section=1 %
2861 \chardef\Hy@linktoc@page=2 %
2862 \chardef\Hy@linktoc@all=3 %
2863 \ifHy@linktocpage
2864   \let\Hy@linktoc\Hy@linktoc@page
2865 \else
2866   \let\Hy@linktoc\Hy@linktoc@section
2867 \fi
2868 \define@key{Hyp}{linktoc}{%
2869   \@ifundefined{Hy@linktoc@#1}{%
2870     \Hy@Warning{%
2871       Unexpected value ‘#1’ of\MessageBreak
2872       option ‘linktoc’ instead of ‘none’,\MessageBreak

```

```

2873     'section', 'page' or 'all'%
2874   }%
2875 }{%
2876   \expandafter\let\expandafter\Hy@linktoc
2877   \csname Hy@linktoc@#1\endcsname
2878 }%
2879 }
2880 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2881 \let\XR@ext\relax
2882 \define@key{Hyp}{verbose}[true]{%
2883   \Hy@boolkey{verbose}{#1}%
2884 }
2885 \define@key{Hyp}{typexml}[true]{%
2886   \Hy@boolkey{typexml}{#1}%
2887 }

```

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.

```

2888 \define@key{Hyp}{raiselinks}[true]{%
2889   \Hy@boolkey{raiselinks}{#1}%
2890 }

```

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

```

2891 \def\Hy@setbreaklinks#1{%
2892   \csname breaklinks#1\endcsname
2893 }
2894 \def\Hy@breaklinks@unsupported{%
2895   \ifx\Hy@setbreaklinks@gobble
2896     \ifHy@breaklinks
2897       \Hy@WarningNoLine{%
2898         You have enabled option 'breaklinks'.\MessageBreak
2899         But driver '\Hy@driver.def' does not support this.\MessageBreak
2900         Expect trouble with the link areas of broken links%
2901       }%
2902     \fi
2903     \fi
2904 }
2905 \define@key{Hyp}{breaklinks}[true]{%
2906   \Hy@boolkey{breaklinks}{#1}%
2907   \let\Hy@setbreaklinks@gobble
2908 }
2909 \define@key{Hyp}{localanchorname}[true]{%
2910   \Hy@boolkey{localanchorname}{#1}%
2911 }

```

Determines whether an automatic anchor is put on each page

```

2912 \define@key{Hyp}{pageanchor}[true]{%
2913   \Hy@boolkey{pageanchor}{#1}%
2914 }

```

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.

```

2915 \define@key{Hyp}{plainpages}[true]{%
2916   \Hy@boolkey{plainpages}{#1}%
2917 }

```

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

```
2918 \define@key{Hyp}{naturalnames}[true]{%
2919   \Hy@boolkey{naturalnames}{#1}%
2920 }
```

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

```
2921 \define@key{Hyp}{hypertextnames}[true]{%
2922   \Hy@boolkey{hypertextnames}{#1}%
2923 }
```

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

```
2924 \define@key{Hyp}{nesting}[true]{%
2925   \Hy@boolkey{nesting}{#1}%
2926 }
```

```
2927 \define@key{Hyp}{destlabel}[true]{%
2928   \Hy@boolkey{destlabel}{#1}%
2929 }
```

```
2930 \define@key{Hyp}{unicode}[true]{%
2931   \Hy@boolkey{unicode}{#1}%
2932   \ifHy@unicode
2933     \def\HyPsd@pdfencoding{unicode}%
2934     \HyPsd@LoadUnicode
2935   \else
2936     \def\HyPsd@pdfencoding{pdfdoc}%
2937   \fi
2938 }
```

```
2939 \Hy@AtBeginDocument{%
2940   \ifx\HyPsd@LoadUnicode\relax
2941   \else
2942     \def\HyPsd@LoadUnicode{%
2943       \Hy@Error{%
2944         Unicode support for bookmarks is not available.\MessageBreak
2945         Activate unicode support by using one of the options\MessageBreak
2946         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2947         in the preamble%
2948       }\@ehc
2949       \global\let\HyPsd@LoadUnicode\relax
2950       \global\Hy@unicodetrue
2951       \global\let\Hy@unicodetrue\Hy@unicodetrue
2952     }%
2953   \fi
2954 }
```

```
2955 \define@key{Hyp}{pdfencoding}{%
2956   \edef\HyPsd@temp{#1}%
2957   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2958     \let\HyPsd@pdfencoding\HyPsd@temp
2959     \Hy@unicodetrue
2960   \else
2961     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2962       \z@
2963     \else
2964       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2965         \z@
2966       \else
```

```

2967         \@ne
2968     \fi
2969 \fi
2970 \let\HyPsd@pdfencoding\HyPsd@temp
2971 \hypersetup{unicode}%
2972 \ifHy@unicode
2973     \def\HyPsd@pdfencoding{#1}%
2974     \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2975         \HyPsd@LoadStringEnc
2976     \fi
2977 \else
2978     \Hy@Warning{Cannot switch to unicode bookmarks}%
2979     \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2980 \fi
2981 \else
2982     \@onelevel@sanitize\HyPsd@temp
2983     \Hy@Warning{%
2984         Values of option 'pdfencoding':\MessageBreak
2985         'pdfdoc', 'unicode', 'auto'.\MessageBreak
2986         Ignoring unknown value '\HyPsd@temp'%
2987     }%
2988 \fi
2989 \fi
2990 }
2991 \def\HyPsd@pdfencoding@auto{auto}
2992 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2993 \def\HyPsd@pdfencoding@unicode{unicode}
2994 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2995 \def\HyPsd@LoadStringEnc{%
2996     \RequirePackage{stringenc}[2009/12/15]%
2997     \let\HyPsd@LoadStringEnc\relax
2998 }
2999 \Hy@AtBeginDocument{%
3000     \@ifpackageloaded{stringenc}{%
3001         \let\HyPsd@LoadStringEnc\relax
3002     }{%
3003         \def\HyPsd@LoadStringEnc{%
3004             \Hy@WarningNoLine{%
3005                 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
3006                 in the preamble or load the package there%
3007             }%
3008         }%
3009     }%
3010 }
3011 \define@key{Hyp}{psdextra}[true]{%
3012     \Hy@boolkey{psdextra}{#1}%
3013     \HyPsd@LoadExtra
3014 }
3015 \def\hypersetup{\kvsetkeys{Hyp}}
3016 \newif\ifHy@setpdfversion
3017 \define@key{Hyp}{pdfversion}{%
3018     \@ifundefined{Hy@pdfversion@#1}{%
3019         \PackageWarning{hyperref}{%
3020             Unsupported PDF version '#1'.\MessageBreak
3021             Valid values: 1.2 until 1.9%
3022         }%

```



```

3023 }{%
3024   \Hy@setpdfversiontrue
3025   \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3026 }%
3027 }
3028 \@namedef{Hy@pdfversion@1.2}{2}%
3029 \@namedef{Hy@pdfversion@1.3}{3}%
3030 \@namedef{Hy@pdfversion@1.4}{4}%
3031 \@namedef{Hy@pdfversion@1.5}{5}%
3032 \@namedef{Hy@pdfversion@1.6}{6}%
3033 \@namedef{Hy@pdfversion@1.7}{7}%
3034 \@namedef{Hy@pdfversion@1.8}{8}%
3035 \@namedef{Hy@pdfversion@1.9}{9}%
3036 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

3037 \newif\ifHy@DviMode
3038 \let\Hy@DviErrMsg\ltx@empty
3039 \ifpdf
3040   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3041 \else
3042   \ifxetex
3043     \def\Hy@DviErrMsg{XeTeX is running}%
3044   \else
3045     \ifvtex
3046       \ifvtexdvi
3047         \Hy@DviModetrue
3048       \else
3049         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3050       \fi
3051     \else
3052       \Hy@DviModetrue
3053     \fi
3054   \fi
3055 \fi
3056 \def\HyOpt@CheckDvi#1{%
3057   \ifHy@DviMode
3058     \expandafter\ltx@firstofone
3059   \else
3060     \Hy@Error{%
3061       Wrong DVI mode driver option ‘#1’,\MessageBreak
3062       because \Hy@DviErrMsg
3063     }\@ehc
3064     \expandafter\ltx@gobble
3065   \fi
3066 }
3067 \DeclareVoidOption{tex4ht}{%
3068   \Hy@texhttrue
3069   \kvsetkeys{Hyp}{colorlinks=true}%
3070   \def\BeforeTeXIVht{\RequirePackage{color}}%
3071   \def\Hy@driver{htex4ht}%
3072   \def\MaybeStopEarly{%
3073     \Hy@Message{Stopped early}%
3074     \Hy@AtBeginDocument{%
3075       \PDF@FinishDoc
3076       \gdef\PDF@FinishDoc{}}%

```

```

3077 }%
3078 \endinput
3079 }%
3080 }
3081 \DeclareVoidOption{pdftex}{%
3082   \ifpdf
3083     \def\Hy@driver{hpdftex}%
3084   \else
3085     \Hy@Error{%
3086       Wrong driver option 'pdftex',\MessageBreak
3087       because pdfTeX in PDF mode is not detected%
3088     }\@ehc
3089   \fi
3090 }
3091 \DeclareVoidOption{nativepdf}{%
3092   \HyOpt@CheckDvi{nativepdf}{%
3093     \def\Hy@driver{hdvips}%
3094   }%
3095 }
3096 \DeclareVoidOption{dvipdfm}{%
3097   \HyOpt@CheckDvi{dvipdfm}{%
3098     \def\Hy@driver{hdvipdfm}%
3099   }%
3100 }
3101 \DeclareVoidOption{dvipdfmx}{%
3102   \HyOpt@CheckDvi{dvipdfmx}{%
3103     \def\Hy@driver{hdvipdfm}%
3104   }%
3105 }
3106 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3107   \expandafter\ifx\csname if#1\expandafter\endcsname
3108     \csname iftrue\endcsname
3109   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3110   \else
3111     \chardef\SpecialDvipdfmxOutlineOpen\z@
3112   \fi
3113 }
3114 \DeclareVoidOption{xetex}{%
3115   \ifxetex
3116     \def\Hy@driver{hxetex}%
3117   \else
3118     \Hy@Error{%
3119       Wrong driver option 'xetex',\MessageBreak
3120       because XeTeX is not detected%
3121     }\@ehc
3122   \fi
3123 }
3124 \DeclareVoidOption{pdfmark}{%
3125   \HyOpt@CheckDvi{pdfmark}{%
3126     \def\Hy@driver{hdvips}%
3127   }%
3128 }
3129 \DeclareVoidOption{dvips}{%
3130   \HyOpt@CheckDvi{dvips}{%
3131     \def\Hy@driver{hdvips}%
3132   }%
3133 }

```

```

3134 \DeclareVoidOption{hypertex}{%
3135   \HyOpt@CheckDvi{hypertex}{%
3136     \def\Hy@driver{hypertex}%
3137   }%
3138 }
3139 \let\Hy@MaybeStopNow\relax
3140 \DeclareVoidOption{vtex}{%
3141   \ifvtex
3142     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3143     \def\Hy@driver{hvtex}%
3144   \else
3145     \ifnum\OpMode=10\relax
3146       \def\Hy@driver{hvtexhtm}%
3147       \def\MaybeStopEarly{%
3148         \Hy@Message{Stopped early}%
3149         \Hy@AtBeginDocument{%
3150           \PDF@FinishDoc
3151           \gdef\PDF@FinishDoc{}}%
3152       }%
3153       \endinput
3154     }%
3155   \else
3156     \Hy@Error{%
3157       Wrong driver option 'vtex',\MessageBreak
3158       because of wrong OpMode (\the\OpMode)%
3159     }\@ehc
3160   \fi
3161 \fi
3162 \else
3163   \Hy@Error{%
3164     Wrong driver option 'vtex',\MessageBreak
3165     because VTeX is not running%
3166   }\@ehc
3167 \fi
3168 }
3169 \DeclareVoidOption{vtexpdfmark}{%
3170   \ifvtex
3171     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3172     \def\Hy@driver{hvtexmrk}%
3173   \else
3174     \Hy@Error{%
3175       Wrong driver option 'vtexpdfmark',\MessageBreak
3176       because of wrong OpMode (\the\OpMode)%
3177     }\@ehc
3178   \fi
3179 \else
3180   \Hy@Error{%
3181     Wrong driver option 'vtexpdfmark',\MessageBreak
3182     because VTeX is not running%
3183   }\@ehc
3184 \fi
3185 }
3186 \DeclareVoidOption{dviwindo}{%
3187   \HyOpt@CheckDvi{dviwindo}{%
3188     \def\Hy@driver{hdviwind}%
3189     \kvsetkeys{Hyp}{colorlinks}%
3190     \PassOptionsToPackage{dviwindo}{color}%

```

```

3191 }%
3192 }
3193 \DeclareVoidOption{dvipsone}{%
3194   \HyOpt@CheckDvi{dvipsone}{%
3195     \def\Hy@driver{hdvipson}%
3196   }%
3197 }
3198 \DeclareVoidOption{textures}{%
3199   \HyOpt@CheckDvi{textures}{%
3200     \def\Hy@driver{htexture}%
3201   }%
3202 }
3203 \DeclareVoidOption{latex2html}{%
3204   \HyOpt@CheckDvi{latex2html}{%
3205     \Hy@AtBeginDocument{\@@@latextohtmlX}%
3206   }%
3207 }

```

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

```

3208 \DeclareVoidOption{ps2pdf}{%
3209   \HyOpt@CheckDvi{ps2pdf}{%
3210     \def\Hy@driver{hdvips}%
3211   }%
3212 }
3213 \let\HyOpt@DriverFallback\ltx@empty
3214 \define@key{Hyp}{driverfallback}{%
3215   \ifHy@DviMode
3216     \def\HyOpt@DriverFallback{#1}%
3217     \Hy@Match\HyOpt@DriverFallback{%
3218       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3219       latex2html|tex4ht)$}%
3220   }{}%
3221   \let\HyOpt@DriverFallback\ltx@empty
3222 }%
3223 \fi
3224 }

```

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.

```

3225 \define@key{Hyp}{hyperfigures}[true]{%
3226   \Hy@boolkey{hyperfigures}{#1}%
3227 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

3228 \define@key{Hyp}{hyperfootnotes}[true]{%
3229   \Hy@boolkey{hyperfootnotes}{#1}%
3230 }

```

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

```

3231 \def\back@none{none}
3232 \def\back@section{section}
3233 \def\back@page{page}
3234 \def\back@slide{slide}
3235 \define@key{Hyp}{backref}[section]{%
3236   \lowercase{\def\Hy@tempa{#1}}%
3237   \ifx\Hy@tempa\@empty

```

```

3238 \let\Hy@tempa\back@section
3239 \fi
3240 \ifx\Hy@tempa\Hy@false
3241 \let\Hy@tempa\back@none
3242 \fi
3243 \ifx\Hy@tempa\back@slide
3244 \let\Hy@tempa\back@section
3245 \fi
3246 \ifx\Hy@tempa\back@page
3247 \PassOptionsToPackage{hyperpageref}{backref}%
3248 \Hy@backreftrue
3249 \else
3250 \ifx\Hy@tempa\back@section
3251 \PassOptionsToPackage{hyperref}{backref}%
3252 \Hy@backreftrue
3253 \else
3254 \ifx\Hy@tempa\back@none
3255 \Hy@backreffalse
3256 \else
3257 \Hy@WarnOptionValue{#1}{backref}{%
3258 'section', 'slide', 'page', 'none',\MessageBreak
3259 or 'false'}%
3260 \fi
3261 \fi
3262 \fi
3263 }
3264 \define@key{Hyp}{pagebackref}[true]{%
3265 \edef\Hy@tempa{#1}%
3266 \lowercase\expandafter{%
3267 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3268 }%
3269 \ifx\Hy@tempa\@empty
3270 \let\Hy@tempa\Hy@true
3271 \fi
3272 \ifx\Hy@tempa\Hy@true
3273 \PassOptionsToPackage{hyperpageref}{backref}%
3274 \Hy@backreftrue
3275 \else
3276 \ifx\Hy@tempa\Hy@false
3277 \Hy@backreffalse
3278 \else
3279 \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
3280 \fi
3281 \fi
3282 }

```

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

```

3283 \define@key{Hyp}{hyperindex}[true]{%
3284 \Hy@boolkey{hyperindex}{#1}%
3285 }

```

Configuration of encap char.

```

3286 \define@key{Hyp}{encap}[\\]{%
3287 \def\HyInd@EncapChar{#1}%
3288 }

```

12 Language options

The `\autoref` feature depends on the language.

```
3289 \def\HyLang@afrikaans{%
3290   \def\equationautorefname{Vergelyking}%
3291   \def\footnoteautorefname{Voetnota}%
3292   \def\itemautorefname{Item}%
3293   \def\figureautorefname{Figuur}%
3294   \def\tableautorefname{Tabel}%
3295   \def\partautorefname{Deel}%
3296   \def\appendixautorefname{Bylae}%
3297   \def\chapterautorefname{Hoofstuk}%
3298   \def\sectionautorefname{Afdeling}%
3299   \def\subsectionautorefname{Subafdeling}%
3300   \def\subsubsectionautorefname{Subsubafdeling}%
3301   \def\paragraphautorefname{Paragraaf}%
3302   \def\subparagraphautorefname{Subparagraaf}%
3303   \def\FancyVerbLineautorefname{Lyn}%
3304   \def\theoremautorefname{Teorema}%
3305   \def\pageautorefname{Bladsy}%
3306 }
3307 \def\HyLang@english{%
3308   \def\equationautorefname{Equation}%
3309   \def\footnoteautorefname{footnote}%
3310   \def\itemautorefname{item}%
3311   \def\figureautorefname{Figure}%
3312   \def\tableautorefname{Table}%
3313   \def\partautorefname{Part}%
3314   \def\appendixautorefname{Appendix}%
3315   \def\chapterautorefname{chapter}%
3316   \def\sectionautorefname{section}%
3317   \def\subsectionautorefname{subsection}%
3318   \def\subsubsectionautorefname{subsubsection}%
3319   \def\paragraphautorefname{paragraph}%
3320   \def\subparagraphautorefname{subparagraph}%
3321   \def\FancyVerbLineautorefname{line}%
3322   \def\theoremautorefname{Theorem}%
3323   \def\pageautorefname{page}%
3324 }
3325 \def\HyLang@french{%
3326   \def\equationautorefname{'Equation}%
3327   \def\footnoteautorefname{note}%
3328   \def\itemautorefname{item}%
3329   \def\figureautorefname{Figure}%
3330   \def\tableautorefname{Tableau}%
3331   \def\partautorefname{Partie}%
3332   \def\appendixautorefname{Appendice}%
3333   \def\chapterautorefname{chapitre}%
3334   \def\sectionautorefname{section}%
3335   \def\subsectionautorefname{sous-section}%
3336   \def\subsubsectionautorefname{sous-sous-section}%
3337   \def\paragraphautorefname{paragraphe}%
3338   \def\subparagraphautorefname{sous-paragraphe}%
3339   \def\FancyVerbLineautorefname{ligne}%
3340   \def\theoremautorefname{Th'eor'eme}%
3341   \def\pageautorefname{page}%
3342 }
```

```

3343 \def\HyLang@german{%
3344   \def\equationautorefname{Gleichung}%
3345   \def\footnoteautorefname{Fu\ss note}%
3346   \def\itemautorefname{Punkt}%
3347   \def\figureautorefname{Abbildung}%
3348   \def\tableautorefname{Tabelle}%
3349   \def\partautorefname{Teil}%
3350   \def\appendixautorefname{Anhang}%
3351   \def\chapterautorefname{Kapitel}%
3352   \def\sectionautorefname{Abschnitt}%
3353   \def\subsectionautorefname{Unterabschnitt}%
3354   \def\subsubsectionautorefname{Unterunterabschnitt}%
3355   \def\paragraphautorefname{Absatz}%
3356   \def\subparagraphautorefname{Unterabsatz}%
3357   \def\FancyVerbLineautorefname{Zeile}%
3358   \def\theoremautorefname{Theorem}%
3359   \def\pageautorefname{Seite}%
3360 }
3361 \def\HyLang@italian{%
3362   \def\equationautorefname{Equazione}%
3363   \def\footnoteautorefname{nota}%
3364   \def\itemautorefname{punto}%
3365   \def\figureautorefname{Figura}%
3366   \def\tableautorefname{Tabella}%
3367   \def\partautorefname{Parte}%
3368   \def\appendixautorefname{Appendice}%
3369   \def\chapterautorefname{Capitolo}%
3370   \def\sectionautorefname{sezione}%
3371   \def\subsectionautorefname{sottosezione}%
3372   \def\subsubsectionautorefname{sottosottosezione}%
3373   \def\paragraphautorefname{paragrafo}%
3374   \def\subparagraphautorefname{sottoparagrafo}%
3375   \def\FancyVerbLineautorefname{linea}%
3376   \def\theoremautorefname{Teorema}%
3377   \def\pageautorefname{Pag.\@}%
3378 }
3379 \def\HyLang@magyar{%
3380   \def\equationautorefname{Egyenlet}%
3381   \def\footnoteautorefname{l'abjegyzet}%
3382   \def\itemautorefname{Elem}%
3383   \def\figureautorefname{'Abra}%
3384   \def\tableautorefname{T'abl'azat}%
3385   \def\partautorefname{R'esz}%
3386   \def\appendixautorefname{F'uggel'ek}%
3387   \def\chapterautorefname{fejezet}%
3388   \def\sectionautorefname{szakasz}%
3389   \def\subsectionautorefname{alszakasz}%
3390   \def\subsubsectionautorefname{alalszakasz}%
3391   \def\paragraphautorefname{bekezd'es}%
3392   \def\subparagraphautorefname{albekezd'es}%
3393   \def\FancyVerbLineautorefname{sor}%
3394   \def\theoremautorefname{T'etel}%
3395   \def\pageautorefname{oldal}%
3396 }
3397 \def\HyLang@portuges{%
3398   \def\equationautorefname{Equa\c c\~ao}%
3399   \def\footnoteautorefname{Nota de rodap'e}%

```

```

3400 \def\itemautorefname{Item}%
3401 \def\figureautorefname{Figura}%
3402 \def\tableautorefname{Tabela}%
3403 \def\partautorefname{Parte}%
3404 \def\appendixautorefname{Ap\~endice}%
3405 \def\chapterautorefname{Cap\itulo}%
3406 \def\sectionautorefname{Se\c c\~ao}%
3407 \def\subsectionautorefname{Subse\c c\~ao}%
3408 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3409 \def\paragraphautorefname{par\agrafo}%
3410 \def\subparagraphautorefname{subpar\agrafo}%
3411 \def\FancyVerbLineautorefname{linha}%
3412 \def\theoremautorefname{Teorema}%
3413 \def\pageautorefname{P\agina}%
3414 }

```

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`.

```

3415 \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`?

```

3416 \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 `\auto{ref}{auto}`” etc. The full name must follow full name of the `\theoremautorefname`.

```

3417 % \def\equationautorefname{%
3418 %   \cyr\cyrv\cyrry\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3419 % }%

```

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

```

3420 \def\footnoteautorefname{%
3421   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3422 }%

```

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

```

3423 % \def\footnoteautorefname{%
3424 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3425 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3426 % }%

```

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

```

3427 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3428 % \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.

```
3429 \def\itemautorefname{\cyr\cyrp.}%
3430 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

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

```
3431 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3432 \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.

```
3433 \def\partautorefname{\cyr\cyrch.}%
3434 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3435 \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.

```
3436 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3437 % \def\appendixautorefname{%
3438 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\cyre\cyrn\cyri\cyre
3439 % }%
```

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.

```
3440 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3441 \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.

```
3442 \def\paragraphautorefname{\cyr\cyrp.}%
3443 \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.

```
3444 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3445 % \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.

```
3446 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3447 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3448 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3449 % \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 ...

```
3450 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3451 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
3452 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3453 \def\pageautorefname{\cyr\cyr.}%
```

```
3454 }
```

```
3455 \def\HyLang@spanish{%
```

```
3456 \def\equationautorefname{Ecuaci'on}%
```

```
3457 \def\footnoteautorefname{Nota a pie de p'agina}%
```

```
3458 \def\itemautorefname{Elemento}%
```

```
3459 \def\figureautorefname{Figura}%
```

```
3460 \def\tableautorefname{Tabla}%
```

```
3461 \def\partautorefname{Parte}%
```

```
3462 \def\appendixautorefname{Ap'endice}%
```

```
3463 \def\chapterautorefname{Cap'itulo}%
```

```
3464 \def\sectionautorefname{Secci'on}%
```

```
3465 \def\subsectionautorefname{Subsecci'on}%
```

```
3466 \def\subsubsectionautorefname{Subsubsecci'on}%
```

```
3467 \def\paragraphautorefname{P'arrafo}%
```

```
3468 \def\subparagraphautorefname{Subp'arrafo}%
```

```
3469 \def\FancyVerbLineautorefname{L'inea}%
```

```
3470 \def\theoremautorefname{Teorema}%
```

```
3471 \def\pageautorefname{P'agina}%
```

```
3472 }
```

```
3473 \def\HyLang@vietnamese{%
```

```
3474 \def\equationautorefname{Ph\uhorn{ }ohorn{ }ng tr'inh}%
```

```
3475 \def\footnoteautorefname{Ch'u th'ich}%
```

```
3476 \def\itemautorefname{m\du{c}}%
```

```
3477 \def\figureautorefname{H'inh}%
```

```
3478 \def\tableautorefname{B'h{a}ng}%
```

```
3479 \def\partautorefname{Ph'\acircumflex{n}}%
```

```
3480 \def\appendixautorefname{Ph\du{ }l\du{c}}%
```

```
3481 \def\chapterautorefname{ch\uhorn{ }ohorn{ }ng}%
```

```
3482 \def\sectionautorefname{m\du{c}}%
```

```
3483 \def\subsectionautorefname{m\du{c}}%
```

```
3484 \def\subsubsectionautorefname{m\du{c}}%
```

```
3485 \def\paragraphautorefname{\dj{ }o\da{n}}%
```

```
3486 \def\subparagraphautorefname{\dj{ }o\da{n}}%
```

```
3487 \def\FancyVerbLineautorefname{d'ong}%
```

```
3488 \def\theoremautorefname{\DJ{ }d{inh l'y}}%
```

```
3489 \def\pageautorefname{Trang}%
```

```
3490 }
```

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

```
3491 \def\HyLang@addto#1#2{%
```

```
3492 #2%
```

```
3493 \@temptokena{#2}%
```

```
3494 \ifx#1\relax
```

```
3495 \let#1\@empty
```

```
3496 \fi
```

```
3497 \ifx#1\@undefined
```

```

3498 \edef#1{\the\@temptokena}%
3499 \else
3500 \toks@\expandafter{#1}%
3501 \edef#1{\the\toks@\the\@temptokena}%
3502 \fi
3503 \@temptokena{}\toks@\@temptokena
3504 }

3505 \def\HyLang@DeclareLang#1#2#3{%
3506 \ifpackagewith{babel}{#1}{%
3507 \expandafter\HyLang@addto
3508 \csname extras#1\expandafter\endcsname
3509 \csname HyLang@#2\endcsname
3510 \begingroup
3511 \edef\x{\endgroup
3512 #3%
3513 }%
3514 \x
3515 \@namedef{HyLang@#1@done}{}%
3516 }{}%
3517 \begingroup
3518 \edef\x##1##2{%
3519 \noexpand\ifx##2\relax
3520 \errmessage{No definitions for language #2' found!}%
3521 \noexpand\fi
3522 \endgroup
3523 \noexpand\define@key{Hyp}{#1}[]{%
3524 \noexpand\ifundefined{HyLang@#1@done}{%
3525 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3526 #3%
3527 \noexpand\@namedef{HyLang@#1@done}{}%
3528 }{}%
3529 }%
3530 }%
3531 \expandafter\x\csname extras#1\expandafter\endcsname
3532 \csname HyLang@#2\endcsname
3533 }

3534 \HyLang@DeclareLang{english}{english}{}
3535 \HyLang@DeclareLang{UKenglish}{english}{}
3536 \HyLang@DeclareLang{british}{english}{}
3537 \HyLang@DeclareLang{USenglish}{english}{}
3538 \HyLang@DeclareLang{american}{english}{}
3539 \HyLang@DeclareLang{german}{german}{}
3540 \HyLang@DeclareLang{austrian}{german}{}
3541 \HyLang@DeclareLang{ngerman}{german}{}
3542 \HyLang@DeclareLang{naustrian}{german}{}
3543 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3544 \HyLang@DeclareLang{brazil}{portuges}{}
3545 \HyLang@DeclareLang{brazilian}{portuges}{}
3546 \HyLang@DeclareLang{portuguese}{portuges}{}
3547 \HyLang@DeclareLang{spanish}{spanish}{}
3548 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3549 \HyLang@DeclareLang{french}{french}{}
3550 \HyLang@DeclareLang{frenchb}{french}{}
3551 \HyLang@DeclareLang{francais}{french}{}
3552 \HyLang@DeclareLang{acadian}{french}{}
3553 \HyLang@DeclareLang{canadien}{french}{}
3554 \HyLang@DeclareLang{italian}{italian}{}

```

```

3555 \HyLang@DeclareLang{magyar}{magyar}{}
3556 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3557 \DeclareVoidOption{vietnamese}{%
3558   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3559   \Hy@AtEndOfPackage{%
3560     \ifundefined{T@PU}{}%
3561     \input{puvnenc.def}%
3562   }%
3563 }%
3564 }
3565 \DeclareVoidOption{vietnam}{%
3566   \HyLang@addto\extravietnam\HyLang@vietnamese
3567   \Hy@AtEndOfPackage{%
3568     \ifundefined{T@PU}{}%
3569     \input{puvnenc.def}%
3570   }%
3571 }%
3572 }

```

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

```

3573 \DeclareVoidOption{arabic}{%
3574   \Hy@AtEndOfPackage{%
3575     \ifundefined{T@PU}{}%
3576     \input{puarenc.def}%
3577   }%
3578 }%
3579 }

```

13 Options to change appearance of links

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

```

3580 \define@key{Hyp}{colorlinks}[true]{%
3581   \Hy@boolkey{colorlinks}{#1}%
3582 }
3583 \DeclareVoidOption{hidelinks}{%
3584   \Hy@colorlinksfalse
3585   \Hy@ocgcolorlinksfalse
3586   \Hy@frenchlinksfalse
3587   \def\Hy@colorlink##1{\begingroup}%
3588   \def\Hy@endcolorlink{\endgroup}%
3589   \def\@pdfborder{0 0 0}%
3590   \let\@pdfborderstyle\ltx@empty
3591 }
3592 \define@key{Hyp}{ocgcolorlinks}[true]{%
3593   \Hy@boolkey{ocgcolorlinks}{#1}%
3594 }
3595 \Hy@AtBeginDocument{%
3596   \begingroup
3597   \ifundefined{OBJ@OCG@view}{%
3598     \ifHy@ocgcolorlinks
3599     \Hy@Warning{%
3600       Driver does not support ‘ocgcolorlinks’,\MessageBreak
3601       using ‘colorlinks’ instead%
3602     }%
3603     \fi

```

```

3604   }{}%
3605   \endgroup
3606 }
3607 \define@key{Hyp}{frenchlinks}[true]{%
3608   \Hy@boolkey{frenchlinks}{#1}%
3609 }

```

14 Bookmarking

```

3610 \begingroup\expandafter\expandafter\expandafter\endgroup
3611 \expandafter\ifx\csname chapter\endcsname\relax
3612   \def\toclevel@part{0}%
3613 \else
3614   \def\toclevel@part{-1}%
3615 \fi
3616 \def\toclevel@chapter{0}
3617 \def\toclevel@section{1}
3618 \def\toclevel@subsection{2}
3619 \def\toclevel@subsubsection{3}
3620 \def\toclevel@paragraph{4}
3621 \def\toclevel@subparagraph{5}
3622 \def\toclevel@figure{0}
3623 \def\toclevel@table{0}
3624 \@ifpackageloaded{listings}{%
3625   \providecommand*\theHlstlisting{\thelstlisting}%
3626   \providecommand*\toclevel@lstlisting{0}%
3627 }{}
3628 \@ifpackageloaded{listing}{%
3629   \providecommand*\theHlisting{\thelisting}%
3630   \providecommand*\toclevel@listing{0}%
3631 }{}
3632 \define@key{Hyp}{bookmarks}[true]{%
3633   \Hy@boolkey{bookmarks}{#1}%
3634 }
3635 \define@key{Hyp}{bookmarksopen}[true]{%
3636   \Hy@boolkey{bookmarksopen}{#1}%
3637 }

```

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.

```

3638 \let\Hy@bookmarksdepth\c@tocdepth
3639 \define@key{Hyp}{bookmarksdepth}[]{}%
3640 \begingroup
3641   \edef\x{#1}%
3642   \ifx\x\empty
3643     \global\let\Hy@bookmarksdepth\c@tocdepth
3644   \else
3645     \@ifundefined{toclevel@\x}{}%

```

```

3646 \@onelevel@sanitize\x
3647 \edef\y{\expandafter\@car\x\@nil}%
3648 \ifcase 0\expandafter\ifx\y-1\fi
3649 \expandafter\ifnum\expandafter'\y>47 %
3650 \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3651 \Hy@Warning{Unknown document division name (\x)}%
3652 \else
3653 \setbox\z@=\hbox{%
3654 \count@=\x
3655 \xdef\Hy@bookmarksdepth{\the\count@}%
3656 }%
3657 \fi
3658 }{%
3659 \setbox\z@=\hbox{%
3660 \count@=\csname toplevel@\x\endcsname
3661 \xdef\Hy@bookmarksdepth{\the\count@}%
3662 }%
3663 }%
3664 \fi
3665 \endgroup
3666 }

```

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

```

3667 \define@key{Hyp}{bookmarksopenlevel}{%
3668 \def\@bookmarksopenlevel{#1}%
3669 }
3670 \def\@bookmarksopenlevel{\maxdimen}
3671 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3672 \define@key{Hyp}{bookmarkstype}{%
3673 \def\Hy@bookmarkstype{#1}%
3674 }
3675 \def\Hy@bookmarkstype{toc}

```

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

```

3676 \define@key{Hyp}{bookmarksnumbered}[true]{%
3677 \Hy@boolkey{bookmarksnumbered}{#1}%
3678 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3679 \define@key{Hyp}{CJKbookmarks}[true]{%
3680 \Hy@boolkey{CJKbookmarks}{#1}%
3681 }

3682 \def\Hy@temp#1{%
3683 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3684 }
3685 \def\Hy@@temp#1#2#3{%
3686 \define@key{Hyp}{#2color}{%
3687 \HyColor@HyperrefColor{##1}#1%
3688 }%
3689 \def##1{#3}%
3690 }
3691 \Hy@temp{link}{red}
3692 \Hy@temp{anchor}{black}
3693 \Hy@temp{cite}{green}
3694 \Hy@temp{file}{cyan}
3695 \Hy@temp{url}{magenta}
3696 \Hy@temp{menu}{red}

```

```

3697 \Hy@temp{run}{\@filecolor}
3698 \define@key{Hyp}{pagecolor}{%
3699   \Hy@WarningPageColor
3700 }
3701 \def\Hy@WarningPageColor{%
3702   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3703   \global\let\Hy@WarningPageColor\relax
3704 }
3705 \define@key{Hyp}{allcolors}{%
3706   \HyColor@HyperrefColor{#1}\@linkcolor
3707   \HyColor@HyperrefColor{#1}\@anchorcolor
3708   \HyColor@HyperrefColor{#1}\@citecolor
3709   \HyColor@HyperrefColor{#1}\@filecolor
3710   \HyColor@HyperrefColor{#1}\@urlcolor
3711   \HyColor@HyperrefColor{#1}\@menucolor
3712   \HyColor@HyperrefColor{#1}\@runcolor
3713 }

3714 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3715 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3716 \let\@baseurl\@empty
3717 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3718 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3719 \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.

```

3720 \let\@pdfpagetransition\relax
3721 \define@key{Hyp}{pdfpagetransition}{%
3722   \def\@pdfpagetransition{#1}%
3723 }

```

`\@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.

```

3724 \let\@pdfpageduration\relax
3725 \define@key{Hyp}{pdfpageduration}{%
3726   \def\@pdfpageduration{#1}%
3727   \Hy@Match\@pdfpageduration{%
3728     ^(|[0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3729   }{%
3730     \Hy@Warning{%
3731       Invalid value '\@pdfpageduration'\MessageBreak
3732       of option 'pdfpageduration'\MessageBreak
3733       is replaced by an empty value%
3734     }%
3735     \let\@pdfpageduration\ltx@empty
3736   }%
3737 }

```

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.

```

3738 \newif\ifHy@useHidKey
3739 \Hy@useHidKeyfalse
3740 \define@key{Hyp}{pdfpagehidden}[true]{%
3741   \Hy@boolkey{pdfpagehidden}{#1}%
3742   \ifHy@pdfpagehidden
3743     \global\Hy@useHidKeytrue
3744   \fi
3745 }

```

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).

```

3746 \def\Hy@ColorList{cite,file,link,menu,run,url}
3747 \@for\Hy@temp:=\Hy@ColorList\do{%
3748   \edef\Hy@temp{%
3749     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3750       \noexpand\HyColor@HyperrefBorderColor
3751       {##1}%
3752       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3753       {hyperref}%
3754       {\Hy@temp bordercolor}%
3755     }%
3756   }%
3757   \Hy@temp
3758 }
3759 \define@key{Hyp}{pagebordercolor}{%
3760   \Hy@WarningPageBorderColor
3761 }
3762 \def\Hy@WarningPageBorderColor{%
3763   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3764   \global\let\Hy@WarningPageBorderColor\relax
3765 }
3766 \define@key{Hyp}{allbordercolors}{%
3767   \def\Hy@temp##1##2{%
3768     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3769   }%
3770   \Hy@temp\@citebordercolor{cite}%
3771   \Hy@temp\@filebordercolor{file}%
3772   \Hy@temp\@linkbordercolor{link}%
3773   \Hy@temp\@menubordercolor{menu}%
3774   \Hy@temp\@runbordercolor{run}%
3775   \Hy@temp\@urlbordercolor{url}%
3776 }
3777 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3778 \Hy@DefNameKey{pdfhighlight}{%
3779   \do{/I}{Invert}%
3780   \do{/N}{None}%
3781   \do{/O}{Outline}%
3782   \do{/P}{Push}%
3783 }
3784 \define@key{Hyp}{pdfborder}{%
3785   \let\Hy@temp\@pdfborder

```



```

3786 \def\@pdfborder{#1}%
3787 \Hy@Match\@pdfborder{%
3788   ~\HyPat@NonNegativeReal/ %
3789   \HyPat@NonNegativeReal/ %
3790   \HyPat@NonNegativeReal/%
3791   ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?${}%
3792 }{}{%
3793   \Hy@Warning{%
3794     Invalid value '\@pdfborder'\MessageBreak
3795     for option 'pdfborder'\MessageBreak
3796     Option setting is ignored%
3797   }%
3798   \let\@pdfborder\Hy@temp
3799 }%
3800 }
3801 \define@key{Hyp}{pdfborderstyle}{%
3802   \let\Hy@temp\@pdfborderstyle
3803   \def\@pdfborderstyle{#1}%
3804   \Hy@Match\@pdfborderstyle{%
3805     ~%
3806     ( */Type */Border%
3807       | */W +\HyPat@NonNegativeReal/%
3808       | */S */[SDBIU]%
3809       | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?]%
3810     )* *$%
3811   }{}{%
3812     \Hy@Warning{%
3813       Invalid value '\@pdfborderstyle'\MessageBreak
3814       for option 'pdfborderstyle'\MessageBreak
3815       Option setting is ignored%
3816     }%
3817     \let\@pdfborderstyle\Hy@temp
3818   }%
3819 }
3820 \def\Hy@setpdfborder{%
3821   \ifx\@pdfborder\@empty
3822   \else
3823     /Border[\@pdfborder]%
3824   \fi
3825   \ifx\@pdfborderstyle\@empty
3826   \else
3827     /BS<<\@pdfborderstyle>>%
3828   \fi
3829 }
3830 \Hy@DefNameKey{pdfpagemode}{%
3831   \do{UseNone}{}%
3832   \do{UseOutlines}{}%
3833   \do{UseThumbs}{}%
3834   \do{FullScreen}{}%
3835   \do{UseOC}{PDF 1.5}%
3836   \do{UseAttachments}{PDF 1.6}%
3837 }
3838 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3839   \do{UseNone}{}%
3840   \do{UseOutlines}{}%
3841   \do{UseThumbs}{}%
3842   \do{FullScreen}{}%

```

```

3843 \do{UseOC}{PDF 1.5}%
3844 \do{UseAttachments}{PDF 1.6}%
3845 }
3846 \Hy@DefNameKey{pdfdirection}{%
3847 \do{L2R}{Left to right}%
3848 \do{R2L}{Right to left}%
3849 }
3850 \Hy@DefNameKey{pdfviewarea}{%
3851 \do{MediaBox}{}%
3852 \do{CropBox}{}%
3853 \do{BleedBox}{}%
3854 \do{TrimBox}{}%
3855 \do{ArtBox}{}%
3856 }
3857 \Hy@DefNameKey{pdfviewclip}{%
3858 \do{MediaBox}{}%
3859 \do{CropBox}{}%
3860 \do{BleedBox}{}%
3861 \do{TrimBox}{}%
3862 \do{ArtBox}{}%
3863 }
3864 \Hy@DefNameKey{pdfprintarea}{%
3865 \do{MediaBox}{}%
3866 \do{CropBox}{}%
3867 \do{BleedBox}{}%
3868 \do{TrimBox}{}%
3869 \do{ArtBox}{}%
3870 }
3871 \Hy@DefNameKey{pdfprintclip}{%
3872 \do{MediaBox}{}%
3873 \do{CropBox}{}%
3874 \do{BleedBox}{}%
3875 \do{TrimBox}{}%
3876 \do{ArtBox}{}%
3877 }
3878 \Hy@DefNameKey{pdfprintscaling}{%
3879 \do{AppDefault}{}%
3880 \do{None}{}%
3881 }
3882 \Hy@DefNameKey{pdfduplex}{%
3883 \do{Simplex}{}%
3884 \do{DuplexFlipShortEdge}{}%
3885 \do{DuplexFlipLongEdge}{}%
3886 }
3887 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3888 \do{true}{}%
3889 \do{false}{}%
3890 }
3891 \define@key{Hyp}{pdfprintpagerange}{%
3892 \def\@pdfprintpagerange{#1}%
3893 }
3894 \Hy@DefNameKey{pdfnumcopies}{%
3895 \do{2}{two copies}%
3896 \do{3}{three copies}%
3897 \do{4}{four copies}%
3898 \do{5}{five copies}%
3899 }

```

```

3900 \define@key{Hyp}{pdfusetitle}[true]{%
3901   \Hy@boolkey{pdfusetitle}{#1}%
3902 }
3903 \def\HyXeTeX@CheckUnicode{%
3904   \ifxetex
3905     \ifHy@unicode
3906     \else
3907       \Hy@WarningNoLine{%
3908         XeTeX driver only supports unicode.\MessageBreak
3909         Enabling option 'unicode'%
3910       }%
3911       \kvsetkeys{Hyp}{unicode}%
3912     \fi
3913   \else
3914     \let\HyXeTeX@CheckUnicode\relax
3915   \fi
3916 }
3917 \def\HyPsd@PrerenderUnicode#1{%
3918   \begingroup
3919     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3920     \else
3921       \sbox0{%
3922         \let\GenericInfo\@gobbletwo
3923         \let\GenericWarning\@gobbletwo
3924         \let\GenericError\@gobblefour
3925         \PrerenderUnicode{#1}%
3926       }%
3927     \fi
3928   \endgroup
3929 }
3930 \define@key{Hyp}{pdftitle}{%
3931   \HyXeTeX@CheckUnicode
3932   \HyPsd@XeTeXBigCharstrue
3933   \HyPsd@PrerenderUnicode{#1}%
3934   \pdfstringdef\@pdftitle{#1}%
3935 }
3936 \define@key{Hyp}{pdfauthor}{%
3937   \HyXeTeX@CheckUnicode
3938   \HyPsd@XeTeXBigCharstrue
3939   \HyPsd@PrerenderUnicode{#1}%
3940   \pdfstringdef\@pdfauthor{#1}%
3941 }
3942 \define@key{Hyp}{pdfproducer}{%
3943   \HyXeTeX@CheckUnicode
3944   \HyPsd@XeTeXBigCharstrue
3945   \HyPsd@PrerenderUnicode{#1}%
3946   \pdfstringdef\@pdfproducer{#1}%
3947   \ifxetex
3948     \Hy@Warning{%
3949       pdfproducer: %
3950       xdvipdfmx will use its own setting\MessageBreak
3951       instead of the value given%
3952     }%
3953   \else
3954     \def\Hy@temp{hdvipdfm}%
3955     \ifx\Hy@driver\Hy@temp
3956       \Hy@Warning{%

```

```

3957     pdfproducer: %
3958     dvipdfm(x) will use its own setting\MessageBreak
3959     instead of the value given%
3960 }%
3961 \fi
3962 \fi
3963 }
3964 \define@key{Hyp}{pdfcreator}{%
3965   \HyXeTeX@CheckUnicode
3966   \HyPsd@XeTeXBigCharstrue
3967   \HyPsd@PrerenderUnicode{#1}%
3968   \pdfstringdef\@pdfcreator{#1}%
3969 }
3970 \define@key{Hyp}{pdfcreationdate}{%
3971   \begingroup
3972   \Hy@unicodetrue
3973   \pdfstringdef\@pdfcreationdate{#1}%
3974   \endgroup
3975 }
3976 \define@key{Hyp}{pdfmoddate}{%
3977   \begingroup
3978   \Hy@unicodetrue
3979   \pdfstringdef\@pdfmoddate{#1}%
3980   \endgroup
3981 }
3982 \define@key{Hyp}{pdfsubject}{%
3983   \HyXeTeX@CheckUnicode
3984   \HyPsd@XeTeXBigCharstrue
3985   \HyPsd@PrerenderUnicode{#1}%
3986   \pdfstringdef\@pdfsubject{#1}%
3987 }
3988 \define@key{Hyp}{pdfkeywords}{%
3989   \HyXeTeX@CheckUnicode
3990   \HyPsd@XeTeXBigCharstrue
3991   \HyPsd@PrerenderUnicode{#1}%
3992   \pdfstringdef\@pdfkeywords{#1}%
3993 }
3994 \define@key{Hyp}{pdftrapped}{%
3995   \lowercase{\edef\Hy@temp{#1}}%
3996   \ifx\Hy@temp\HyInfo@trapped@true
3997     \def\@pdftrapped{True}%
3998   \else
3999     \ifx\Hy@temp\HyInfo@trapped@false
4000       \def\@pdftrapped{False}%
4001     \else
4002       \ifx\Hy@temp\HyInfo@trapped@unknown
4003         \def\@pdftrapped{Unknown}%
4004       \else
4005         \ifx\Hy@temp\@empty
4006           \else
4007             \Hy@Warning{%
4008               Unsupported value ‘#1’\MessageBreak
4009               for option ‘pdftrapped’%
4010             }%
4011           \fi
4012         \def\@pdftrapped{}%
4013       \fi

```

```

4014 \fi
4015 \fi
4016 }
4017 \def\HyInfo@trapped@true{true}
4018 \def\HyInfo@trapped@false{false}
4019 \def\HyInfo@trapped@unknown{unknown}
4020 \def\HyInfo@TrappedUnsupported{%
4021 \ifx\@pdftrapped\@empty
4022 \else
4023 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4024 \gdef\HyInfo@TrappedUnsupported{}%
4025 \fi
4026 }
4027 \define@key{Hyp}{pdfinfo}{%
4028 \kvsetkeys{pdfinfo}{#1}%
4029 }
4030 \def\Hy@temp#1{%
4031 \lowercase{\Hy@temp@A{#1}}{#1}%
4032 }
4033 \def\Hy@temp@A#1#2{%
4034 \define@key{pdfinfo}{#2}{%
4035 \hypersetup{pdf#1={##1}}}%
4036 }%
4037 }
4038 \Hy@temp{Title}
4039 \Hy@temp{Author}
4040 \Hy@temp{Keywords}
4041 \Hy@temp{Subject}
4042 \Hy@temp{Creator}
4043 \Hy@temp{Producer}
4044 \Hy@temp{CreationDate}
4045 \Hy@temp{ModDate}
4046 \Hy@temp{Trapped}
4047 \newif\ifHyInfo@AddonUnsupported
4048 \kv@set@family@handler{pdfinfo}{%
4049 \HyInfo@AddonHandler{#1}{#2}%
4050 }
4051 \let\HyInfo@do\relax
4052 \def\HyInfo@AddonHandler#1#2{%
4053 \ifx\kv@value\relax
4054 \Hy@Warning{%
4055 Option 'pdfinfo': ignoring key '\kv@key' without value%
4056 }%
4057 \else
4058 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4059 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4060 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4061 \ifHyInfo@AddonUnsupported
4062 \Hy@Warning{%
4063 This driver does not support additional\MessageBreak
4064 information entries, therefore\MessageBreak
4065 '\kv@key' is ignored%
4066 }%
4067 \else
4068 \define@key{pdfinfo}{\HyInfo@Key}{%
4069 \HyXeTeX@CheckUnicode
4070 \HyPsd@XeTeXBigChartrue

```

```

4071 \HyPsd@PrerenderUnicode{##1}%
4072 \pdfstringdef\HyInfo@Value{##1}%
4073 \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
4074 \HyInfo@Value
4075 }%
4076 \edef\HyInfo@AddonList{%
4077 \HyInfo@AddonList
4078 \HyInfo@do{\HyInfo@Key}%
4079 }%
4080 \kv@parse@normalized{%
4081 \HyInfo@Key={#2}%
4082 }{%
4083 \kv@processor@default{pdfinfo}%
4084 }%
4085 \fi
4086 \else
4087 \kv@parse@normalized{%
4088 \HyInfo@Key={#2}%
4089 }{%
4090 \kv@processor@default{pdfinfo}%
4091 }%
4092 \fi
4093 \fi
4094 }
4095 \def\HyInfo@GenerateAddons{%
4096 \ifHyInfo@AddonUnsupported
4097 \def\HyInfo@Addons{}%
4098 \else
4099 \begingroup
4100 \toks@{}%
4101 \def\HyInfo@do##1{%
4102 \EdefEscapeName\HyInfo@Key{##1}%
4103 \edef\x{%
4104 \toks@{%
4105 \the\toks@
4106 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4107 }%
4108 }%
4109 \x
4110 }%
4111 \HyInfo@AddonList
4112 \edef\x{\endgroup
4113 \def\noexpand\HyInfo@Addons{\the\toks@}%
4114 }%
4115 \x
4116 \fi
4117 }
4118 \let\HyInfo@AddonList\ltx@empty
4119 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
4120 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4121 \let\setpdfinkmargin\@gobble
4122 \def\calculate@pdfview#1 #2\{%
4123 \def\@pdfview{#1}%
4124 \ifx\#2\%
4125 \def\@pdfviewparams{-32768}%
4126 \else
4127 \def\@pdfviewparams{#2}%

```

```

4128 \fi
4129 }
4130 \begingroup\expandafter\expandafter\expandafter\endgroup
4131 \expandafter\ifx\csname numexpr\endcsname\relax
4132 \def\Hy@number#1{%
4133 \expandafter\@firstofone\expandafter{\number#1}%
4134 }%
4135 \else
4136 \def\Hy@number#1{%
4137 \the\numexpr#1\relax
4138 }%
4139 \fi
4140 \define@key{Hyp}{pdfstartpage}{%
4141 \ifx\#1\%
4142 \let\@pdfstartpage\ltx@empty
4143 \else
4144 \edef\@pdfstartpage{\Hy@number{#1}}%
4145 \fi
4146 }%
4147 \define@key{Hyp}{pdfstartview}{%
4148 \ifx\#1\%
4149 \let\@pdfstartview\ltx@empty
4150 \else
4151 \hypercalcbpdef\@pdfstartview{/#1}%
4152 \fi
4153 }
4154 \def\HyPat@NonNegativeReal/{%
4155 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
4156 }
4157 \define@key{Hyp}{pdfremotestartview}{%
4158 \ifx\#1\%
4159 \def\@pdfremotestartview{/Fit}%
4160 \else
4161 \hypercalcbpdef\@pdfremotestartview{#1}%
4162 \edef\@pdfremotestartview{\@pdfremotestartview}%
4163 \Hy@Match\@pdfremotestartview{%
4164 ^{XYZ -?(null|\HyPat@NonNegativeReal/) %
4165 -?(null|\HyPat@NonNegativeReal/) %
4166 (null|\HyPat@NonNegativeReal/)|%
4167 Fit(|B| %
4168 (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
4169 R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
4170 \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
4171 )}$%
4172 }{}{%
4173 \Hy@Warning{%
4174 Invalid value '\@pdfremotestartview'\MessageBreak
4175 of 'pdfremotestartview'\MessageBreak
4176 is replaced by 'Fit'%
4177 }%
4178 \let\@pdfremotestartview\@empty
4179 }%
4180 \ifx\@pdfremotestartview\@empty
4181 \def\@pdfremotestartview{/Fit}%
4182 \else
4183 \edef\@pdfremotestartview{\@pdfremotestartview}%
4184 \fi

```

```

4185 \fi
4186 }
4187 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4188 \define@key{Hyp}{pdftoolbar}[true]{%
4189 \Hy@boolkey{pdftoolbar}{#1}%
4190 }
4191 \define@key{Hyp}{pdfmenubar}[true]{%
4192 \Hy@boolkey{pdfmenubar}{#1}%
4193 }
4194 \define@key{Hyp}{pdfwindowui}[true]{%
4195 \Hy@boolkey{pdfwindowui}{#1}%
4196 }
4197 \define@key{Hyp}{pdffitwindow}[true]{%
4198 \Hy@boolkey{pdffitwindow}{#1}%
4199 }
4200 \define@key{Hyp}{pdfcenterwindow}[true]{%
4201 \Hy@boolkey{pdfcenterwindow}{#1}%
4202 }
4203 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4204 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4205 }
4206 \define@key{Hyp}{pdfa}[true]{%
4207 \Hy@boolkey{pdfa}{#1}%
4208 }
4209 \define@key{Hyp}{pdfnewwindow}[true]{%
4210 \def\Hy@temp{#1}%
4211 \ifx\Hy@temp\@empty
4212 \Hy@pdfnewwindowsetfalse
4213 \else
4214 \Hy@pdfnewwindowsettrue
4215 \Hy@boolkey{pdfnewwindow}{#1}%
4216 \fi
4217 }
4218 \def\Hy@SetNewWindow{%
4219 \ifHy@pdfnewwindowset
4220 /NewWindow %
4221 \ifHy@pdfnewwindow true\else false\fi
4222 \fi
4223 }
4224 \Hy@DefNameKey{pdfpagelayout}{%
4225 \do{SinglePage}{}%
4226 \do{OneColumn}{}%
4227 \do{TwoColumnLeft}{}%
4228 \do{TwoColumnRight}{}%
4229 \do{TwoPageLeft}{PDF 1.5}%
4230 \do{TwoPageRight}{PDF 1.5}%
4231 }
4232 \define@key{Hyp}{pdflang}{%
4233 \def\@pdflang{#1}%
4234 }
4235 \define@key{Hyp}{pdfpagelabels}[true]{%
4236 \Hy@boolkey{pdfpagelabels}{#1}%
4237 }
4238 \define@key{Hyp}{pdfescapeform}[true]{%
4239 \Hy@boolkey{pdfescapeform}{#1}%
4240 }

```

Default values:


```

4241 \def\@linkbordercolor{1 0 0}
4242 \def\@urlbordercolor{0 1 1}
4243 \def\@menubordercolor{1 0 0}
4244 \def\@filebordercolor{0 .5 .5}
4245 \def\@runbordercolor{0 .7 .7}
4246 \def\@citebordercolor{0 1 0}
4247 \def\@pdfhighlight{/I}
4248 \let\@pdftitle\ltx@empty
4249 \let\@pdfauthor\ltx@empty
4250 \let\@pdfproducer\relax
4251 \def\@pdfcreator{LaTeX with hyperref package}
4252 \let\@pdfcreationdate\ltx@empty
4253 \let\@pdfmoddate\ltx@empty
4254 \let\@pdfsubject\ltx@empty
4255 \let\@pdfkeywords\ltx@empty
4256 \let\@pdftrapped\ltx@empty
4257 \let\@pdfpagescrop\ltx@empty
4258 \def\@pdfstartview{/Fit}
4259 \def\@pdfremotestartview{/Fit}
4260 \def\@pdfstartpage{1}
4261 \let\@pdfprintpagerange\ltx@empty
4262 \let\@pdflang\ltx@empty
4263 \let\PDF@SetupDoc\@empty
4264 \let\PDF@FinishDoc\@empty
4265 \let\phantomsection\@empty
4266 \let\special@paper\@empty
4267 \def\HyperDestNameFilter#1{#1}
4268 \Hy@AtBeginDocument{%
4269   \begingroup
4270     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4271     \dimen@=\x\relax
4272     \ifdim\dimen@>\z@
4273       \else
4274         \dimen@=11in\relax
4275         \Hy@WarningNoLine{%
4276           Height of page (\expandafter\string\x) %
4277           is invalid (\the\x),\MessageBreak
4278           using 11in%
4279         }%
4280       \fi
4281       \dimen@=0.99626401\dimen@
4282       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4283     \endgroup
4284 }
4285 \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.

```

4286 \let\hyper@normalise\ExecuteOptions
4287 \let\ExecuteOptions\hypersetup
4288 \Hy@RestoreCatcodes
4289 \InputIfFileExists{hyperref.cfg}{\|}{\|}
4290 \Hy@SetCatcodes
4291 \let\ExecuteOptions\hyper@normalise
4292 \ifx\Hy@MaybeStopNow\relax
4293   \else
4294     \Hy@stoppeardearlytrue

```

```

4295 \expandafter\Hy@MaybeStopNow
4296 \fi
4297 \Hy@stoppedearlyfalse

```

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

```

4298 \SetupKeyvalOptions{family=Hyp}
4299 \DeclareLocalOptions{%
4300   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4301 }

```

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

```

4302 \@ifpackageloaded{tex4ht}{%
4303   \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
4304   \PassOptionsToPackage{tex4ht}{hyperref}%
4305 }%
4306 }{}

4307 \let\ReadBookmarks\relax
4308 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package `xspace` support

```

4309 \def\Hy@xspace@end{}
4310 \ltx@ifundefined{xspaceaddexceptions}{-%
4311   \Hy@AtBeginDocument{%
4312     \ltx@ifundefined{xspaceaddexceptions}{-%
4313       }-%
4314       \def\Hy@xspace@end{%
4315         \ltx@gobble{end for xspace}%
4316       }%
4317       \xspaceaddexceptions{%
4318         \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4319       }%
4320     }%
4321   }%
4322 }{}%
4323 \def\Hy@xspace@end{%
4324   \ltx@gobble{end for xspace}%
4325 }%
4326 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4327 }

```

15.2 Option `draft`

```

4328 \Hy@AtBeginDocument{%
4329   \ifHy@draft
4330     \let\hyper@@anchor\@gobble
4331     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4332     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4333     \def\hyper@anchorend{\Hy@xspace@end}%
4334     \let\hyper@linkstart\@gobbletwo
4335     \def\hyper@linkend{\Hy@xspace@end}%
4336     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4337     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4338     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4339     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%

```

```

4340 \let\PDF@SetupDoc\@empty
4341 \let\PDF@FinishDoc\@empty
4342 \let\@fifthoffive\@secondoftwo
4343 \let\@secondoffive\@secondoftwo
4344 \let\ReadBookmarks\relax
4345 \let\WriteBookmarks\relax
4346 \Hy@WarningNoLine{Draft mode on}%
4347 \fi
4348 \Hy@DisableOption{draft}%
4349 \Hy@DisableOption{nolinks}%
4350 \Hy@DisableOption{final}%
4351 }

```

15.3 PDF/A

```

4352 \Hy@DisableOption{pdfa}

4353 \ifHy@pdfa
4354 \kvsetkeys{Hyp}{pdfversion=1.4}%
4355 \Hy@DisableOption{pdfversion}%
4356 \def\Hy@Acrobatmenu#1#2{%
4357 \leavevmode
4358 \begingroup
4359 \edef\x{#1}%
4360 \@onelevel@sanitize\x
4361 \ifx\x\Hy@NextPage
4362 \let\y=Y%
4363 \else
4364 \ifx\x\Hy@PrevPage
4365 \let\y=Y%
4366 \else
4367 \ifx\x\Hy@FirstPage
4368 \let\y=Y%
4369 \else
4370 \ifx\x\Hy@LastPage
4371 \let\y=Y%
4372 \else
4373 \let\y=N%
4374 \fi
4375 \fi
4376 \fi
4377 \fi
4378 \expandafter\endgroup
4379 \ifx\y Y%
4380 \else
4381 \Hy@Error{%
4382 PDF/A: Named action ‘#1’ is not permitted%
4383 }\@ehc
4384 {#2}%
4385 \expandafter\@gobble
4386 \fi
4387 }%
4388 \def\Hy@temp#1{%
4389 \expandafter\def\csname Hy@#1\endcsname{#1}%
4390 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4391 }%
4392 \Hy@temp{NextPage}%
4393 \Hy@temp{PrevPage}%
4394 \Hy@temp{FirstPage}%

```

```

4395 \Hy@temp{LastPage}%
4396 \else
4397 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4398 \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.

```

4399 \Hy@nextfalse
4400 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}{\Hy@nexttrue}
4401 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}{\Hy@nexttrue}
4402 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}{\Hy@nexttrue}
4403 \ifHy@next
4404 \let\texttilde\~%
4405 \fi

4406 \def\Hy@wrapper@babel#1#2{%
4407 \begingroup
4408 \Hy@safe@activetrue
4409 \set@display@protect
4410 \edef\x{#2}%
4411 \@onelevel@sanitize\x
4412 \toks@{#1}%
4413 \edef\x{\endgroup\the\toks@{\x}}%
4414 \x
4415 }
4416 \def\Hy@WrapperDef#1{%
4417 \begingroup
4418 \escapechar=\m@ne
4419 \xdef\Hy@gtemp{%
4420 \expandafter\noexpand\csname HyWrap@string#1\endcsname
4421 }%
4422 \endgroup
4423 \edef#1{%
4424 \noexpand\Hy@wrapper@babel
4425 \expandafter\noexpand\Hy@gtemp
4426 }%
4427 \expandafter\def\Hy@gtemp
4428 }

4429 \ifHy@hyperfigures
4430 \Hy@Info{Hyper figures ON}%
4431 \else
4432 \Hy@Info{Hyper figures OFF}%
4433 \fi
4434 \ifHy@nesting
4435 \Hy@Info{Link nesting ON}%
4436 \else
4437 \Hy@Info{Link nesting OFF}%
4438 \fi
4439 \ifHy@hyperindex
4440 \Hy@Info{Hyper index ON}%
4441 \else
4442 \Hy@Info{Hyper index OFF}%
4443 \fi
4444 \ifHy@plainpages
4445 \Hy@Info{Plain pages ON}%

```

```

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

```

15.4.1 Driver loading

```

4487 \Hy@AtEndOfPackage{%
4488   \@ifpackageloaded{tex4ht}{%
4489     \def\Hy@driver{htex4ht}%
4490     \Hy@texhttrue
4491   }{}%

```

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.

```

4492   \ifx\Hy@driver\@empty
4493   \else
4494     \def\Hy@temp{hpdftex}%
4495     \ifpdf
4496       \ifx\Hy@driver\Hy@temp
4497       \else

```

```

4498     \Hy@WarningNoLine{%
4499         Wrong driver '\Hy@driver.def';\MessageBreak
4500         pdfTeX is running in PDF mode.\MessageBreak
4501         Forcing driver '\Hy@temp.def"%
4502     }%
4503     \let\Hy@driver\Hy@temp
4504 \fi
4505 \else
4506     \ifx\Hy@driver\Hy@temp
4507         \Hy@WarningNoLine{%
4508             Wrong driver '\Hy@driver.def';\MessageBreak
4509             pdfTeX is not running in PDF mode.\MessageBreak
4510             Using default driver%
4511         }%
4512         \let\Hy@driver\@empty
4513     \fi
4514 \fi
4515 \fi
4516 \ifHy@texht
4517 \else
4518     \ifx\Hy@driver\@empty
4519     \else
4520         \def\Hy@temp{hxtex}%
4521         \ifxetex
4522             \ifx\Hy@driver\Hy@temp
4523             \else
4524                 \Hy@WarningNoLine{%
4525                     Wrong driver '\Hy@driver.def';\MessageBreak
4526                     XeTeX is running.\MessageBreak
4527                     Forcing driver '\Hy@temp.def' for XeTeX%
4528                 }%
4529                 \let\Hy@driver\Hy@temp
4530             \fi
4531         \fi
4532     \fi
4533 \fi
4534 \ifx\Hy@driver\@empty
4535 \else
4536     \def\Hy@temp{hvtexhtm}%
4537     \ifvtexhtml
4538         \ifx\Hy@driver\Hy@temp
4539         \else
4540             \Hy@WarningNoLine{%
4541                 Wrong driver '\Hy@driver.def';\MessageBreak
4542                 VTeX is running in HTML 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                 VTeX is not running in HTML mode.\MessageBreak
4552                 Using default driver%
4553             }%
4554             \let\Hy@driver\@empty

```

```

4555 \fi
4556 \fi
4557 \fi

```

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

```

4558 \def\HyOpt@DriverType{%
4559 \ifx\Hy@driver\@empty
4560 \def\HyOpt@DriverType{ (autodetected)}%
4561 \providecommand*\Hy@defaultdriver{\hypertex}%
4562 \ifpdf
4563 \def\Hy@driver{hpdfTeX}%
4564 \else
4565 \ifxetex
4566 \def\Hy@driver{hxetex}%
4567 \else
4568 \ifvtexhtml
4569 \def\Hy@driver{hvtexhtm}%
4570 \def\MaybeStopEarly{%
4571 \Hy@Message{Stopped early}%
4572 \Hy@AtBeginDocument{%
4573 \PDF@FinishDoc
4574 \gdef\PDF@FinishDoc{}}%
4575 }%
4576 \endinput
4577 }%
4578 \else
4579 \ifvtexpdf
4580 \def\Hy@driver{hvtex}%
4581 \else
4582 \ifvtexps
4583 \def\Hy@driver{hvtex}%
4584 \else
4585 \ifx\HyOpt@DriverFallback\ltx@empty
4586 \let\Hy@driver\Hy@defaultdriver
4587 \def\HyOpt@DriverType{ (default)}%
4588 \else
4589 \begingroup
4590 \toks@{\expandafter{\HyOpt@DriverFallback}}%
4591 \edef\x{\endgroup
4592 \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4593 }%
4594 \x
4595 \ifx\Hy@driver\ltx@empty
4596 \let\Hy@driver\Hy@defaultdriver
4597 \def\HyOpt@DriverType{ (default)}%
4598 \else
4599 \def\HyOpt@DriverType{ (fallback)}%
4600 \fi
4601 \fi
4602 \fi
4603 \fi
4604 \fi
4605 \fi
4606 \fi
4607 \ifx\Hy@driver\Hy@defaultdriver
4608 \def\Hy@temp{hdvwind}%
4609 \ifx\Hy@temp\Hy@driver
4610 \kvsetkeys{Hyp}{colorlinks}%

```

```

4611     \PassOptionsToPackage{dviwindo}{color}%
4612     \fi
4613   \fi
4614 \fi
4615 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4616 \chardef\Hy@VersionChecked=0 %
4617 \input{\Hy@driver.def}%
4618 \ifcase\Hy@VersionChecked
4619   \Hy@VersionCheck{\Hy@driver.def}%
4620 \fi
4621 \let\@unprocessedoptions\relax
4622 \Hy@RestoreCatcodes
4623 \Hy@DisableOption{tex4ht}%
4624 \Hy@DisableOption{pdftex}%
4625 \Hy@DisableOption{nativepdf}%
4626 \Hy@DisableOption{dvipdfm}%
4627 \Hy@DisableOption{dvipdfmx}%
4628 \Hy@DisableOption{dvipdfmx-outline-open}%
4629 \Hy@DisableOption{pdfmark}%
4630 \Hy@DisableOption{dvips}%
4631 \Hy@DisableOption{hypertext}%
4632 \Hy@DisableOption{vtex}%
4633 \Hy@DisableOption{vtexpdfmark}%
4634 \Hy@DisableOption{dviwindo}%
4635 \Hy@DisableOption{dvipsone}%
4636 \Hy@DisableOption{textures}%
4637 \Hy@DisableOption{latex2html}%
4638 \Hy@DisableOption{ps2pdf}%
4639 \Hy@DisableOption{xetex}%
4640 \Hy@DisableOption{pdfversion}%
4641 }

```

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.

```

4642 \newif\ifHy@DvipdfmxOutlineOpen
4643 \ifxetex
4644   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4645     \else
4646       \chardef\SpecialDvipdfmxOutlineOpen\@ne
4647       \Hy@DvipdfmxOutlineOpenttrue
4648     \fi
4649 \fi
4650 \begingroup\expandafter\expandafter\expandafter\endgroup
4651 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4652 \else
4653   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4654     \Hy@DvipdfmxOutlineOpenttrue
4655   \fi
4656 \fi

```

15.4.2 Bookmarks

```

4657 \def\WriteBookmarks{0}
4658 \def\@bookmarkopenstatus#1{%
4659   \ifHy@bookmarksopen

```

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


```

4660 \ifnum#1<\expandafter\@firstofone\expandafter
4661      {\number\@bookmarksopenlevel} % explicit space
4662 \else
4663   -%
4664 \fi
4665 \else
4666   -%
4667 \fi
4668 }
4669 \ifHy@bookmarks
4670 \Hy@Info{Bookmarks ON}%
4671 \ifx\@pdfpagemode\@empty
4672 \def\@pdfpagemode{UseOutlines}%
4673 \fi
4674 \else
4675 \let\@bookmarkopenstatus\ltx@gobble
4676 \Hy@Info{Bookmarks OFF}%
4677 \Hy@AtEndOfPackage{%
4678   \global\let\ReadBookmarks\relax
4679   \global\let\WriteBookmarks\relax
4680 }%
4681 \ifx\@pdfpagemode\@empty
4682 \def\@pdfpagemode{UseNone}%
4683 \fi
4684 \fi
4685 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4686 \def\Hy@CatcodeWrapper#1{%
4687 \let\Hy@endWrap\ltx@empty
4688 \def\TMP@EnsureCode##1##2{%
4689   \edef\Hy@endWrap{%
4690     \Hy@endWrap
4691     \catcode##1 \the\catcode##1\relax
4692   }%
4693   \catcode##1 ##2\relax
4694 }%
4695 \TMP@EnsureCode{10}{12}% ^^J
4696 \TMP@EnsureCode{33}{12}% !
4697 \TMP@EnsureCode{34}{12}% "
4698 \TMP@EnsureCode{36}{3}% $ (math)
4699 \TMP@EnsureCode{38}{4}% & (alignment)
4700 \TMP@EnsureCode{39}{12}% '
4701 \TMP@EnsureCode{40}{12}% (
4702 \TMP@EnsureCode{41}{12}% )
4703 \TMP@EnsureCode{42}{12}% *
4704 \TMP@EnsureCode{43}{12}% +
4705 \TMP@EnsureCode{44}{12}% ,
4706 \TMP@EnsureCode{45}{12}% -
4707 \TMP@EnsureCode{46}{12}% .
4708 \TMP@EnsureCode{47}{12}% /
4709 \TMP@EnsureCode{58}{12}% :
4710 \TMP@EnsureCode{59}{12}% ;
4711 \TMP@EnsureCode{60}{12}% <
4712 \TMP@EnsureCode{61}{12}% =
4713 \TMP@EnsureCode{62}{12}% >
4714 \TMP@EnsureCode{63}{12}% ?
4715 \TMP@EnsureCode{91}{12}% [

```

```

4716 \TMP@EnsureCode{93}{12}% ]
4717 \TMP@EnsureCode{94}{7}% ^ (superscript)
4718 \TMP@EnsureCode{95}{8}% _ (subscript)
4719 \TMP@EnsureCode{96}{12}% ‘
4720 \TMP@EnsureCode{124}{12}% |
4721 \TMP@EnsureCode{126}{13}% ~ (active)
4722 #1\relax
4723 \Hy@EndWrap
4724 }

```

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

```

4725 \Hy@AtBeginDocument{%
4726   \ifHy@ocgcolorlinks
4727     \kvsetkeys{Hyp}{colorlinks}%
4728     \ifHy@pdfa
4729       \Hy@Warning{%
4730         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4731         using ‘colorlinks’ instead of ‘ocgcolorlinks’%
4732       }%
4733       \Hy@ocgcolorlinksfalse
4734     \fi
4735   \fi
4736   \ifHy@ocgcolorlinks
4737   \else
4738     \Hy@DisableOption{ocgcolorlinks}%
4739   \fi
4740   \ifHy@colorlinks
4741     \def\@pdfborder{0 0 0}%
4742     \let\@pdfborderstyle\@empty
4743     \ifHy@typexml
4744     \else
4745       \Hy@CatcodeWrapper{%
4746         \RequirePackage{color}%
4747       }%
4748     \fi
4749     \def\Hy@colorlink#1{%
4750       \begingroup
4751       \HyColor@UseColor#1%
4752     }%
4753     \def\Hy@endcolorlink{\endgroup}%
4754     \Hy@Info{Link coloring ON}%
4755   \else
4756     \ifHy@frenchlinks
4757       \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4758       \def\Hy@endcolorlink{\endgroup}%
4759       \Hy@Info{French linking ON}%
4760     \else

```

for grouping consistency:

```

4761     \def\Hy@colorlink#1{\begingroup}%
4762     \def\Hy@endcolorlink{\endgroup}%
4763     \Hy@Info{Link coloring OFF}%
4764   \fi
4765 \fi
4766 \Hy@DisableOption{colorlinks}%
4767 \Hy@DisableOption{frenchlinks}%
4768 \ifHy@texht
4769   \long\def\@firstoffive#1#2#3#4#5{#1}%

```

```

4770 \long\def\@secondoffive#1#2#3#4#5{#2}%
4771 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4772 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4773 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4774 \providecommand*\@safe@activetrue{}%
4775 \providecommand*\@safe@activesfalse{}%
4776 \def\T@ref#1{%
4777   \Hy@safe@activetrue
4778   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4779   \Hy@safe@activesfalse
4780 }%
4781 \def\T@pageref#1{%
4782   \Hy@safe@activetrue
4783   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4784   \Hy@safe@activesfalse
4785 }%
4786 \else
4787   \ifHy@typexml
4788   \else
4789     \Hy@CatcodeWrapper{%
4790       \RequirePackage{nameref}[2012/07/28]%
4791     }%
4792   \fi
4793 \fi
4794 \DeclareRobustCommand\ref{%
4795   \@ifstar\@crefstar\T@ref
4796 }%
4797 \DeclareRobustCommand\pageref{%
4798   \@ifstar\@pagerefstar\T@pageref
4799 }%
4800 % \@ifclassloaded{memoir}{%
4801 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4802 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4803 %   }%
4804 % } \ltx@secondoftwo
4805 % {%
4806 %   \DeclareRobustCommand*\@nameref{%
4807 %     \@ifstar\@mem@titlerefno link\@mem@titleref
4808 %   }%
4809 % }{%
4810   \DeclareRobustCommand*\@nameref{%
4811     \@ifstar\@namerefstar\T@nameref
4812   }%
4813 % }%
4814 }
4815 \Hy@AtBeginDocument{%
4816   \ifHy@texht
4817   \else
4818     \Hy@CatcodeWrapper\ReadBookmarks
4819   \fi
4820 }
4821 \ifHy@backref
4822   \RequirePackage{backref}%
4823 \else
4824   \let\Hy@backout\@gobble
4825 \fi
4826 \Hy@DisableOption{backref}

```

```
4827 \Hy@DisableOption{pagebackref}
```

```
4828 \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`.

```
4829 \begingroup
4830 \endlinechar=-1 %
4831 \catcode'\^^A=14 %
4832 \catcode'\^^M\active
4833 \catcode'\%\active
4834 \catcode'\#\active
4835 \catcode'\_\active
4836 \catcode'\$\active
4837 \catcode'\&\active
4838 \gdef\hyper@normalise{^^A
4839   \begingroup
4840   \catcode'\^^M\active
4841   \def^^M{ }^^A
4842   \catcode'\%\active
4843   \let%\@percentchar
4844   \let%\@percentchar
4845   \catcode'\#\active
4846   \def#{\hyper@hash}^^A
4847   \def\#{\hyper@hash}^^A
4848   \@makeother\&^^A
4849   \edef&{\string&}^^A
4850   \edef\&{\string&}^^A
4851   \edef\textunderscore{\string_}^^A
4852   \let_\textunderscore
4853   \catcode'\_\active
4854   \let_\textunderscore
4855   \let~\hyper@tilde
4856   \let~\hyper@tilde
4857   \let\textasciitilde\hyper@tilde
4858   \let\\\@backslashchar
4859   \edef${\string$}^^A
4860   \Hy@safe@activetrue
4861   \hyper@n@rmalise
4862 }^^A
4863 \catcode'\#=6 ^^A
4864 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4865 \gdef\hyper@n@rmalise#1#2{^^A
4866   \def\Hy@tempa{#2}^^A
4867   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4868     \ltx@ReturnAfterElseFi{^^A
4869       \hyper@@normalise{#1}^^A
4870     }^^A
4871   \else
4872     \ltx@ReturnAfterFi{^^A
```

```

4873     \hyper@@normalise{#1}{#2}^^A
4874   }^^A
4875   \fi
4876 }^^A
4877 \gdef\hyper@@normalise#1#2{^^A
4878   \edef\Hy@tempa{^^A
4879     \endgroup
4880     \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4881   }^^A
4882   \Hy@tempa
4883 }^^A
4884 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4885   #1^^A
4886   \ifx\limits#2\limits
4887     \else
4888       \ltx@ReturnAfterFi{^^A
4889         \Hy@RemovePercentCr #2\@nil
4890       }^^A
4891     \fi
4892   }^^A
4893 \endgroup
4894 \providecommand*\hyper@chars{%
4895   \let\#\hyper@hash
4896   \let\%\@percentchar
4897   \Hy@safe@activestrue
4898 }

4899 \def\hyperlink#1#2{%
4900   \hyper@@@link{}{#1}{#2}%
4901 }

4902 \def\Hy@VerboseLinkStart#1#2{%
4903   \ifHy@verbose
4904     \begingroup
4905     \Hy@safe@activestrue
4906     \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4907     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4908     \xdef\Hy@VerboseGlobalTemp{%
4909       \Hy@VerboseGlobalTemp, %
4910       line \the\inputlineno
4911     }%
4912   \endgroup
4913   \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4914   \@onelevel@sanitize\Hy@VerboseLinkInfo
4915   \fi
4916 }

4917 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4918 \def\Hy@VerboseLinkStop{%
4919   \ifHy@verbose
4920     \begingroup
4921     \edef\x{\endgroup
4922       \write\m@ne{%
4923         Package 'hyperref' Info: %
4924         End of reference \Hy@VerboseLinkInfo.%
4925       }%
4926     }%
4927   \x
4928   \fi

```

```

4929 }
4930 \def\Hy@VerboseAnchor#1{%
4931   \ifHy@verbose
4932     \begingroup
4933     \Hy@safe@activetrue
4934     \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4935   \endgroup
4936   \fi
4937 }
4938 \def\Hy@AllowHyphens{%
4939   \relax
4940   \ifhmode
4941     \penalty\@M
4942     \hskip\z@skip
4943   \fi
4944 }
4945 \DeclareRobustCommand*{\href}[1][]{%
4946   \begingroup
4947   \setkeys{href}{#1}%
4948   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4949 }
4950 \def\Hy@href#1{%
4951   \hyper@normalise\href@
4952 }
4953 \begingroup
4954   \catcode'\$=6 %
4955   \catcode'\#=12 %
4956   \gdef\href@#1{\expandafter\href@split$1##\}%
4957   \gdef\href@split$1##$2##$3\\$4{%
4958     \hyper@@link{$1}{$2}{$3}{$4}%
4959   \endgroup
4960 }%
4961 \endgroup

```

Option 'page'.

```

4962 \define@key{href}{page}{%
4963   \def\Hy@href@page{#1}%
4964 }
4965 \let\Hy@href@page\@empty
4966 \newcount\c@Hy@tempcnt
4967 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4968 \def\Hy@MakeRemoteAction{%
4969   \ifx\Hy@href@page\@empty
4970     \def\Hy@href@page{0}%
4971   \else
4972     \setcounter{Hy@tempcnt}{\Hy@href@page}%
4973     \ifnum\c@Hy@tempcnt<\@ne
4974       \Hy@Warning{%
4975         Invalid page number (\theHy@tempcnt)\MessageBreak
4976         for remote PDF file.\MessageBreak
4977         Using page 1%
4978       }%
4979     \def\Hy@href@page{0}%
4980   \else
4981     \global\advance\c@Hy@tempcnt\m@ne
4982     \edef\Hy@href@page{\theHy@tempcnt}%
4983   \fi

```

```
4984 \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.

```
4985 \ifx\Hy@href@nextactionraw\@empty
4986 \else
4987 \Hy@pdfnewwindowsettrue
4988 \Hy@pdfnewwindowtrue
4989 \fi
4990 }
```

Option ‘pdfremotestartview’.

```
4991 \define@key{href}{pdfremotestartview}{%
4992 \setkeys{Hyp}{pdfremotestartview={#1}}}%
4993 }
```

Option ‘pdfnewwindow’.

```
4994 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4995 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default
```

Option ‘ismap’.

```
4996 \newif\ifHy@href@ismap
4997 \define@key{href}{ismap}[true]{%
4998 \ltx@ifundefined{Hy@href@ismap#1}{%
4999 \Hy@Error{%
5000 Invalid value (#1) for key ‘ismap’.\MessageBreak
5001 Permitted values are ‘true’ or ‘false’.\MessageBreak
5002 Ignoring ‘ismap’%
5003 } \@ehc
5004 }{%
5005 \csname Hy@href@ismap#1\endcsname
5006 }%
5007 }
```

Option ‘nextactionraw’.

```
5008 \let\Hy@href@nextactionraw\@empty
5009 \define@key{href}{nextactionraw}{%
5010 \edef\Hy@href@nextactionraw{#1}%
5011 \ifx\Hy@href@nextactionraw\@empty
5012 \else
5013 \Hy@Match\Hy@href@nextactionraw{%
5014 ~(\HyPat@ObjRef/|<<.*[/].+>>|%
5015 \[( ?\HyPat@ObjRef/|<<.*[/].+>>)+ ?)\$%
5016 }{}{%
5017 \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
5018 \Hy@href@nextactionraw\MessageBreak
5019 The action is discarded%
5020 }%
5021 }%
5022 \ifx\Hy@href@nextactionraw\@empty
5023 \else
5024 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5025 \fi
5026 \fi
5027 }
5028 \def\HyPat@ObjRef/{.+}
```

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

```
5029 \RequirePackage{url}
5030 \let\HyOrg@url\url
```

```

5031 \def\Hurl{\begingroup \Url}
5032 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
5033 \def\nolinkurl@#1{\Hurl{#1}}
5034 \DeclareRobustCommand*\url{\hyper@normalise\url@}
5035 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5036 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5037 \providecommand\hyper@image[2]{#2}

5038 \def\hypertarget#1#2{%
5039   \ifHy@nesting
5040     \hyper@@anchor{#1}{#2}%
5041   \else
5042     \hyper@@anchor{#1}{\relax}#2%
5043   \fi
5044 }

```

`\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.

```

5045 \DeclareRobustCommand*\hyperref{%
5046   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5047 }
5048 \def\Hy@babelnormalise#1[#2]{%
5049   \begingroup
5050   \Hy@safe@activestrue
5051   \edef\Hy@tempa{%
5052     \endgroup
5053     \noexpand#1[#2]}%
5054   }%
5055   \Hy@tempa
5056 }
5057 \def\@hyperref{\hyper@normalise\@hyperref}
5058 \def\@hyperref#1#2#3{%
5059   \edef\ref@one{\ifx\\#2\\ \else#2.\fi#3}%
5060   \expandafter\tryhyper@link\ref@one\{#1}%
5061 }
5062 \def\tryhyper@link#1\\#2{%
5063   \hyper@@link{#2}{#1}%
5064 }

5065 \def\hyperdef{\@ifnextchar[\label@hyperdef]{\@hyperdef}}
5066 \def\@hyperdef#1#2#3{%, category, name, text
5067   \ifx\\#1\\%
5068     \def\Hy@AnchorName{#2}%
5069   \else
5070     \def\Hy@AnchorName{#1.#2}%
5071   \fi
5072   \ifHy@nesting
5073     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5074   \else
5075     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5076   \fi
5077 }

```


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

```

5078 \def\label@hyperref[#1]{%
5079   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5080 }%
5081 \def\label@@hyperref#1#2#3{%
5082   \ifx#1\relax
5083     \protect\G@refundefinedtrue
5084     \@latex@warning{%
5085       Hyper reference ‘#2’ on page \thepage \space undefined%
5086     }%
5087     \begingroup
5088       #3%
5089     \endgroup
5090   \else
5091     \hyper@@link{\expandafter\@fifthoffive#1}%
5092     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5093   \fi
5094 }
5095 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5096                               % anchor text
5097   \@bsphack
5098   \ifx\#2\%
5099     \def\Hy@AnchorName{#3}%
5100   \else
5101     \def\Hy@AnchorName{#2.#3}%
5102   \fi
5103   \if@filesw
5104     \protected@write\@auxout{}{%
5105       \string\newlabel{#1}{\{ }\}{\{ }\Hy@AnchorName}{ }\}%
5106     }%
5107   \fi
5108   \@esphack
5109   \ifHy@nesting
5110     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5111   \else
5112     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5113   \fi
5114 }

```

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.

```

5115 \def\hyper@@link{\let\Hy@reserved@a\relax
5116   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5117 }
5118 \def\hyper@link@[#1]#2#3#4{%
5119   \begingroup
5120     \protected@edef\Hy@tempa{#2}%
5121     \Hy@safe@activestrue
5122     \edef\x{#3}%
5123     \ifx\Hy@tempa\@empty
5124       \toks0{\hyper@link{#1}}%

```

```

5125 \else
5126 \toks0{\expandafter\hyper@readexternallink#2\{\#1}\}%
5127 \fi
5128 \toks2{%
5129 \Hy@safe@activesfalse
5130 #4%
5131 }%
5132 \edef\Hy@tempa{\the\toks2}%
5133 \edef\x{\endgroup
5134 \ifx\Hy@tempa\@empty
5135 \noexpand\Hy@Warning{Suppressing empty link}%
5136 \else
5137 \the\toks0 {\x}{\the\toks2}%%
5138 \fi
5139 }%
5140 \x
5141 }

```

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.

```

5142 \def\hyper@readexternallink#1\#2#3#4{%
5143 \begingroup
5144 \let\relax
5145 \expandafter\endgroup
5146 \expandafter\@hyper@@readexternallink#1\{\#2}\{\#3}\{\#4}%
5147 }
5148 \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.

```

5149 \@hyper@readexternallink{\#2}\{\#3}\{\#4}\#1::\{\#1}%
5150 }

```

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

```

5151 \def\@pdftempwordfile{file}%
5152 \def\@pdftempwordrun{run}%
5153 \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:

```

5154 \ifx\#6\%
5155 \@hyper@linkfile file:#7\{\#3}\{\#2}\{\#7}%

```

```

5156 \else
5157   \ifx\\#4\\%
5158     \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5159   \else

```

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

```

5160   \def\@pdftempa{#4}%
5161   \ifx\@pdftempa\@pdftempwordfile
5162     \@hyper@linkfile#7\\{#3}{#2}{#7}%
5163   \else

```

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

```

5164     \ifx\@pdftempa\@pdftempwordrun
5165       \ifHy@pdfa
5166         \Hy@Error{%
5167           PDF/A: Launch action is prohibited%
5168         }\@ehc
5169       \begingroup
5170         \leavevmode
5171         #2%
5172       \endgroup
5173     \else
5174       \@hyper@launch#7\\{#3}{#2}%
5175     \fi
5176   \else

```

otherwise its a URL

```

5177     \hyper@linkurl{#3}{#7\ifx\\#2\\else\hyper@hash#2\fi}%
5178   \fi
5179 \fi
5180 \fi
5181 \fi
5182 }

```

By default, turn run: into file:

```

5183 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
5184   \hyper@linkurl{#2}{%
5185     \Hy@linkfileprefix
5186     #1%
5187     \ifx\\#3\\%
5188     \else
5189       \hyper@hash
5190       #3%
5191     \fi
5192   }%
5193 }

```

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

```

5194 \def\@hyper@linkfile file:#1\\#2#3#4{%
5195   %file url,link string, name, original uri
5196   \filename@parse{#1}%
5197   \ifx\filename@ext\relax
5198     \edef\filename@ext{\XR@ext}%
5199   \fi
5200   \def\use@file{\filename@area\filename@base.\filename@ext}%
5201   \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5202     \hyper@linkfile{#2}{\use@file}{#3}%
5203   }{%

```

```

5204 \ifx\@baseurl\@empty
5205 \hyper@linkurl{#2}{%
5206   #4\ifx\#3\else\hyper@hash#3\fi
5207 }%
5208 \else
5209 \hyper@linkurl{#2}{\use@file\ifx\#3\else\hyper@hash#3\fi}%
5210 \fi
5211 }%
5212 }

5213 \def\Hy@ifStringEndsWith#1#2{%
5214 \begingroup
5215 \edef\x{#1}%
5216 \@onelevel@sanitize\x
5217 \edef\x{.x}%
5218 \edef\y{#2}%
5219 \@onelevel@sanitize\y
5220 \edef\y{.y}%
5221 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5222 \endgroup
5223 \ifx\relax##2\relax
5224 \expandafter\ltx@secondoftwo
5225 \else
5226 \expandafter\ltx@firstoftwo
5227 \fi
5228 }%
5229 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5230 }

5231 \def\Hy@StringLocalhost{localhost}
5232 \@onelevel@sanitize\Hy@StringLocalhost
5233 \def\Hy@CleanupFile#1{%
5234 \edef#1{#1}%
5235 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5236 }
5237 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5238 \begingroup
5239 \toks@{\endgroup}%
5240 \def\x{#1}%
5241 \ifx\x\@empty
5242 \def\x{#2}%
5243 \ifx\x\@empty
5244 \toks@{\endgroup\def#5{/#3}}%
5245 \else
5246 \@onelevel@sanitize\x
5247 \ifx\x\Hy@StringLocalhost
5248 \toks@{\endgroup\def#5{/#3}}%
5249 \fi
5250 \fi
5251 \fi
5252 \the\toks@
5253 }

```

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.

```

5254 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5255 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5256   \ifx\#1\%
5257     #2\Hy@Warning{Ignoring empty anchor}%
5258   \else
5259     \def\anchor@spot{#2#3}%
5260     \let\put@me@back\@empty
5261     \ifx\relax#2\relax
5262     \else
5263       \ifHy@nesting
5264       \else
5265         \ifcat a\noexpand#2\relax
5266         \else
5267           \ifcat 0\noexpand#2 \relax
5268           \else
5269             \typeout{Anchor start is not alphanumeric %
5270               on input line\the\inputlineno%
5271             }%
5272             \let\anchor@spot\@empty
5273             \def\put@me@back{#2#3}%
5274           \fi
5275         \fi
5276       \fi
5277     \fi
5278     \ifHy@activeanchor
5279       \anchor@spot
5280     \else
5281       \hyper@anchor{#1}%
5282     \fi
5283     \expandafter\put@me@back
5284   \fi
5285   \let\anchor@spot\@empty
5286 }
5287 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5288 \ifHy@destlabel

\hyper@newdestlabel

5289 \def\hyper@newdestlabel#1#2{%
5290   \begingroup
5291     \Hy@safe@activetrue
5292     \edef\x{\endgroup
5293       \noexpand\@newl@bel{HyDL}{#1}{#2}%
5294     }%
5295   \x
5296 }%

\hyper@destlabel@hook

5297 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5298 \newcommand*\Hy@DestRename[2]{%
5299   \ltx@ifundefined{HyDL!#1}{%

```

```

5300 \begingroup
5301 \Hy@safe@activetrue
5302 \edef\dest@name{#1}%
5303 \edef\label@name{#2}%
5304 \hyper@destlabel@hook
5305 \Hy@IsNotEmpty{dest@name}{%
5306 \Hy@IsNotEmpty{label@name}{%
5307 \global\expandafter
5308 \let\csname HyDL!#1\endcsname\ltx@empty
5309 \if@files
5310 \protected@write\@auxout{}{%
5311 \string\hyper@newdestlabel
5312 {#1}%
5313 {\label@name}%
5314 }%
5315 \fi
5316 }%
5317 }%
5318 \endgroup
5319 }{}%
5320 }%

```

\HyperDestRename

```

5321 \newcommand*{\HyperDestRename}[2]{%
5322 \AtBeginDocument{%
5323 \Hy@DestRename{#1}{#2}%
5324 }%
5325 }%
5326 \AtBeginDocument{%
5327 \let\HyperDestRename\Hy@DestRename
5328 }%

```

\Hy@IsNotEmpty

```

5329 \def\Hy@IsNotEmpty#1{%
5330 \ltx@ifundefined{#1}\ltx@gobble{%
5331 \expandafter\ifx\csname#1\endcsname\ltx@empty
5332 \expandafter\ltx@gobble
5333 \else
5334 \expandafter\ltx@firstofone
5335 \fi
5336 }%
5337 }%

5338 \ltx@GlobalAppendToMacro\label@hook{%
5339 \HyperDestRename\@currentHref\label@name
5340 }%

```

\HyperDestLabelReplace

```

5341 \def\HyperDestLabelReplace#1{%
5342 \ltx@ifundefined{HyDL@#1}{%
5343 #1%
5344 }{%
5345 \csname HyDL@#1\endcsname
5346 }%
5347 }%

```

\HyperDestNameFilter

```

5348 \let\HyperDestNameFilter\HyperDestLabelReplace

```

```

5349 \else

\hyper@newdestlabel

5350 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace

5351 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename

@gobbletwo

5352 \fi

5353 \Hy@DisableOption{destlabel}

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

5354 \AddLineBeginAux{%
5355 \string\providecommand\string\hyper@newdestlabel[2]{}%
5356 }

```

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.

```

5357 \let\htmladdimg\hyperimage

5358 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5359 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5360 \def\htmlref#1#2{% anchor text, label
5361 \label@hyperref{#2}{#1}%
5362 }

```

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.

```

5363 \def\@latex2htmlX{%
5364 \let\hhyperref\hyperref
5365 \def\hyperref##1##2##3##4{% anchor text for HTML
5366 % text to print before label in print
5367 % label
5368 % post-label text in print
5369 ##2\ref{##4}##3%
5370 }%
5371 }

```

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.

```
5372 \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

```
5373 \def\HyField@NewFlag#1#2{%
5374   \lowercase{\HyField@NewOption{#2}}%
5375   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5376 }
```

\HyField@NewFlagOnly

```
5377 \def\HyField@NewFlagOnly#1#2{%
5378   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5379 }
```

\HyField@NewOption #1: option name

```
5380 \def\HyField@NewOption#1{%
5381   \expandafter\newif\csname ifFld@#1\endcsname
5382   \define@key{Field}{#1}[true]{%
5383     \lowercase{\Field@boolkey{##1}}{#1}%
5384   }%
5385 }
```

\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

```
5386 \def\HyField@NewBitsetFlag#1#2#3#4{%
5387   \begingroup
5388     \count@=#4\relax
5389     \advance\count@\m@ne
5390     \def\x##1{%
5391       \endgroup
5392       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5393       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5394         \expandafter\edef\csname HyField@#3@##1\endcsname{%
5395           (\number#4) #2%
5396         }%
5397       \else
5398         \expandafter\edef\csname HyField@#3@##1\endcsname{%
5399           \csname HyField@#3@##1\endcsname
5400           /#2%
5401         }%
5402       \fi
5403     }%
5404     \expandafter\x\expandafter{\the\count@}%
5405 }
```



```

\HyField@UseFlag The bit set is HyField@#1
5406 \def\HyField@UseFlag#1#2{%
5407 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5408 }

\HyField@@UseFlag
5409 \def\HyField@@UseFlag#1#2{%
5410 \bitsetSetValue{HyField@#2}{%
5411 \csname HyField@#2@#1\endcsname
5412 }{%
5413 \csname ifFld@#1\endcsname 1\else 0\fi
5414 }%
5415 }

\HyField@SetFlag The bit set is HyField@#1
5416 \def\HyField@SetFlag#1#2{%
5417 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5418 }

\HyField@@SetFlag
5419 \def\HyField@@SetFlag#1#2{%
5420 \bitsetSetValue{HyField@#2}{%
5421 \csname HyField@#2@#1\endcsname
5422 }{1}%
5423 }

\HyField@PrintFlags
5424 \def\HyField@PrintFlags#1#2{%
5425 \ifHy@verbose
5426 \begingroup
5427 \let\Hy@temp\@empty
5428 \let\MessageBreak\relax
5429 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5430 \bitsetGetSetBitList{HyField@#1}\do{%
5431 \edef\Hy@temp{%
5432 \Hy@temp
5433 \csname HyField@#1@\x\endcsname\MessageBreak
5434 }%
5435 }%
5436 \edef\x{\endgroup
5437 \noexpand\Hy@Info{%
5438 Field flags: %
5439 \expandafter\ifx\@car#1\@nil S\else/\fi
5440 #1 %
5441 \bitsetGetDec{HyField@#1} %
5442 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5443 \Hy@temp
5444 for #2%
5445 }%
5446 }\x
5447 \fi
5448 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5449 \HyField@NewFlag{Ff}{ReadOnly}{1}
5450 \HyField@NewFlag{Ff}{Required}{2}
5451 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5452 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5453 \HyField@NewFlag{Ff}{Radio}{16}
5454 \HyField@NewFlag{Ff}{Pushbutton}{17}
5455 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5456 \HyField@NewFlag{Ff}{Multiline}{13}
5457 \HyField@NewFlag{Ff}{Password}{14}
5458 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5459 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5460 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5461 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5462 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5463 \HyField@NewFlag{Ff}{Combo}{18}
5464 \HyField@NewFlag{Ff}{Edit}{19}
5465 \HyField@NewFlag{Ff}{Sort}{20}
5466 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5467 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5468 \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.

```

5469 \newif\iffld@popdown
5470 \define@key{Field}{popdown}[true]{%
5471   \lowercase{\Field@boolkey{#1}}{popdown}%
5472 }

```

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.

```

5473 \HyField@NewFlag{F}{Invisible}{1}
5474 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5475 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5476 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5477 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5478 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5479 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5480 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5481 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5482 \ifHy@pdfa
5483   \def\HyField@PDFAFldWarning#1#2{%
5484     \Hy@Warning{%
5485       PDF/A: Annotation flag ‘#1’ must\MessageBreak
5486       be set to ‘#2’%
5487     }%
5488   }%
5489   \Fld@invisiblefalse
5490   \def\Fld@invisibletrue{%

```

```

5491 \HyField@PDFAFFlagWarning{invisible}{false}%
5492 }%
5493 \Fld@hiddenfalse
5494 \def\Fld@hiddenttrue{%
5495 \HyField@PDFAFFlagWarning{hidden}{false}%
5496 }%
5497 \Fld@printtrue
5498 \def\Fld@printfalse{%
5499 \HyField@PDFAFFlagWarning{print}{true}%
5500 }%
5501 \Fld@nozoomtrue
5502 \def\Fld@nozoomfalse{%
5503 \HyField@PDFAFFlagWarning{nozoom}{true}%
5504 }%
5505 \Fld@norotatetrue
5506 \def\Fld@norotatefalse{%
5507 \HyField@PDFAFFlagWarning{norotate}{true}%
5508 }%
5509 \Fld@noviewfalse
5510 \def\Fld@noviewtrue{%
5511 \HyField@PDFAFFlagWarning{noview}{false}%
5512 }%
5513 \fi

```

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

```

5514 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5515 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5516 \HyField@NewFlag{Submit}{GetMethod}{4}
5517 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5518 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5519 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5520 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5521 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5522 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5523 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5524 \HyField@NewFlag{Submit}{ExclFKey}{12}
5525 \HyField@NewFlag{Submit}{EmbedForm}{14}

5526 \define@key{Field}{export}{%
5527 \lowercase{\def\Hy@temp{#1}}%
5528 \@ifundefined{Fld@export@}\Hy@temp{%
5529 \@onelevel@sanitize\Hy@temp
5530 \Hy@Error{%
5531 Unknown export format '\Hy@temp'.\MessageBreak
5532 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5533 }\@ehc
5534 }{%
5535 \let\Fld@export\Hy@temp
5536 }%
5537 }

5538 \def\Fld@export{fdf}
5539 \@namedef{Fld@export@fdf}{0}%
5540 \@namedef{Fld@export@html}{1}%
5541 \@namedef{Fld@export@xfdf}{2}%
5542 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```
5543 \def\HyField@FlagsSubmit{%
5544   \bitsetReset{HyField@Submit}%
5545   \ifcase\@nameuse{Fld@export@\Fld@export} %
5546     % FDF
5547     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5548     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5549     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5550     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5551     \HyField@UseFlag{Submit}{CanonicalFormat}%
5552     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5553     \HyField@UseFlag{Submit}{ExclFKey}%
5554     \HyField@UseFlag{Submit}{EmbedForm}%
5555   \or % HTML
5556     \HyField@SetFlag{Submit}{ExportFormat}%
5557     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5558     \HyField@UseFlag{Submit}{GetMethod}%
5559     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5560     \HyField@UseFlag{Submit}{CanonicalFormat}%
5561   \or % XFDF
5562     \HyField@SetFlag{Submit}{XFDF}%
5563     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5564     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5565     \HyField@UseFlag{Submit}{CanonicalFormat}%
5566   \or % PDF
5567     \HyField@SetFlag{Submit}{SubmitPDF}%
5568     \HyField@UseFlag{Submit}{GetMethod}%
5569   \fi
5570   \HyField@PrintFlags{Submit}{submit button field}%
5571   \bitsetIsEmpty{HyField@Submit}{%
5572     \let\Fld@submitflags\ltx@empty
5573   }{%
5574     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5575   }%
5576 }
```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
5577 \def\HyField@FlagsAnnot#1{%
5578   \bitsetReset{HyField@F}%
5579   \HyField@UseFlag{F}{Invisible}%
5580   \HyField@UseFlag{F}{Hidden}%
5581   \HyField@UseFlag{F}{Print}%
5582   \HyField@UseFlag{F}{NoZoom}%
5583   \HyField@UseFlag{F}{NoRotate}%
5584   \HyField@UseFlag{F}{NoView}%
5585   \HyField@UseFlag{F}{Locked}%
5586   \HyField@UseFlag{F}{ToggleNoView}%
5587   \HyField@UseFlag{F}{LockedContents}%
5588   \HyField@PrintFlags{F}{#1}%
5589   \bitsetIsEmpty{HyField@F}{%
5590     \let\Fld@annotflags\ltx@empty
5591   }{%
5592     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5593   }
```

```

5593 }%
5594 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5595 \def\HyField@FlagsPushButton{%
5596 \HyField@FlagsAnnot{push button field}%
5597 \bitsetReset{HyField@Ff}%
5598 \HyField@UseFlag{Ff}{ReadOnly}%
5599 \HyField@UseFlag{Ff}{Required}%
5600 \HyField@UseFlag{Ff}{NoExport}%
5601 \HyField@SetFlag{Ff}{PushButton}%
5602 \HyField@PrintFlags{Ff}{push button field}%
5603 \bitsetIsEmpty{HyField@Ff}{%
5604 \let\Fld@flags\ltx@empty
5605 }{%
5606 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5607 }%
5608 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5609 \def\HyField@FlagsCheckBox{%
5610 \HyField@FlagsAnnot{check box field}%
5611 \bitsetReset{HyField@Ff}%
5612 \HyField@UseFlag{Ff}{ReadOnly}%
5613 \HyField@UseFlag{Ff}{Required}%
5614 \HyField@UseFlag{Ff}{NoExport}%
5615 \HyField@PrintFlags{Ff}{check box field}%
5616 \bitsetIsEmpty{HyField@Ff}{%
5617 \let\Fld@flags\ltx@empty
5618 }{%
5619 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5620 }%
5621 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5622 \def\HyField@FlagsRadioButton{%
5623 \HyField@FlagsAnnot{radio button field}%
5624 \bitsetReset{HyField@Ff}%
5625 \HyField@UseFlag{Ff}{ReadOnly}%
5626 \HyField@UseFlag{Ff}{Required}%
5627 \HyField@UseFlag{Ff}{NoExport}%
5628 \HyField@UseFlag{Ff}{NoToggleToOff}%
5629 \HyField@SetFlag{Ff}{Radio}%
5630 \HyField@UseFlag{Ff}{RadiosInUnison}%
5631 \HyField@PrintFlags{Ff}{radio button field}%
5632 \bitsetIsEmpty{HyField@Ff}{%
5633 \let\Fld@flags\ltx@empty
5634 }{%
5635 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5636 }%
5637 }

```

20.1.7 Text fields

\HyField@FlagsText

```
5638 \def\HyField@FlagsText{%
5639   \HyField@FlagsAnnot{text field}%
5640   \bitsetReset{HyField@Ff}%
5641   \HyField@UseFlag{Ff}{ReadOnly}%
5642   \HyField@UseFlag{Ff}{Required}%
5643   \HyField@UseFlag{Ff}{NoExport}%
5644   \HyField@UseFlag{Ff}{Multiline}%
5645   \HyField@UseFlag{Ff}{Password}%
5646   \HyField@UseFlag{Ff}{FileSelect}%
5647   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5648   \HyField@UseFlag{Ff}{DoNotScroll}%
5649   \ifFld@comb
5650     \ifcase0\ifFld@multiline
5651       \else\ifFld@password
5652       \else\ifFld@fileselect
5653       \else 1\fi\fi\fi\relax
5654     \Hy@Error{%
5655       Field option ‘comb’ cannot used together with\MessageBreak
5656       ‘multiline’, ‘password’, or ‘fileselect’%
5657     }\@ehc
5658   \else
5659     \HyField@UseFlag{Ff}{Comb}%
5660   \fi
5661 \fi
5662 \HyField@UseFlag{Ff}{RichText}%
5663 \HyField@PrintFlags{Ff}{text field}%
5664 \bitsetIsEmpty{HyField@Ff}{%
5665   \let\Fld@flags\ltx@empty
5666 }{%
5667   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5668 }%
5669 }
```

20.1.8 Choice fields

\HyField@FlagsChoice

```
5670 \def\HyField@FlagsChoice{%
5671   \HyField@FlagsAnnot{choice field}%
5672   \bitsetReset{HyField@Ff}%
5673   \HyField@UseFlag{Ff}{ReadOnly}%
5674   \HyField@UseFlag{Ff}{Required}%
5675   \HyField@UseFlag{Ff}{NoExport}%
5676   \HyField@UseFlag{Ff}{Combo}%
5677   \ifFld@combo
5678     \HyField@UseFlag{Ff}{Edit}%
5679   \fi
5680   \HyField@UseFlag{Ff}{Sort}%
5681   \HyField@UseFlag{Ff}{MultiSelect}%
5682   \ifFld@combo
5683     \ifFld@edit
5684       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5685     \fi
5686   \fi
5687   \HyField@UseFlag{Ff}{CommitOnSelChange}%

```

```

5688 \HyField@PrintFlags{Ff}{choice field}%
5689 \bitsetIsEmpty{HyField@Ff}{%
5690   \let\Fld@flags\ltx@empty
5691 }{%
5692   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5693 }%
5694 }

```

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`.

```

5695 \def\HyField@PDFChoices#1{%
5696   \begingroup
5697   \global\let\Fld@choices\ltx@empty
5698   \let\HyTmp@optlist\ltx@empty
5699   \let\HyTmp@optitem\relax
5700   \count@=0 %
5701   \kv@parse{#1}{%
5702     \Hy@pdfstringdef\kv@key\kv@key
5703     \ifx\kv@value\relax
5704       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
5705         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
5706       \else
5707         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5708       \fi
5709     \else
5710       \Hy@pdfstringdef\kv@value\kv@value
5711       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
5712     \fi
5713     \edef\HyTmp@optlist{%
5714       \HyTmp@optlist
5715       \HyTmp@optitem{\the\count@}{\kv@key}0%
5716     }%
5717     \advance\count@ by 1 %
5718     \@gobbletwo
5719   }%
5720   \xdef\Fld@choices{/Opt[\Fld@choices]}%
5721   \ifFld@multiselect
5722     \HyField@@PDFChoices{DV}\Fld@default
5723     \HyField@@PDFChoices{V}\Fld@value
5724   \else
5725     \ifx\Fld@default\relax
5726     \else
5727       \pdfstringdef\Hy@gtemp\Fld@default
5728       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5729     \fi
5730     \ifx\Fld@value\relax
5731     \else
5732       \pdfstringdef\Hy@gtemp\Fld@value
5733       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5734     \fi
5735   \fi
5736 \endgroup
5737 }

```

\HyField@@PDFChoices

```
5738 \def\HyField@@PDFChoices#1#2{%
5739   \ifx#2\relax
5740   \else
5741     \count@=0 %
5742     \def\HyTmp@optitem##1##2##3{%
5743       \def\HyTmp@key{##2}%
5744       \ifx\HyTmp@key\Hy@gtemp
5745         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5746           \HyTmp@optlist
5747           \HyTmp@optitem{##1}{##2}1%
5748         }%
5749         \let\HyTmp@found=Y%
5750       \else
5751         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5752           \HyTmp@optlist
5753           \HyTmp@optitem{##1}{##2}##3%
5754         }%
5755       \fi
5756     }%
5757     \expandafter\comma@parse\expandafter{#2}{%
5758       \pdfstringdef\Hy@gtemp\comma@entry
5759       \let\HyTmp@found=N %
5760       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5761       \HyTmp@optlist
5762       \ifx\HyTmp@found Y%
5763         \advance\count@ by 1 %
5764       \else
5765         \@onelevel@sanitize\comma@entry
5766         \PackageWarning{hyperref}{%
5767           \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
5768           \MessageBreak
5769           it cannot be found in the choices%
5770         }%
5771       \fi
5772       \@gobble
5773     }%
5774     \def\HyTmp@optitem##1##2##3{%
5775       \ifnum##3=1 %
5776         (##2)%
5777       \fi
5778     }%
5779     \ifcase\count@
5780     \or
5781       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5782     \else
5783       \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5784     \ifx#1V%
5785       \def\HyTmp@optitem##1##2##3{%
5786         \ifnum##3=1 %
5787           \@firstofone{ ##1}%
5788         \fi
5789       }%
5790       \edef\HyTmp@optlist{\HyTmp@optlist}%
5791       \xdef\Fld@choices{%
5792         \Fld@choices
5793         /I[\expandafter\@firstofone\HyTmp@optlist]%

```



```

5794     }%
5795     \fi
5796     \fi
5797     \fi
5798 }

```

20.3 Forms

\HyField@SetKeys

```

5799 \def\HyField@SetKeys{%
5800   \kvsetkeys{Field}%
5801 }

5802 \newif\ifFld@checked
5803 \newif\ifFld@disabled
5804 \Fld@checkedfalse
5805 \Fld@disabledfalse
5806 \newcount\Fld@menulength
5807 \newdimen\Fld@Width
5808 \newdimen\Fld@charsize
5809 \Fld@charsize=10\p@
5810 \def\Fld@maxlen{0}
5811 \def\Fld@align{0}
5812 \def\Fld@color{0 0 0 rg}
5813 \def\Fld@bcolor{1 1 1}
5814 \def\Fld@bordercolor{1 0 0}
5815 \def\Fld@bordersep{1\p@}
5816 \def\Fld@borderwidth{1}
5817 \def\Fld@borderstyle{S}
5818 \def\Fld@cbsymbol{4}
5819 \def\Fld@radiosymbol{H}
5820 \def\Fld@rotation{0}
5821 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5822 \def\endForm{\@endForm}
5823 \newif\ifForm@html
5824 \Form@htmlfalse
5825 \def\Form@boolkey#1#2{%
5826   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5827 }
5828 \define@key{Form}{action}{%
5829   \hyper@normalise\Hy@DefFormAction{#1}%
5830 }
5831 \def\Hy@DefFormAction{\def\Form@action}
5832 \def\enc@html{html}
5833 \define@key{Form}{encoding}{%
5834   \def\Hy@tempa{#1}%
5835   \ifx\Hy@tempa\enc@html
5836     \Form@htmltrue
5837     \def\Fld@export{html}%
5838   \else
5839     \Hy@Warning{%
5840       Form 'encoding' key with \MessageBreak
5841       unknown value '#1'%
5842     }%
5843     \Form@htmlfalse
5844   \fi
5845 }

```

```

5846 \define@key{Form}{method}{%
5847   \lowercase{\def\Hy@temp{#1}}%
5848   \@ifundefined{Form@method@\Hy@temp}{%
5849     \@onelevel@sanitize\Hy@temp
5850     \Hy@Error{%
5851       Unknown method '\Hy@temp'.\MessageBreak
5852       Known values are 'post' and 'get'%
5853     }\@ehc
5854   }{%
5855     \let\Form@method\Hy@temp
5856     \ifcase\@nameuse{Form@method@\Hy@temp} %
5857       \Fld@getmethodfalse
5858     \else
5859       \Fld@getmethodtrue
5860     \fi
5861   }%
5862 }
5863 \def\Form@method{}
5864 \@namedef{Form@method@post}{0}
5865 \@namedef{Form@method@get}{1}

5866 \newif\ifHyField@NeedAppearances
5867 \def\HyField@NeedAppearancesfalse{%
5868   \global\let\ifHyField@NeedAppearances\iffalse
5869 }
5870 \def\HyField@NeedAppearancetrue{%
5871   \global\let\ifHyField@NeedAppearances\iftrue
5872 }
5873 \HyField@NeedAppearancetrue
5874 \define@key{Form}{NeedAppearances}[true]{%
5875   \edef\Hy@tempa{#1}%
5876   \ifx\Hy@tempa\Hy@true
5877     \HyField@NeedAppearancetrue
5878   \else
5879     \ifx\Hy@tempa\Hy@false
5880       \HyField@NeedAppearancesfalse
5881     \else
5882       \Hy@Error{%
5883         Unexpected value '\Hy@tempa'.\MessageBreak
5884         of option 'NeedAppearances' instead of\MessageBreak
5885         'true' or 'false'%
5886       }\@ehc
5887     \fi
5888   \fi
5889 }
5890 \def\Field@boolkey#1#2{%
5891   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5892 }
5893 \ifHy@texht
5894   \newtoks\Field@toks
5895   \Field@toks={ }%
5896   \def\Field@addtoks#1#2{%
5897     \edef\@processme{\Field@toks{the\Field@toks\space #1="#2"}}%
5898     \@processme
5899   }%
5900 \else
5901   \def\Hy@WarnHTMLFieldOption#1{%
5902     \Hy@Warning{%

```

```

5903     HTML field option '#1'\MessageBreak
5904     is ignored%
5905 }%
5906 }%
5907 \fi
5908 \def\Fld@checkequals#1=#2=#3\{%
5909   \def\@currDisplay{#1}%
5910   \ifx\#2\%
5911     \def\@currValue{#1}%
5912   \else
5913     \def\@currValue{#2}%
5914   \fi
5915 }
5916 \define@key{Field}{loc}{%
5917   \def\Fld@loc{#1}%
5918 }
5919 \define@key{Field}{checked}[true]{%
5920   \lowercase{\Field@boolkey{#1}}{checked}%
5921 }
5922 \define@key{Field}{disabled}[true]{%
5923   \lowercase{\Field@boolkey{#1}}{disabled}%
5924 }
5925 \ifHy@texht
5926   \define@key{Field}{accesskey}{%
5927     \Field@addtoks{accesskey}{#1}%
5928   }%
5929   \define@key{Field}{tabkey}{%
5930     \Field@addtoks{tabkey}{#1}%
5931   }%
5932 \else
5933   \define@key{Field}{accesskey}{%
5934     \Hy@WarnHTMLFieldOption{accesskey}%
5935   }%
5936   \define@key{Field}{tabkey}{%
5937     \Hy@WarnHTMLFieldOption{tabkey}%
5938   }%
5939 \fi
5940 \define@key{Field}{name}{%
5941   \def\Fld@name{#1}%
5942 }
5943 \let\Fld@altname\relax
5944 \define@key{Field}{altname}{%
5945   \def\Fld@altname{#1}%
5946 }
5947 \let\Fld@mappingname\relax
5948 \define@key{Field}{mappingname}{%
5949   \def\Fld@mappingname{#1}%
5950 }
5951 \define@key{Field}{width}{%
5952   \def\Fld@width{#1}%
5953   \Field@Width#1\setbox0=\hbox{m}%
5954 }
5955 \define@key{Field}{maxlen}{%
5956   \def\Fld@maxlen{#1}%
5957 }
5958 \define@key{Field}{menulength}{%
5959   \Fld@menulength=#1\relax

```

```

5960 }
5961 \define@key{Field}{height}{%
5962   \def\Fld@height{#1}%
5963 }
5964 \define@key{Field}{charsize}{%
5965   \setlength{\Fld@charsize}{#1}%
5966 }
5967 \define@key{Field}{borderwidth}{%
5968   \Hy@defaultbp\Fld@borderwidth{#1}%
5969 }
5970 \def\Hy@defaultbp#1#2{%
5971   \begingroup
5972     \afterassignment\Hy@defaultbpAux
5973     \dimen@=#2bp\relax{#1}{#2}%
5974 }
5975 \begingroup\expandafter\expandafter\expandafter\endgroup
5976 \expandafter\ifx\csname dimexpr\endcsname\relax
5977   \def\Hy@defaultbpAux#1\relax#2#3{%
5978     \ifx!#1!%
5979       \endgroup
5980       \def#2{#3}%
5981     \else
5982       \dimen@=.99626\dimen@
5983       \edef\x{\endgroup
5984         \def\noexpand#2{%
5985           \strip@pt\dimen@
5986         }%
5987       }\x
5988     \fi
5989   }%
5990 \else
5991   \def\Hy@defaultbpAux#1\relax#2#3{%
5992     \ifx!#1!%
5993       \endgroup
5994       \def#2{#3}%
5995     \else
5996       \edef\x{\endgroup
5997         \def\noexpand#2{%
5998           \strip@pt\dimexpr\dimen@*800/803\relax
5999         }%
6000       }\x
6001     \fi
6002   }%
6003 \fi
6004 \define@key{Field}{borderstyle}{%
6005   \let\Hy@temp\Fld@borderstyle
6006   \def\Fld@borderstyle{#1}%
6007   \Hy@Match\Fld@borderstyle{%
6008     ~[SDBIU]$%
6009   }{}{%
6010     \Hy@Warning{%
6011       Invalid value '@pdfborderstyle'\MessageBreak
6012       for option 'pdfborderstyle'. Valid values:\MessageBreak
6013       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6014       \space\space I (Inset), U (Underline)\MessageBreak
6015       Option setting is ignored%
6016     }%

```

```

6017 \let\Fld@borderstyle\Hy@temp
6018 }%
6019 }
6020 \define@key{Field}{bordersep}{%
6021 \def\Fld@bordersep{#1}%
6022 }
6023 \define@key{Field}{default}{%
6024 \def\Fld@default{#1}%
6025 }
6026 \define@key{Field}{align}{%
6027 \def\Fld@align{#1}%
6028 }
6029 \define@key{Field}{value}{%
6030 \def\Fld@value{#1}%
6031 }
6032 \define@key{Field}{checkboxsymbol}{%
6033 \Fld@DingDef\Fld@cbsymbol{#1}%
6034 }
6035 \define@key{Field}{radiosymbol}{%
6036 \Fld@DingDef\Fld@radiosymbol{#1}%
6037 }
6038 \def\Fld@DingDef#1#2{%
6039 \let\Fld@temp\ltx@empty
6040 \Fld@@@DingDef#2\ding{ }\@nil
6041 \let#1\Fld@temp
6042 }
6043 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6044 \expandafter\def\expandafter\Fld@temp\expandafter{%
6045 \Fld@temp
6046 #1%
6047 }%
6048 \ifx\\#3\\%
6049 \expandafter\@gobble
6050 \else
6051 \begingroup
6052 \lccode'0=#2\relax
6053 \lowercase{\endgroup
6054 \expandafter\def\expandafter\Fld@temp\expandafter{%
6055 \Fld@temp
6056 0%
6057 }%
6058 }%
6059 \expandafter\@firstofone
6060 \fi
6061 {%
6062 \Fld@@@DingDef#3\@nil
6063 }%
6064 }

6065 \define@key{Field}{rotation}{%
6066 \def\Fld@rotation{#1}%
6067 }

6068 \define@key{Field}{backgroundcolor}{%
6069 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6070 }
6071 \define@key{Field}{bordercolor}{%
6072 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6073 }

```

```

6074 \define@key{Field}{color}{%
6075   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6076 }

6077 \let\Fld@onclick@code\ltx@empty
6078 \let\Fld@format@code\ltx@empty
6079 \let\Fld@validate@code\ltx@empty
6080 \let\Fld@calculate@code\ltx@empty
6081 \let\Fld@keystroke@code\ltx@empty
6082 \let\Fld@onfocus@code\ltx@empty
6083 \let\Fld@onblur@code\ltx@empty
6084 \let\Fld@onmousedown@code\ltx@empty
6085 \let\Fld@onmouseup@code\ltx@empty
6086 \let\Fld@onenter@code\ltx@empty
6087 \let\Fld@onexit@code\ltx@empty
6088 \def\Hy@temp#1{%
6089   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6090 }
6091 \def\Hy@@temp#1#2{%
6092   \ifHy@pdfa
6093     \define@key{Field}{#2}{%
6094       \Hy@Error{%
6095         PDF/A: Additional action ‘#2’ is prohibited%
6096       }\@ehc
6097     }%
6098   \else
6099     \define@key{Field}{#2}{%
6100       \def#1{##1}%
6101     }%
6102   \fi
6103 }
6104 \Hy@temp{keystroke}
6105 \Hy@temp{format}
6106 \Hy@temp{validate}
6107 \Hy@temp{calculate}
6108 \Hy@temp{onfocus}
6109 \Hy@temp{onblur}
6110 \Hy@temp{onenter}
6111 \Hy@temp{onexit}
6112 \ifHy@texht
6113   \def\Hy@temp#1{%
6114     \define@key{Field}{#1}{%
6115       \Fld@addtoks{#1}{##1}%
6116     }%
6117   }%
6118 \else
6119   \def\Hy@temp#1{%
6120     \define@key{Field}{#1}{%
6121       \Hy@WarnHTMLFieldOption{#1}%
6122     }%
6123   }%
6124 \fi
6125 \Hy@temp{ondblclick}
6126 \Hy@temp{onmousedown}
6127 \Hy@temp{onmouseup}
6128 \Hy@temp{onmouseover}
6129 \Hy@temp{onmousemove}
6130 \Hy@temp{onmouseout}

```

```

6131 \Hy@temp{onkeydown}
6132 \Hy@temp{onkeyup}
6133 \Hy@temp{onselect}
6134 \Hy@temp{onchange}
6135 \Hy@temp{onkeypress}
6136 \ifHy@texht
6137   \define@key{Field}{onclick}{%
6138     \Field@addtoks{onclick}{#1}%
6139   }%
6140 \else
6141   \ifHy@pdfa
6142     \define@key{Field}{onclick}{%
6143       \Hy@Error{%
6144         PDF/A: Action 'onclick' is prohibited%
6145       }\@ehc
6146     }%
6147   \else
6148     \define@key{Field}{onclick}{%
6149       \def\Fld@onclick@code{#1}%
6150     }%
6151   \fi
6152 \fi

6153 \DeclareRobustCommand\TextField{%
6154   \@ifnextchar[{\@TextField}{\@TextField[]}%
6155 }
6156 \DeclareRobustCommand\ChoiceMenu{%
6157   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6158 }
6159 \DeclareRobustCommand\CheckBox{%
6160   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6161 }
6162 \DeclareRobustCommand\PushButton{%
6163   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6164 }
6165 \DeclareRobustCommand\Gauge{%
6166   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6167 }
6168 \DeclareRobustCommand\Submit{%
6169   \@ifnextchar[{\@Submit}{\@Submit[]}%
6170 }
6171 \DeclareRobustCommand\Reset{%
6172   \@ifnextchar[{\@Reset}{\@Reset[]}%
6173 }
6174 \def\LayoutTextField#1#2{% label, field
6175   #1 #2%
6176 }
6177 \def\LayoutChoiceField#1#2{% label, field
6178   #1 #2%
6179 }
6180 \def\LayoutCheckField#1#2{% label, field
6181   #1 #2%
6182 }
6183 \def\LayoutPushButtonField#1{% button
6184   #1%
6185 }
6186 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6187 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}

```

```

6188 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6189 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6190 \def\MakeButtonField#1{%
6191   \sbox0{%
6192     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6193   }%
6194   \@tempdima\ht0 %
6195   \advance\@tempdima by \Fld@borderwidth bp %
6196   \advance\@tempdima by \Fld@borderwidth bp %
6197   \ht0\@tempdima
6198   \@tempdima\dp0 %
6199   \advance\@tempdima by \Fld@borderwidth bp %
6200   \advance\@tempdima by \Fld@borderwidth bp %
6201   \dp0\@tempdima
6202   \box0\relax
6203 }
6204 \def\DefaultHeightofSubmit{14pt}
6205 \def\DefaultWidthofSubmit{2cm}
6206 \def\DefaultHeightofReset{14pt}
6207 \def\DefaultWidthofReset{2cm}
6208 \def\DefaultHeightofCheckBox{\baselineskip}
6209 \def\DefaultWidthofCheckBox{\baselineskip}
6210 \def\DefaultHeightofChoiceMenu{\baselineskip}
6211 \def\DefaultWidthofChoiceMenu{\baselineskip}
6212 \def\DefaultHeightofText{\baselineskip}
6213 \def\DefaultHeightofTextMultiline{4\baselineskip}
6214 \def\DefaultWidthofText{3cm}
6215 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6216 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6217 \def\DefaultOptionsofPushButton{print}
6218 \def\DefaultOptionsofCheckBox{print}
6219 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6220 \def\DefaultOptionsofListBox{print}
6221 \def\DefaultOptionsofComboBox{print,edit,sort}
6222 \def\DefaultOptionsofPopdownBox{print}
6223 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6224 \ifHy@hyperfigures
6225   \Hy@Info{Hyper figures ON}%
6226 \else
6227   \Hy@Info{Hyper figures OFF}%
6228 \fi
6229 \ifHy@nesting
6230   \Hy@Info{Link nesting ON}%
6231 \else
6232   \Hy@Info{Link nesting OFF}%
6233 \fi
6234 \ifHy@hyperindex
6235   \Hy@Info{Hyper index ON}%
6236 \else
6237   \Hy@Info{Hyper index OFF}%
6238 \fi
6239 \ifHy@backref

```



```

6240 \Hy@Info{backreferencing ON}%
6241 \else
6242 \Hy@Info{backreferencing OFF}%
6243 \fi
6244 \ifHy@colorlinks
6245 \Hy@Info{Link coloring ON}%
6246 \else
6247 \Hy@Info{Link coloring OFF}%
6248 \fi
6249 \ifHy@ocgcolorlinks
6250 \Hy@Info{Link coloring with OCG ON}%
6251 \else
6252 \Hy@Info{Link coloring with OCG OFF}%
6253 \fi
6254 \ifHy@pdfa
6255 \Hy@Info{PDF/A mode ON}%
6256 \else
6257 \Hy@Info{PDF/A mode OFF}%
6258 \fi

```

22 Low-level utility macros

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

```

6259 \edef\hyper@hash{\string#}
6260 \edef\hyper@tilde{\string~}
6261 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6262 \def\@currentHref{Doc-Start}
6263 \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.

```

6264 \Hy@AtBeginDocument{%
6265 \Hy@pdfstringtrue
6266 \PDF@SetupDoc
6267 \let\PDF@SetupDoc\@empty
6268 \Hy@DisableOption{pdfpagescrop}%
6269 \Hy@DisableOption{pdfpagemode}%
6270 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6271 \Hy@DisableOption{pdfdirection}%
6272 \Hy@DisableOption{pdfviewarea}%
6273 \Hy@DisableOption{pdfviewclip}%
6274 \Hy@DisableOption{pdfprintarea}%
6275 \Hy@DisableOption{pdfprintclip}%
6276 \Hy@DisableOption{pdfprintscaling}%
6277 \Hy@DisableOption{pdfduplex}%
6278 \Hy@DisableOption{pdfpicktraybypdfsize}%
6279 \Hy@DisableOption{pdfprintpagerange}%
6280 \Hy@DisableOption{pdfnumcopies}%
6281 \Hy@DisableOption{pdfstartview}%
6282 \Hy@DisableOption{pdfstartpage}%
6283 \Hy@DisableOption{pdftoolbar}%
6284 \Hy@DisableOption{pdfmenubar}%
6285 \Hy@DisableOption{pdfwindowui}%
6286 \Hy@DisableOption{pdffitwindow}%
6287 \Hy@DisableOption{pdfcenterwindow}%

```

```

6288 \Hy@DisableOption{pdfdisplaydoctitle}%
6289 \Hy@DisableOption{pdfpagelayout}%
6290 \Hy@DisableOption{pdflang}%
6291 \Hy@DisableOption{baseurl}%
6292 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6293 \Hy@pdfstringfalse
6294 }

Ignore star from referencing macros:
6295 \LetLtxMacro\NoHy@OrgRef\ref
6296 \DeclareRobustCommand*{\ref}{%
6297 \ifstar\NoHy@OrgRef\NoHy@OrgRef
6298 }
6299 \LetLtxMacro\NoHy@OrgPageRef\pageref
6300 \DeclareRobustCommand*{\pageref}{%
6301 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6302 }

```

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.

```

6303 \def\NoHyper{%
6304 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6305 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6306 \global\let\hyper@livelink\hyper@link
6307 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6308 \let\hyper@anchor\ltx@gobble
6309 \let\hyper@anchorstart\ltx@gobble
6310 \def\hyper@anchorend{\Hy@xspace@end}%
6311 \let\hyper@linkstart\ltx@gobbletwo
6312 \def\hyper@linkend{\Hy@xspace@end}%
6313 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6314 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6315 \let\Hy@backout\@gobble
6316 }
6317 \def\stop@hyper{%
6318 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6319 \let\Hy@backout\@gobble
6320 \let\hyper@@anchor\ltx@gobble
6321 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6322 \let\hyper@anchor\ltx@gobble
6323 \let\hyper@anchorstart\ltx@gobble
6324 \def\hyper@anchorend{\Hy@xspace@end}%
6325 \let\hyper@linkstart\ltx@gobbletwo
6326 \def\hyper@linkend{\Hy@xspace@end}%
6327 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6328 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6329 }
6330 \def\endNoHyper{%
6331 \global\let\hyper@link\hyper@livelink
6332 }
6333 \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:

```
6334 \*nohyperref
6335 \RequirePackage{letltxmacro}[2008/06/13]
6336 \let\hyper@@anchor\@gobble
6337 \def\hyper@link#1#2#3{#3}%
6338 \let\hyper@anchorstart\@gobble
6339 \let\hyper@anchorend\@empty
6340 \let\hyper@linkstart\@gobbletwo
6341 \let\hyper@linkend\@empty
6342 \def\hyper@linkurl#1#2{#1}%
6343 \def\hyper@linkfile#1#2#3{#1}%
6344 \def\hyper@link@{#1}#2#3{#1}%
6345 \let\PDF@SetupDoc\@empty
6346 \let\PDF@FinishDoc\@empty
6347 \def\nohyperpage#1{#1}
```

Some top-level commands:

```
6348 \def\Acrobatmenu#1#2{\leavevmode#2}
6349 \let\pdfstringdefDisableCommands\@gobbletwo
6350 \let\texorpdfstring\@firstoftwo
6351 \let\pdfbookmark\@undefined
6352 \newcommand\pdfbookmark[3]{}
6353 \let\phantomsection\@empty
6354 \let\hypersetup\@gobble
6355 \let\hyperbaseurl\@gobble
6356 \newcommand*{\href}[3]{}
6357 \let\hyperdef\@gobbletwo
6358 \let\hyperlink\@gobble
6359 \let\hypertarget\@gobble
6360 \def\hyperref{%
6361   \@ifnextchar{\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6362 }
6363 \long\def\@gobbleopt[#1]{}
6364 \let\hyperpage\@empty
```

Ignore star from referencing macros:

```
6365 \LetLtxMacro\NoHy@OrgRef\ref
6366 \DeclareRobustCommand*\ref{%
6367   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6368 }
6369 \LetLtxMacro\NoHy@OrgPageRef\pageref
6370 \DeclareRobustCommand*\pageref{%
6371   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6372 }
6373 \</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}`

```
6374 \*package}
6375 \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.

```
6376 \if@filesw
6377 \ifHy@typexml
6378 \immediate\closeout\@mainaux
6379 \immediate\openout\@mainaux\jobname.aux\relax
6380 \immediate\write\@auxout{<relaxxml>\relax}%
6381 \fi
6382 \immediate\write\@auxout{%
6383 \string\providecommand\string\HyperFirstAtBeginDocument{%
6384 \string\AtBeginDocument}^^J%
6385 \string\HyperFirstAtBeginDocument{%
6386 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6387 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6388 \string\gdef\string\contentsline%
6389 \string#1\string#2\string#3\string#4{%
6390 \string\oldcontentsline%
6391 {\string#1}{\string#2}{\string#3}}^^J%
6392 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6393 \string\gdef\string\newlabel\string#1\string#2{%
6394 \string\newlabelxx{\string#1}\string#2}^^J%
6395 \string\gdef\string\newlabelxx%
6396 \string#1\string#2\string#3\string#4\string#5\string#6{%
6397 \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.

```
6398 \string\AtEndDocument{%
6399 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6400 \string\let\string\contentsline\string\oldcontentsline^^J%
6401 \string\let\string\newlabel\string\oldnewlabel^^J%
6402 \string\fi%
6403 }^^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.

```
6404 \string\fi%
6405 }^^J%
6406 \string\global\string\let\string\hyper@last\relax^^J%
6407 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6408 }%
6409 \fi
6410 \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.

```
6411 \ifx\hyper@last\@undefined
6412 \def\@starttoc#1{%
6413 \begingroup
6414 \makeatletter
```

```

6415 \IfFileExists{\jobname.#1}{%
6416 \Hy@WarningNoLine{%
6417 old #1 file detected, not used; run LaTeX again%
6418 }%
6419 }{}%
6420 \if@filesw
6421 \expandafter\newwrite\csname tf@#1\endcsname
6422 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6423 \fi
6424 \@nobreakfalse
6425 \endgroup
6426 }%
6427 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
6428 \fi
6429 }

```

26 Title strings

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

```

6430 \ifHy@pdfusetitle
6431 \let\HyOrg@title\title
6432 \let\HyOrg@author\author
6433 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6434 \def\Hy@scanopttitle[#1]{%
6435 \gdef\Hy@title{#1}%
6436 \HyOrg@title{#1}%
6437 }%
6438 \def\Hy@scantitle#1{%
6439 \gdef\Hy@title{#1}%
6440 \HyOrg@title{#1}%
6441 }%
6442 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6443 \def\Hy@scanoptauthor[#1]{%
6444 \gdef\Hy@author{#1}%
6445 \HyOrg@author{#1}%
6446 }%
6447 \def\Hy@scanauthor#1{%
6448 \gdef\Hy@author{#1}%
6449 \HyOrg@author{#1}%
6450 }%

```

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.

```

6451 \begingroup
6452 \def\process@me#1\@nil#2{%
6453 \expandafter\let\expandafter\x\csname @#2\endcsname
6454 \edef\y{\expandafter\strip@prefix\meaning\x}%
6455 \def\c##1##2\@nil{%
6456 \ifx\\##1\\%
6457 \else
6458 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6459 \expandafter{\x}%
6460 \fi
6461 }%

```

```

6462 \expandafter\c\y\relax#1\@nil
6463 }%
6464 \expandafter\process@me\string\@latex@\@nil{title}%
6465 \expandafter\process@me\string\@latex@\@nil{author}%
6466 \endgroup
6467 \fi
6468 \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.

```

6469 \def\Hy@UseMaketitleString#1{%
6470 \ltx@ifundefined{Hy@#1}{}%
6471 \begingroup
6472 \let\Hy@saved@hook\pdfstringdefPreHook
6473 \pdfstringdefDisableCommands{%
6474 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6475 \let\newline\\%
6476 }%
6477 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6478 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6479 \csname Hy@#1\endcsname\@empty
6480 }%
6481 \fi
6482 \global\let\pdfstringdefPreHook\Hy@saved@hook
6483 \endgroup
6484 }%
6485 }
6486 \def\Hy@newline@title#1{ #1}
6487 \def\Hy@newline@author#1{, #1}
6488 \def\Hy@UseMaketitleInfos{%
6489 \Hy@UseMaketitleString{title}%
6490 \Hy@UseMaketitleString{author}%
6491 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6492 \RequirePackage{atbegshi}[2007/09/09]
6493 \let\Hy@EveryPageHook\ltx@empty
6494 \let\Hy@EveryPageBoxHook\ltx@empty
6495 \let\Hy@FirstPageHook\ltx@empty
6496 \AtBeginShipout{%
6497 \Hy@EveryPageHook
6498 \ifx\Hy@EveryPageBoxHook\ltx@empty
6499 \else

```

```

6500 \setbox\AtBeginShipoutBox=\vbox{%
6501 \offinterlineskip
6502 \Hy@EveryPageBoxHook
6503 \box\AtBeginShipoutBox
6504 }%
6505 \fi
6506 }
6507 \ltx@iffileloaded{hpdf.tex.def}{%
6508 \AtBeginShipout{%
6509 \Hy@FirstPageHook
6510 \global\let\Hy@FirstPageHook\ltx@empty
6511 }%
6512 }{%
6513 \AtBeginShipoutFirst{%
6514 \Hy@FirstPageHook
6515 }%
6516 }
6517 \g@addto@macro\Hy@FirstPageHook{%
6518 \PDF@FinishDoc
6519 \global\let\PDF@FinishDoc\ltx@empty
6520 }

```

28.1 PDF /PageLabels

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

```

6521 \ifHy@pdfpagelabels
6522 \begingroup\expandafter\expandafter\expandafter\endgroup
6523 \expandafter\ifx\csname thepage\endcsname\relax
6524 \Hy@pdfpagelabelsfalse
6525 \Hy@WarningNoLine{%
6526 Option 'pdfpagelabels' is turned off\MessageBreak
6527 because \string\thepage\space is undefined%
6528 }%
6529 \csname fi\endcsname
6530 \csname iffalse\expandafter\endcsname
6531 \fi

```

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

```

6532 \def\thispdfpagelabel#1{%
6533 \gdef\HyPL@thisLabel{#1}%
6534 }%
6535 \global\let\HyPL@thisLabel\relax

```

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

```

6536 \let\HyPL@Labels\ltx@empty

```

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

```

6537 \newcount\Hy@abspage
6538 \Hy@abspage=0 %

```

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

```

6539 \def\HyPL@LastType{init}%
6540 \def\HyPL@LastNumber{0}%
6541 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6542 \def\HyPL@arabic{D}%
6543 \def\HyPL@Roman{R}%
6544 \def\HyPL@roman{r}%
6545 \def\HyPL@Alph{A}%
6546 \def\HyPL@alph{a}%

6547 \let\HyPL@SlidesSetPage\ltx@empty
6548 \ltx@ifclassloaded{slides}{%
6549   \def\HyPL@SlidesSetPage{%
6550     \advance\c@page\ltx@one
6551     \ifnum\value{page}>\ltx@one
6552       \protected@edef\HyPL@SlidesOptionalPage{%
6553         \Hy@SlidesFormatOptionalPage{thepage}%
6554       }%
6555     \else
6556       \let\HyPL@SlidesOptionalPage\ltx@empty
6557     \fi
6558     \advance\c@page-\ltx@one
6559     \def\HyPL@page{%
6560       \csname the\Hy@SlidesPage\endcsname
6561       \HyPL@SlidesOptionalPage
6562     }%
6563   }%
6564 }{}%
```

`\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.

```

6565 \def\HyPL@EveryPage{%
6566   \begingroup
6567   \ifx\HyPL@thisLabel\relax
6568     \let\HyPL@page\thepage
6569     \HyPL@SlidesSetPage
6570   \else
6571     \let\HyPL@page\HyPL@thisLabel
6572     \global\let\HyPL@thisLabel\relax
6573   \fi
6574   \let\HyPL@Type\relax
6575   \ifnum\c@page>0 %
6576     \ifx\HyPL@SlidesSetPage\ltx@empty
6577       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6578     \fi
6579   \fi
6580   \let\Hy@temp Y%
6581   \ifx\HyPL@Type\HyPL@LastType
6582   \else
6583     \let\Hy@temp N%
6584   \fi
6585   \ifx\HyPL@Type\relax
6586     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6587   \else
6588     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6589   \fi
6590   \ifx\HyPL@Prefix\HyPL@LastPrefix
6591   \else
6592     \let\Hy@temp N%
6593   \fi
6594   \if Y\Hy@temp
```



```

6595 \advance\c@page by -1 %
6596 \ifnum\HyPL@LastNumber=\the\c@page\relax
6597 \else
6598 \let\Hy@temp N%
6599 \fi
6600 \Hy@StepCount\c@page
6601 \fi
6602 \if N\Hy@temp
6603 \ifx\HyPL@Type\relax
6604 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6605 \else
6606 \HyPL@StorePageLabel{%
6607 \ifx\HyPL@Prefix\@empty
6608 \else
6609 /P(\HyPL@Prefix)%
6610 \fi
6611 /S/\csname HyPL\HyPL@Type\endcsname
6612 \ifnum\the\c@page=1 %
6613 \else
6614 \space/St \the\c@page
6615 \fi
6616 }%
6617 \fi
6618 \fi
6619 \xdef\HyPL@LastNumber{\the\c@page}%
6620 \global\let\HyPL@LastType\HyPL@Type
6621 \global\let\HyPL@LastPrefix\HyPL@Prefix
6622 \endgroup
6623 \Hy@GlobalStepCount\Hy@abspage
6624 }%

```

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

```

6625 \def\HyPL@CheckThePage#1\@nil{%
6626 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6627 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e.g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

6628 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6629 \def\Hy@tempa{#4}%
6630 \def\Hy@tempb{\csname\endcsname\c@page}%
6631 \ifx\Hy@tempa\Hy@tempb
6632 \expandafter\ifx\csname HyPL#3\endcsname\relax
6633 \else
6634 \def\HyPL@Type{#3}%
6635 \def\HyPL@Prefix{#2}%
6636 \fi
6637 \else
6638 \begingroup
6639 \let\Hy@next\endgroup
6640 \let\HyPL@found\@undefined
6641 \def\arabic{\HyPL@Format{arabic}}%
6642 \def\Roman{\HyPL@Format{Roman}}%
6643 \def\roman{\HyPL@Format{roman}}%

```

```

6644 \def\Alph{\HyPL@Format{Alph}}%
6645 \def\alph{\HyPL@Format{alph}}%
6646 \protected@edef\Hy@temp{#1}%
6647 \ifx\HyPL@found\relax
6648 \toks@{\expandafter{\Hy@temp}}%
6649 \edef\Hy@next{\endgroup
6650 \noexpand\HyPL@@@CheckThePage\the\toks@
6651 \noexpand\HyPL@found\relax\noexpand\@nil
6652 }%
6653 \fi
6654 \Hy@next
6655 \fi
6656 }%

```

`\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`.

```

6657 \def\HyPL@Format#1#2{%
6658 \ifx\HyPL@found\@undefined
6659 \expandafter\ifx\csname c@#2\endcsname\c@page
6660 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6661 \else
6662 \expandafter\noexpand\csname#1\endcsname{#2}%
6663 \fi
6664 \else
6665 \expandafter\noexpand\csname#1\endcsname{#2}%
6666 \fi
6667 }%

```

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

```

6668 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6669 \def\Hy@tempa{#3}%
6670 \def\Hy@tempb{\HyPL@found\relax}%
6671 \ifx\Hy@tempa\Hy@tempb
6672 \def\HyPL@Type{#2}%
6673 \def\HyPL@Prefix{#1}%
6674 \fi
6675 }%

```

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

```

6676 \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`.

```

6677 \def\HyPL@Useless{0<</S/D>>}%
6678 \@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.

```

6679 \def\HyPL@SetPageLabels{%
6680 \@onelevel@sanitize\HyPL@Labels
6681 \ifx\HyPL@Labels\@empty
6682 \else
6683 \ifx\HyPL@Labels\HyPL@Useless

```

```

6684 \else
6685 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>>}%
6686 \fi
6687 \fi
6688 }%

6689 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6690 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
6691 \Hy@DisableOption{pdfpagelabels}
6692 \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
6693 \ifpdf
6694 \pdf@ifdraftmode{%
6695 \let\Hy@PutCatalog\ltx@gobble
6696 }{%
6697 \let\Hy@PutCatalog\pdfcatalog
6698 }
6699 \endifpdf

```

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.

```

6700 \ifvtex
6701 \providecommand*\XR@ext{pdf}
6702 \edef\Hy@VTeXversion{%
6703 \ifx\VTeXversion\@undefined
6704 \z@
6705 \else
6706 \ifx\VTeXversion\relax
6707 \z@
6708 \else
6709 \VTeXversion
6710 \fi
6711 \fi
6712 }
6713 \begingroup
6714 \ifnum\Hy@VTeXversion<660 %
6715 \gdef\Hy@PutCatalog#1{%
6716 \Hy@WarningNoLine{%
6717 VTeX 6.59g or above required for pdfpagelabels%
6718 }%
6719 }%
6720 \else
6721 \gdef\Hy@PutCatalog#1{%
6722 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6723 }%
6724 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%

```

```

6725 \ifx\#2\%
6726 \else
6727 \immediate\special{!pdfpagelabels #2}%
6728 \fi
6729 }%
6730 \fi
6731 \endgroup
6732 \</vtex>

6733 \<*pdftex | vtex>

```

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

```

6734 \ifHy@pdfpagelabels
6735 \def\HyPL@StorePageLabel#1{%
6736 \toks@\expandafter{\HyPL@Labels}%
6737 \xdef\HyPL@Labels{%
6738 \the\toks@
6739 \the\Hy@abspage<<#1>>%
6740 }%
6741 }%

```

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.

```

6742 \RequirePackage{atveryend}[2009/12/07]%
6743 \AtVeryEndDocument{%
6744 \HyPL@SetPageLabels
6745 }%

6746 \fi
6747 \</pdftex | vtex>

```

28.1.2 xetex

```

6748 \<*xetex>
6749 \HyPsd@LoadUnicode
6750 \Hy@unicodetrue
6751 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6752 \else
6753 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6754 \fi
6755 \HyPsd@LoadStringEnc
6756 \define@key{Hyp}{unicode}[true]{%
6757 \Hy@boolkey{unicode}{#1}%
6758 \ifHy@unicode
6759 \else
6760 \Hy@Warning{%
6761 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
6762 option setting 'unicode=false'%
6763 }%
6764 \Hy@unicodetrue
6765 \fi
6766 }
6767 \define@key{Hyp}{pdfencoding}{%
6768 \edef\HyPsd@temp{#1}%
6769 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6770 \let\HyPsd@pdfencoding\HyPsd@temp
6771 \else

```

```

6772 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6773 \let\HyPsd@pdfencoding\HyPsd@temp
6774 \else
6775 \Hy@Warning{%
6776 XeTeX driver only supports\MessageBreak
6777 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6778 setting 'pdfencoding=\HyPsd@temp'%
6779 }%
6780 \fi
6781 \fi
6782 }
6783 \let\HyXeTeX@CheckUnicode\relax
6784 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

6785 \<*pdfmarkbase>
6786 \begingroup
6787 \@ifundefined{headerps@out}{\}%
6788 \toks@\expandafter{\Hy@FirstPageHook}%
6789 \xdef\Hy@FirstPageHook{%
6790 \noexpand\headerps@out{%
6791 systemdict /pdfmark known%
6792 {%
6793 userdict /?pdfmark systemdict /exec get put%
6794 }{%
6795 userdict /?pdfmark systemdict /pop get put %
6796 userdict /pdfmark systemdict /cleartomark get put%
6797 }%
6798 ifelse%
6799 }%
6800 \the\toks@
6801 }%
6802 }%
6803 \endgroup
6804 \</pdfmarkbase>

\Hy@PutCatalog
6805 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
6806 \<*pdfmarkbase>
6807 \def\Hy@PutCatalog#1{%
6808 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
6809 }
6810 \</pdfmarkbase>

6811 \<*pdfmarkbase | dvipdfm | xetex>
6812 \ifHy@pdfpagelabels

```

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

```

6813 \def\HyPL@StorePageLabel#1{%
6814 \if@filesw
6815 \begingroup
6816 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6817 \immediate\write\@mainaux{%
6818 \string\HyPL@Entry{\Hy@tempa}%
6819 }%
6820 \endgroup
6821 \fi
6822 }%

```

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.

```

6823 \Hy@AtBeginDocument{%
6824   \if@filesw
6825     \immediate\write\@mainaux{%
6826       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6827     }%
6828   \fi
6829   \ifx\HyPL@Labels\@empty
6830     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6831   \else
6832     \HyPL@SetPageLabels
6833   \fi
6834   \let\HyPL@Entry\@gobble
6835 }%
```

`\HyPL@Entry`

```

6836 \def\HyPL@Entry#1{%
6837   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6838     \HyPL@Labels
6839     #1%
6840   }%
6841 }%

6842 \fi
6843 </pdfmarkbase | dvipdfm | xetex>

6844 <*package>

6845 \ifx\MaybeStopEarly\relax
6846 \else
6847   \Hy@stoppedearlytrue
6848   \expandafter\MaybeStopEarly
6849 \fi
6850 \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

```

6851 \def\Hy@CounterExists#1{%
6852   \begingroup\expandafter\expandafter\expandafter\endgroup
6853   \expandafter\ifx\csname c@#1\endcsname\relax
6854     \expandafter\@gobble
6855   \else
6856     \begingroup\expandafter\expandafter\expandafter\endgroup
6857     \expandafter\ifx\csname the#1\endcsname\relax
6858       \expandafter\expandafter\expandafter\@gobble
6859     \else
6860       \expandafter\expandafter\expandafter\@firstofone
6861     \fi
6862   \fi
6863 }
6864 \Hy@CounterExists{section}{%
6865   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6866 }
6867 \Hy@CounterExists{part}{%
6868   \providecommand\theHpart{\arabic{part}}}%
6869 }
6870 \ltx@ifundefined{thechapter}{%
6871   \providecommand\theHsection   {\arabic{section}}}%
6872   \providecommand\theHfigure    {\arabic{figure}}}%
6873   \providecommand\theHtable     {\arabic{table}}}%
6874 }{%
6875   \providecommand\theHchapter   {\arabic{chapter}}}%
6876   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
6877   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
6878   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
6879 }
6880 \providecommand\theHsubsection  {\theHsection.\arabic{subsection}}
6881 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6882 \providecommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
6883 \providecommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
6884 \providecommand\theHtheorem     {\theHsection.\arabic{theorem}}
6885 \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.

6886 \let\H@item\item
6887 \newcounter{Item}
6888 \def\theHItem{\arabic{Item}}
6889 \def\item{%
6890   \@hyper@itemfalse
6891   \if@nmbrlist\@hyper@itemtrue\fi
6892   \H@item
6893 }

6894 \providecommand\theHenumi      {\theHItem}
6895 \providecommand\theHenumii     {\theHItem}
6896 \providecommand\theHenumiii    {\theHItem}
6897 \providecommand\theHenumiv     {\theHItem}
6898 \providecommand\theHHfootnote  {\arabic{Hfootnote}}
6899 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6900 \@ifundefined{theHHmpfootnote}{%
6901   \let\theHHmpfootnote\theHHfootnote
6902 }{}

```

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.

```
6903 \let\H@refstepcounter\refstepcounter
6904 \edef\name@of@eq{equation}%
6905 \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.

```
6906 \newif\if@hyper@item
6907 \newif\if@skiphyperref
6908 \@hyper@itemfalse
6909 \@skiphyperreffalse
6910 \def\refstepcounter#1{%
6911   \ifHy@pdfstring
6912   \else
6913     \H@refstepcounter{#1}%
6914     \edef\This@name{#1}%
6915     \ifx\This@name\name@of@slide
6916     \else
6917       \if@skiphyperref
6918       \else
6919         \if@hyper@item
6920         \stepcounter{Item}%
6921         \hyper@refstepcounter{Item}%
6922         \@hyper@itemfalse
6923       \else
6924         \hyper@refstepcounter{#1}%
6925       \fi
6926     \fi
6927   \fi
6928 \fi
6929 }
6930 \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.

```
6931 \@ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
6932 \def\hyper@refstepcounter#1{%
6933   \edef\This@name{#1}%
6934   \ifx\This@name\name@of@eq
6935     \@ifundefined{theHequation}{%
6936       \make@stripped@name{\theequation}%
6937       \let\theHequation\newname
6938     }{}%
6939   \fi
6940   \HyCnt@ProvideTheHCounter{#1}%
6941   \hyper@makecurrent{#1}%
6942   \ifmeasuring@
6943   \else
6944     \Hy@raisedlink{%
6945       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6946     }%
```



```

6947 \fi
6948 }

```

`\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.

```

6949 \def\HyCnt@ProvideTheHCounter#1{%
6950   \@ifundefined{theH#1}{%
6951     \expandafter\def\csname theH#1\endcsname{%
6952       \def\Hy@temp{\@elt{#1}}%
6953       \ltx@onelevel@sanitize\Hy@temp
6954       \let\HyOrg@elt\@elt
6955       \edef\@elt{%
6956         \noexpand\HyCnt@LookForParentCounter
6957         \expandafter\noexpand\csname theH#1\endcsname
6958       }%
6959       \cl@ckpt
6960       \let\@elt\HyOrg@elt
6961       \expandafter
6962       \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
6963       \expandafter{%
6964         \expandafter\@arabic\csname c@#1\endcsname
6965       }%
6966     }{%
6967   }

```

`\Hy@LookForParentCounter`

```

6968 \def\HyCnt@LookForParentCounter#1#2{%
6969   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
6970   \ltx@ifundefined{cl@#2}{%
6971   }{%
6972     \ltx@onelevel@sanitize\Hy@temp@A
6973     \edef\Hy@temp@A{%
6974       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
6975     }\Hy@temp@A
6976     \ifin@
6977       \ltx@ifundefined{theH#2}{%
6978         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6979         \expandafter{%
6980           \expandafter\@arabic\csname c@#2\endcsname.%
6981         }%
6982       }{%
6983         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6984         \expandafter{%
6985           \csname theH#2\endcsname.%
6986         }%
6987       }%
6988     \fi
6989   }%
6990 }

```

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.

```

6991 \begingroup\expandafter\expandafter\expandafter\endgroup
6992 \expandafter\ifx\csname chapter\endcsname\relax
6993 \def\Hy@chapterstring{section}%
6994 \else
6995 \def\Hy@chapterstring{chapter}%
6996 \fi
6997 \def\Hy@appendixstring{appendix}
6998 \def\Hy@chapapp{\Hy@chapterstring}
6999 \ltx@ifundefined{appendix}{%
7000 }{%
7001 \let\HyOrg@appendix\appendix
7002 \def\Hy@AlphNoErr#1{%
7003 \ifnum\value{#1}>26 %
7004 Alph\number\value{#1}%
7005 \else
7006 \ifnum\value{#1}<1 %
7007 Alph\number\value{#1}%
7008 \else
7009 \Alph{#1}%
7010 \fi
7011 \fi
7012 }%
7013 \def\appendix{%
7014 \ltx@ifundefined{chapter}{%
7015 \gdef\theHsection{\Hy@AlphNoErr{section}}%
7016 }{%
7017 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7018 }%
7019 \xdef\Hy@chapapp{\Hy@appendixstring}%
7020 \HyOrg@appendix
7021 }%
7022 }

```

\Hy@Test@alph

```

7023 \def\Hy@Test@alph#1{%
7024 \ifcase#1\or
7025 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7026 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7027 u\or v\or w\or x\or y\or z%
7028 \else
7029 \@ctrerr
7030 \fi
7031 }

```

\Hy@Test@Alph

```

7032 \def\Hy@Test@Alph#1{%
7033 \ifcase#1\or
7034 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7035 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7036 U\or V\or W\or X\or Y\or Z%
7037 \else
7038 \@ctrerr
7039 \fi

```

7040 }

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

```
7041 \def\hyper@makecurrent#1{%
7042   \begingroup
7043   \edef\Hy@param{#1}%
7044   \ifx\Hy@param\Hy@chapterstring
7045     \let\Hy@param\Hy@chapapp
7046   \fi
7047   \ifHy@hypertextnames
7048     \let\@number\@firstofone
7049     \def\@fnsymbol##1{\fnsymbol\number##1}%
7050     \def\@arabic##1{\number##1}%
7051     \ifx\@alph\Hy@Test@alph
7052       \else
7053         \def\@alph{alph\number}%
7054       \fi
7055     \ifx\@Alph\Hy@Test@Alph
7056       \else
7057         \def\@Alph{Alph\number}%
7058       \fi
7059     \ifHy@naturalnames
7060       \let\textlatin\@firstofone
7061       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7062     \else
7063       \xdef\HyperGlobalCurrentHref{%
7064         \csname
7065           the%
7066           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7067           #1%
7068         \endcsname
7069       }%
7070     \fi
7071     \xdef\HyperGlobalCurrentHref{%
7072       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7073     }%
7074   \else
7075     \Hy@GlobalStepCount\Hy@linkcounter
7076     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7077   \fi
7078 \endgroup
7079 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7080 \ifHy@localanchorname
7081   \let\@currentHref\HyperLocalCurrentHref
7082 \else
7083   \global\let\@currentHref\HyperGlobalCurrentHref
7084 \fi
7085 }
```

\Hy@MakeCurrentHref

```
7086 \def\Hy@MakeCurrentHref#1{%
7087   \edef\HyperLocalCurrentHref{#1}%
7088   \@onelevel@sanitize\HyperLocalCurrentHref
7089   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7090   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7091   \ifHy@localanchorname
```

```

7092 \let\@currentHref\HyperLocalCurrentHref
7093 \else
7094 \global\let\@currentHref\HyperGlobalCurrentHref
7095 \fi
7096 }

```

\Hy@MakeCurrentHrefAuto

```

7097 \def\Hy@MakeCurrentHrefAuto#1{%
7098 \Hy@GlobalStepCount\Hy@linkcounter
7099 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7100 }

```

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

```

7101 \def\@currentHlabel{\@currentHref}

7102 \@ifpackageloaded{fancyvrb}{%
7103 \@ifpackagelater{fancyvrb}{1998/05/20}{%}{%
7104 \def\FV@StepLineNo{%
7105 \FV@SetLineNo
7106 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7107 \FV@StepLineNo
7108 }%
7109 }%
7110 }{}

```

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 hypertexnames 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

```

7111 \Hy@AtBeginDocument{%
7112 \@ifclassloaded{revtex4}{%
7113 \@namedef{ver@lastpage.sty}{1994/06/25}%
7114 }{}%
7115 \@ifpackageloaded{lastpage}{%
7116 \ifHy@pageanchor
7117 \else
7118 \Hy@WarningNoLine{%
7119 The \string\pageref{LastPage} link doesn't work\MessageBreak
7120 with disabled option 'pageanchor'%
7121 }%
7122 \fi
7123 \def\lastpage@putlabel{%
7124 \addtocounter{page}{-1}%
7125 \if@files@
7126 \begin@group
7127 \let\@number\@firstofone
7128 \ifHy@pageanchor
7129 \ifHy@hypertexnames
7130 \ifHy@plainpages

```

```

7131         \def\Hy@temp{\arabic{page}}}%
7132     \else
7133         \Hy@unicodedefalse
7134         \pdfstringdef\Hy@temp{\thepage}%
7135     \fi
7136 \else
7137     \def\Hy@temp{\the\Hy@pagecounter}%
7138 \fi
7139 \fi
7140 \immediate\write\@auxout{%
7141     \string\newlabel
7142     {LastPage}{\thepage}{\thepage}%
7143     \ifHy@pageanchor page.\Hy@temp\fi}%
7144 }%
7145 \endgroup
7146 \fi
7147 \addtocounter{page}{1}%
7148 }%
7149 \@ifclassloaded{revtex4}{%
7150     \begingroup
7151     \toks@{\expandafter{\lastpage@putlabel}}%
7152     \edef\x{\endgroup
7153         \def\noexpand\lastpage@putlabel{%
7154             \noexpand\stepcounter{page}%
7155             \the\toks@
7156             \noexpand\addtocounter{page}\noexpand\m@ne
7157         }%
7158     }%
7159     \x
7160 }{}%
7161 }{}%
7162 }
7163 \end{package}
7164 \check
7165 \checkpackage{lastpage}[1994/06/25]
7166 \checkcommand\def\lastpage@putlabel{%
7167     \addtocounter{page}{-1}%
7168     \immediate\write\@auxout{%
7169         \string\newlabel{LastPage}{\thepage}{\thepage}%
7170     }%
7171     \addtocounter{page}{1}%
7172 }
7173 \end{check}
7174 \end{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.

```

7175 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
7176 \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:

```

7177 \@ifpackageloaded{titlesec}{%
7178   \def\ttl@Hy@steplink#1{%
7179     \Hy@MakeCurrentHrefAuto{#1*}%
7180     \edef\ttl@Hy@saveanchor{%
7181       \noexpand\Hy@raisedlink{%
7182         \noexpand\hyper@anchorstart{\@currentHref}%
7183         \noexpand\hyper@anchorend
7184       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7185       \noexpand\ttl@Hy@PatchSaveWrite
7186     }%
7187   }%
7188 }%
7189 \def\ttl@Hy@PatchSaveWrite{%
7190   \begingroup
7191   \toks@{\expandafter{\ttl@savewrite}}%
7192   \edef\x{\endgroup
7193     \def\noexpand\ttl@savewrite{%
7194       \let\noexpand\@currentHref
7195       \noexpand\ttl@Hy@SavedCurrentHref
7196       \the\toks@
7197     }%
7198   }%
7199   \x
7200 }%
7201 \def\ttl@Hy@refstepcounter#1{%
7202   \let\ttl@b\Hy@raisedlink
7203   \def\Hy@raisedlink##1{%
7204     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7205   }%
7206   \refstepcounter{#1}%
7207   \let\Hy@raisedlink\ttl@b
7208 }%
7209 }{}

```

Package titletoc support:

```

7210 \@ifpackageloaded{titletoc}{%
7211   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7212 }{}

```

33 Package varioref support

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

```

7213 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
7214 \@ifpackageloaded{varioref}{%
7215   \def\vref@pagenum#1#2{%
7216     \@ifundefined{r@#2}{%
7217       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7218     }{}%
7219     \edef#1{\getpagerefnumber{#2}}%
7220   }%
7221 }{}

```

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

```

7222 \def\Hy@varioref@refstepcounter#1{%
7223   \stepcounter{#1}%
7224   \protected@edef\@currentlabel{%
7225     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7226   }%
7227 }
7228 \AtBeginDocument{%
7229   \ifx\refstepcounter\Hy@varioref@refstepcounter
7230     \let\H@refstepcounter\refstepcounter
7231     \let\refstepcounter\Hy@saved@refstepcounter
7232   \fi
7233 }
```

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

```

7234 \@ifpackageloaded{longtable}{%
7235   \begingroup
7236   \def\y{\LT@array}%
7237   \@ifundefined{scr@LT@array}{%
7238     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7239   }{\def\y{\scr@LT@array}}%
7240   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7241     \expandafter\endgroup
7242     \expandafter\def\y[##1]##2{%
7243       \H@refstepcounter{#1}%
7244       \hyper@makecurrent{table}%
7245       \let\Hy@LT@currentHref\@currentHref
7246       #2\@sharp###4%
7247     }%
7248   }%
7249   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
```

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

```

7250 \begingroup
7251   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7252     \endgroup
7253     \def\LT@start{%
7254       #1%
7255       \ifvoid\LT@foot#2\fi
7256       \let\@currentHref\Hy@LT@currentHref
7257       \Hy@raisedlink{%
7258         \hyper@anchorstart{\@currentHref}\hyper@anchorend
7259       }%
7260       #3%
7261     }%
7262   }%
7263   \expandafter\x\LT@start\@nil
7264 }
```

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.

```

7265 \let\new@refstepcounter\refstepcounter
7266 \let\H@equation\equation
7267 \let\H@endequation\endequation

7268 \@ifpackageloaded{amsmath}{%
7269   \long\def\Hy@temp{%
7270     \incr@eqnum
7271     \mathdisplay@push
7272     \st@rredfalse \global\@eqnswtrue
7273     \mathdisplay{equation}%
7274   }%
7275   \ifx\Hy@temp\equation
7276     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7277       \csname iftrue\endcsname
7278   \else
7279     \long\def\equation{%
7280       \mathdisplay@push
7281       \st@rredfalse \global\@eqnswtrue
7282       \mathdisplay{equation}%
7283       \incr@eqnum
7284     }%
7285   \fi
7286 \fi
7287 }{%
7288 \def\equation{%
7289   \let\refstepcounter\H@refstepcounter
7290   \H@equation
7291   \@ifundefined{theHequation}{%
7292     \make@stripped@name{\theequation}%
7293     \let\theHequation\newname
7294   }{%
7295     \hyper@makecurrent{equation}%

```

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

```

7296   \mathopen{%
7297     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7298   }%
7299   \let\refstepcounter\new@refstepcounter
7300 }%
7301 \def\endequation{%
7302   \ifx\Hy@raisedlink\ltx@empty
7303     \hyper@anchorend
7304   \else
7305     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7306   \fi
7307   \H@endequation
7308 }%
7309 }

```

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.

```

7310 \newif\if@eqnstar
7311 \@eqnstarfalse
7312 \let\H@eqnarray\eqnarray
7313 \let\H@endeqnarray\endeqnarray
7314 \def\eqnarray{%
7315   \let\Hy@reserved@a\relax
7316   \def\@currentHref{%
7317     \H@eqnarray
7318     \if@eqnstar
7319     \else
7320       \ifx\@currentHref\%
7321       \else
7322         \ifundefined{theHequation}{%
7323           \make@stripped@name{\theequation}%
7324           \let\theHequation\newname
7325         }{%
7326           \hyper@makecurrent{equation}%
7327           \mathopen{%
7328             \Hy@raisedlink{%
7329               \hyper@anchorstart{\@currentHref}\hyper@anchorend
7330             }%
7331           }%
7332         \fi
7333       \fi
7334     }
7335   \def\endeqnarray{%
7336     \H@endeqnarray
7337   }

```

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.

```

7338 \@namedef{eqnarray*}{%
7339   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7340 }
7341 \@namedef{endeqnarray*}{%
7342   \nonumber\endeqnarray\@eqnstarfalse
7343 }

```

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

```

7344 \ltx@ifundefined{subeqnarray}{-}{%
7345   \let\H@subeqnarray\subeqnarray
7346   \let\H@endsubeqnarray\endsubeqnarray
7347   \def\subeqnarray{%
7348     \let\Hy@reserved@a\relax
7349     \H@subeqnarray
7350     \@ifundefined{theHequation}{%
7351       \make@stripped@name{\theequation}%
7352       \let\theHequation\newname
7353     }{%
7354       \hyper@makecurrent{equation}%
7355       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7356     }%
7357   \def\endsubeqnarray{%

```

```

7358 \H@endsubeqnarray
7359 }%
7360 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7361 }

```

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

```

7362 \def\make@stripped@name#1{%
7363 \begingroup
7364 \escapechar\m@ne
7365 \global\let\newname\@empty
7366 \protected@edef\Hy@tempa{#1}%
7367 \edef\@tempb{%
7368 \noexpand\@tfor\noexpand\Hy@tempa:=%
7369 \expandafter\strip@prefix\meaning\Hy@tempa
7370 }%
7371 \@tempb\do{%
7372 \if{\Hy@tempa\else
7373 \if}\Hy@tempa\else
7374 \xdef\newname{\newname\Hy@tempa}%
7375 \fi
7376 \fi
7377 }%
7378 \endgroup
7379 }

```

Support for amsmath's subequations:

```

7380 \begingroup\expandafter\expandafter\expandafter\endgroup
7381 \expandafter\ifx\csname subequations\endcsname\relax
7382 \else
7383 \let\HyOrg@subequations\subequations
7384 \def\subequations{%
7385 \stepcounter{equation}%
7386 \protected@edef\theHparentequation{%
7387 \ifundefined{theHequation}\theequation\theHequation
7388 }%
7389 \addtocounter{equation}{-1}%
7390 \HyOrg@subequations
7391 \def\theHequation{\theHparentequation\alph{equation}}%
7392 \ignorespaces
7393 }%
7394 \fi

```

Support for package `amsthm` (Daniel Müllner):

```

7395 \@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

7396 \def\Hy@temp#1#2#3{%
7397 \ifhmode\unskip\unskip\par\fi
7398 \normalfont
7399 \trivlist
7400 \let\thmheadnl\relax
7401 \let\thm@swap\@gobble
7402 \let\thm@indent\indent % indent
7403 \thm@headfont{\scshape}% heading font small caps

```

```

7404 \thm@notefont{\fontseries\mddefault\upshape}%
7405 \thm@headpunct{.}% add period after heading
7406 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7407 \thm@space@setup
7408 #1% style overrides
7409 \@topsep \thm@preskip % used by thm head
7410 \@topsepadd \thm@postskip % used by \@endparenv
7411 \def\@tempa{#2}\ifx\@empty\@tempa
7412 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7413 \else
7414 \refstepcounter{#2}%
7415 \def\@tempa{%
7416 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7417 }%
7418 \fi
7419 \@tempa
7420 }%
7421 \ifx\Hy@temp\@thm
7422 \def\@thm#1#2#3{%
7423 \ifhmode
7424 \unskip\unskip\par
7425 \fi
7426 \normalfont
7427 \trivlist
7428 \let\thmheadnl\relax
7429 \let\thm@swap\@gobble
7430 \let\thm@indent\indent % indent
7431 \thm@headfont{\scshape}% heading font small caps
7432 \thm@notefont{\fontseries\mddefault\upshape}%
7433 \thm@headpunct{.}% add period after heading
7434 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7435 \thm@space@setup
7436 #1% style overrides
7437 \@topsep \thm@preskip % used by thm head
7438 \@topsepadd \thm@postskip % used by \@endparenv
7439 \def\dth@counter{#2}%
7440 \ifx\@empty\dth@counter
7441 \def\@tempa{%
7442 \@oparg{\@begintheorem{#3}{}}{}}%
7443 }%
7444 \else
7445 \H@refstepcounter{#2}%
7446 \hyper@makecurrent{#2}%
7447 \let\Hy@dth@currentHref\@currentHref
7448 \def\@tempa{%
7449 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7450 }%
7451 \fi
7452 \@tempa
7453 }%
7454 \else
7455 \def\@thm#1#2#3{%
7456 \ifhmode
7457 \unskip\unskip\par
7458 \fi
7459 \normalfont
7460 \trivlist

```

```

7461 \let\thmheadnl\relax
7462 \let\thm@swap\@gobble
7463 \thm@notefont{\fontseries\mddefault\upshape}%
7464 \thm@headpunct{.}% add period after heading
7465 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7466 \thm@space@setup
7467 #1% style overrides
7468 \@topsep \thm@preskip % used by thm head
7469 \@topsepadd \thm@postskip % used by \@endparenv
7470 \def\dth@counter{#2}%
7471 \ifx\@empty\dth@counter
7472 \def\@tempa{%
7473 \@oparg{\@begintheorem{#3}{}}{}%
7474 }%
7475 \else
7476 \H@refstepcounter{#2}%
7477 \hyper@makecurrent{#2}%
7478 \let\Hy@dth@currentHref\@currentHref
7479 \def\@tempa{%
7480 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7481 }%
7482 \fi
7483 \@tempa
7484 }%
7485 \fi
7486 \dth@everypar={%
7487 \@minipagefalse
7488 \global\@newlistfalse
7489 \@noperitemfalse
7490 \if@inlabel
7491 \global\@inlabelfalse
7492 \begingroup
7493 \setbox\z@\lastbox
7494 \ifvoid\z@
7495 \kern-\itemindent
7496 \fi
7497 \endgroup
7498 \ifx\@empty\dth@counter
7499 \else
7500 \Hy@raisedlink{%
7501 \hyper@anchorstart{%
7502 \ifundefined{Hy@dth@currentHref}%
7503 \@currentHref\Hy@dth@currentHref
7504 }\hyper@anchorend
7505 }%
7506 \fi
7507 \unhbox\@labels
7508 \fi
7509 \if@nobreak
7510 \@nobreakfalse \clubpenalty\@M
7511 \else
7512 \clubpenalty\@clubpenalty \everypar{}%
7513 \fi
7514 }%
7515 }{}

```

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.

```

7516 \ifHy@hyperfootnotes
7517   \newcounter{Hfootnote}%
7518   \let\H@@@footnotetext\@footnotetext
7519   \let\H@@@footnotemark\@footnotemark
7520   \def\@xfootnotenext[#1]{%
7521     \begingroup
7522       \csname c@\@mpfn\endcsname #1\relax
7523       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7524     \endgroup
7525     \ifx\@footnotetext\@mpfootnotetext
7526       \expandafter\H@@@mpfootnotetext
7527     \else
7528       \expandafter\H@@@footnotetext
7529     \fi
7530   }%
7531   \def\@xfootnotemark[#1]{%
7532     \begingroup
7533       \c@footnote #1\relax
7534       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7535     \endgroup
7536     \H@@@footnotemark
7537   }%
7538   \let\H@@@mpfootnotetext\@mpfootnotetext
7539   \long\def\@mpfootnotetext#1{%
7540     \H@@@mpfootnotetext{%
7541       \ifHy@nesting
7542         \expandafter\ltx@firstoftwo
7543       \else
7544         \expandafter\ltx@secondoftwo
7545       \fi
7546     }%
7547     \expandafter\hyper@@@anchor\expandafter{%
7548       \Hy@footnote@currentHref
7549     }{#1}%
7550   }{%
7551     \Hy@raisedlink{%
7552       \expandafter\hyper@@@anchor\expandafter{%
7553         \Hy@footnote@currentHref
7554       }{\relax}%
7555     }#1%
7556   }%
7557 }%
7558 }%
7559 \long\def\@footnotetext#1{%
7560   \H@@@footnotetext{%
7561     \ifHy@nesting
7562       \expandafter\ltx@firstoftwo
7563     \else
7564       \expandafter\ltx@secondoftwo
7565     \fi

```

```

7566 {%
7567   \expandafter\hyper@@anchor\expandafter{%
7568     \Hy@footnote@currentHref
7569   }{#1}%
7570 }{%
7571   \Hy@raisedlink{%
7572     \expandafter\hyper@@anchor\expandafter{%
7573       \Hy@footnote@currentHref
7574     }\relax}%
7575   }%
7576   \let\@currentHref\Hy@footnote@currentHref
7577   \let\@currentlabelname\@empty
7578   #1%
7579   }%
7580 }%
7581 }%

```

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.

```

7582 \def\@footnotemark{%
7583   \leavevmode
7584   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7585   \stepcounter{Hfootnote}%
7586   \global\let\Hy@saved@currentHref\@currentHref
7587   \hyper@makecurrent{Hfootnote}%
7588   \global\let\Hy@footnote@currentHref\@currentHref
7589   \global\let\@currentHref\Hy@saved@currentHref
7590   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7591   \@makefnmark
7592   \hyper@linkend
7593   \ifhmode\spacefactor\@x@sf\fi
7594   \relax
7595 }%

```

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

```

7596 \@ifpackageloaded{tabularx}{%
7597   \let\HyOrg@TX@endtabularx\TX@endtabularx
7598   \def\Hy@tabularx@hook{%
7599     \let\@footnotetext\H@@footnotetext
7600     \let\@footnotemark\H@@footnotemark
7601     \let\@mpfootnotetext\H@@mpfootnotetext
7602   }%
7603   \begingroup
7604     \toks@\expandafter{\TX@endtabularx}%
7605     \xdef\Hy@gtemp{%
7606       \noexpand\Hy@tabularx@hook
7607       \the\toks@
7608     }%
7609   \endgroup
7610   \let\TX@endtabularx\Hy@gtemp
7611 }{}%

```

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

```

7612 \ifpackageloaded{longtable}{%
7613   \CheckCommand*{\LT@p@ftntext}[1]{%
7614     \edef\@tempa{%
7615       \the\LT@p@ftn
7616       \noexpand\footnotetext[\the\c@footnote]%
7617     }%
7618     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7619   }%
7620   \long\def\LT@p@ftntext#1{%
7621     \edef\@tempa{%
7622       \the\LT@p@ftn
7623       \begingroup
7624         \noexpand\c@footnote=\the\c@footnote\relax
7625         \noexpand\protected@xdef\noexpand\@thefnmark{%
7626           \noexpand\thempfn
7627         }%
7628         \noexpand\Hy@LT@footnotetext{%
7629           \Hy@footnote@currentHref
7630         }%
7631       }%
7632       \global\LT@p@ftn\expandafter{%
7633         \@tempa{#1}%
7634       }\endgroup
7635     }%
7636   }%
7637   \long\def\Hy@LT@footnotetext#1#2{%
7638     \H@@@footnotetext{%
7639       \ifHy@nesting
7640         \hyper@@@anchor{#1}{#2}%
7641       \else
7642         \Hy@raisedlink{%
7643           \hyper@@@anchor{#1}{\relax}%
7644         }%
7645         \def\@currentHref{#1}%
7646         \let\@currentlabelname\@empty
7647         #2%
7648       \fi
7649     }%
7650   }%
7651 }{}%
```

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

```

7652 \ifpackageloaded{fancyvrb}{%
7653   \def\V@@@footnotetext{%
7654     \insert\footins\bgroup
7655     \csname reset@font\endcsname
7656     \footnotesize
7657     \interlinepenalty\interfootnotelinepenalty
7658     \splittopskip\footnotesep
7659     \splitmaxdepth\dp\strutbox
7660     \floatingpenalty \@MM
7661     \hsize\columnwidth
7662     \@parboxrestore
7663     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7664     \@makefnmark{}%
7665     \rule{\z@}{\footnotesep}%

```

```

7666 \bgroup
7667 \aftergroup\V@@@footnotetext
7668 \Hy@raisedlink{%
7669   \expandafter\hyper@@anchor\expandafter{%
7670     \Hy@footnote@currentHref
7671   }\relax}%
7672 }%
7673 \let\@currentHref\Hy@footnote@currentHref
7674 \let\@currentlabelname\@empty
7675 \ignorespaces
7676 }%
7677 }{}%

```

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

```

7678 \def\Hy@temp#1{%
7679   \begingroup
7680     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7681   \endgroup
7682   \@footnotemark
7683 }%
7684 \ifx\Hy@temp\footref
7685   \def\footref#1{%
7686     \begingroup
7687       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7688     \endgroup
7689     \H@@@footnotemark
7690   }%
7691 \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.

```

7692 \let\HyOrg@maketitle\maketitle
7693 \def\maketitle{%
7694   \let\Hy@saved@footnotemark\@footnotemark
7695   \let\Hy@saved@footnotetext\@footnotetext
7696   \let\@footnotemark\H@@@footnotemark
7697   \let\@footnotetext\H@@@footnotetext
7698   \@ifnextchar[\Hy@maketitle@optarg{% ]
7699     \HyOrg@maketitle
7700     \Hy@maketitle@end
7701   }%
7702 }%
7703 \def\Hy@maketitle@optarg[#1]{%
7704   \HyOrg@maketitle[{#1}]%
7705   \Hy@maketitle@end
7706 }%
7707 \def\Hy@maketitle@end{%
7708   \ifx\@footnotemark\H@@@footnotemark
7709     \let\@footnotemark\Hy@saved@footnotemark
7710   \fi
7711   \ifx\@footnotetext\H@@@footnotetext
7712     \let\@footnotetext\Hy@saved@footnotetext
7713   \fi
7714 }%

```

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


```

7715 \def\realfootnote{%
7716   \ifnextchar[\@xfootnote{%
7717     \stepcounter{\@mpfn}%
7718     \protected@xdef\@thefnmark{\thempfn}%
7719     \H@@footnotemark\H@@footnotetext
7720   }%
7721 }%

7722 \fi
7723 \Hy@DisableOption{hyperfootnotes}

7724 \</package>
7725 \<*/check>
7726 \checklatex
7727 \checkcommand\def\@xfootnotenext[#1]{%
7728   \begingroup
7729     \csname c@\@mpfn\endcsname #1\relax
7730     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7731   \endgroup
7732   \@footnotetext
7733 }
7734 \checkcommand\def\@xfootnotemark[#1]{%
7735   \begingroup
7736     \c@footnote #1\relax
7737     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7738   \endgroup
7739   \@footnotemark
7740 }
7741 \checkcommand\def\@footnotemark{%
7742   \leavevmode
7743   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7744   \@makefnmark
7745   \ifhmode\spacefactor\@x@sf\fi
7746   \relax
7747 }
7748 \</check>
7749 \<*/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.

```

7750 \def\caption{%
7751   \ifx\@capytype\@undefined
7752     \@latex@error{\noexpand\caption outside float}\@ehd
7753     \expandafter\@gobble
7754   \else
7755     \H@refstepcounter\@capytype
7756     \let\Hy@tempa\@caption
7757     \@ifundefined{float@caption}{%
7758       }{%
7759         \expandafter\ifx\csname @float@c@\@capytype\endcsname
7760           \float@caption
7761         \let\Hy@tempa\Hy@float@caption
7762       }
7763     }%
7764     \expandafter\@firstofone

```

```

7765 \fi
7766 {\@dblarg{\Hy@tempa\@captype}}%
7767 }
7768 \long\def\@caption#1[#2]#3{%
7769 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7770 \csname iftrue\endcsname
7771 \global\let\@currentHref\hc@currentHref
7772 \else
7773 \hyper@makecurrent{\@captype}%
7774 \fi
7775 \@ifundefined{NR@gettitle}{%
7776 \def\@currentlabelname{#2}%
7777 }{%
7778 \NR@gettitle{#2}%
7779 }%
7780 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7781 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7782 }%
7783 \begingroup
7784 \@parboxrestore
7785 \if@minipage
7786 \@setminipage
7787 \fi
7788 \normalsize
7789 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7790 \csname iftrue\endcsname
7791 \global\@capstartfalse
7792 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7793 \else
7794 \@makecaption{\csname fnum@#1\endcsname}{%
7795 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7796 \ifHy@nesting
7797 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7798 \else
7799 \Hy@raisedlink{%
7800 \expandafter\hyper@@anchor\expandafter{%
7801 \@currentHref
7802 }{\relax}%
7803 }%
7804 #3%
7805 \fi
7806 }%
7807 \fi
7808 \par
7809 \endgroup
7810 }

```

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’.

```

7811 \let\Hy@float@caption\@caption
7812 \newcommand{\HyNew@float@makebox}[1]{%
7813 \HyOrg@float@makebox{%
7814 #1\relax

```

```

7815 \ifx\Hy@float@currentHref\@undefined
7816 \else
7817 \expandafter\hyper@anchor\expandafter{%
7818 \Hy@float@currentHref
7819 }{\relax}%
7820 \global\let\Hy@float@currentHref\@undefined
7821 \fi
7822 }%
7823 }%
7824 \@ifpackageloaded{float}{%
7825 \def\Hy@float@caption{%
7826 \ifx\Hy@float@currentHref\@undefined
7827 \hyper@makecurrent{\@capttype}%
7828 \global\let\Hy@float@currentHref\@currentHref
7829 \else
7830 \let\@currentHref\Hy@float@currentHref
7831 \fi
7832 \float@caption
7833 }%
7834 \let\HyOrg@float@makebox\float@makebox
7835 \let\float@makebox\HyNew@float@makebox
7836 }{}

7837 \endpackage
7838 \if*check
7839 \checklatex[1999/06/01 - 2000/06/01]
7840 \checkcommand\def\caption{%
7841 \ifx\@capttype\@undefined
7842 \@latex@error{\noexpand\caption outside float}\@ehd
7843 \expandafter\@gobble
7844 \else
7845 \refstepcounter\@capttype
7846 \expandafter\@firstofone
7847 \fi
7848 {\@dblarg{\@caption\@capttype}}%
7849 }
7850 \checkcommand\long\def\@caption#1[#2]#3{%
7851 \par
7852 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7853 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7854 }%
7855 \begingroup
7856 \@parboxrestore
7857 \if@minipage
7858 \setminipage
7859 \fi
7860 \normalsize
7861 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7862 \endgroup
7863 }
7864 \endcheck
7865 \if*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.

```

7866 \def\hyper@natlinkstart#1{%
7867   \Hy@backout{#1}%
7868   \hyper@linkstart{cite}{cite.#1}%
7869   \def\hyper@nat@current{#1}%
7870 }
7871 \def\hyper@natlinkend{%
7872   \hyper@linkend
7873 }
7874 \def\hyper@natlinkbreak#1#2{%
7875   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7876 }
7877 \def\hyper@natanchorstart#1{%
7878   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7879 }
7880 \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.

```

7881 \ltx@ifundefined{NAT@parse}{%
7882   \providecommand*\@extra@binfo{}%
7883   \providecommand*\@extra@b@citeb{}%
7884   \def\bibcite#1#2{%
7885     \@newl@bel{b}{#1\@extra@binfo}{%
7886       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7887     }%
7888   }%
7889   \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.”.

```

7890 \let\Hy@bibcite\bibcite
7891 \begingroup
7892   \@ifundefined{bbl@cite@choice}{}{%
7893     \g@addto@macro\bbl@cite@choice{%
7894       \let\bibcite\Hy@bibcite
7895     }%
7896   }%
7897 \endgroup

```

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

```

7898 \providecommand*\@BIBLABEL{\@biblabel}%
7899 \def\@bibitem[#1]#2{%
7900   \@skiphypreftrue
7901   \H@item[%
7902     \ifx\Hy@raisedlink\@empty
7903       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7904       \@BIBLABEL{#1}%
7905       \hyper@anchorend
7906     \else
7907       \Hy@raisedlink{%

```

```

7908     \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7909 }%
7910 \@BIBLABEL{#1}%
7911 \fi
7912 \hfill
7913 ]%
7914 \@skiphyperreffalse
7915 \if@filesw
7916 \begingroup
7917 \let\protect\noexpand
7918 \immediate\write\@auxout{%
7919 \string\bibcite{#2}{#1}%
7920 }%
7921 \endgroup
7922 \fi
7923 \ignorespaces
7924 }%

```

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

```

7925 \def\@bibitem#1{%
7926 \@skiphyperrefftrue\H@item\@skiphyperreffalse
7927 \Hy@raisedlink{%
7928 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7929 }%
7930 \if@filesw
7931 \begingroup
7932 \let\protect\noexpand
7933 \immediate\write\@auxout{%
7934 \string\bibcite{#1}{\the\value{\@listctr}}}%
7935 }%
7936 \endgroup
7937 \fi
7938 \ignorespaces
7939 }%
7940 }{}

7941 \</package>
7942 \<*check>
7943 \checklatex
7944 \checkcommand\def\@lbibitem[#1]#2{%
7945 \item[\@biblabel{#1}\hfill]%
7946 \if@filesw
7947 {%
7948 \let\protect\noexpand
7949 \immediate\write\@auxout{%
7950 \string\bibcite{#2}{#1}%
7951 }%
7952 }%
7953 \fi
7954 \ignorespaces
7955 }
7956 \checkcommand\def\@bibitem#1{%
7957 \item
7958 \if@filesw
7959 \immediate\write\@auxout{%
7960 \string\bibcite{#1}{\the\value{\@listctr}}}%
7961 }%

```

```

7962 \fi
7963 \ignorespaces
7964 }
7965 </check>
7966 <*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.

```

7967 \ifclassloaded{revtex}{%
7968 \Hy@Info{*** compatibility with revtex **** }%
7969 \def\revtex@checking#1#2{%
7970 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
7971 \expandafter\def\csname b@#1\endcsname{#2}%
7972 \@SetMaxRnhefLabel{#1}%
7973 \expandafter\let\csname b@#1\endcsname\T@temp
7974 }%

```

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

```

7975 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
7976 \providecommand*\@extra@b@citeb{}%
7977 \def\CITEX[#1]#2{%
7978 \let\@citea\@empty
7979 \leavevmode
7980 \unskip
7981 $\{ %
7982 \scriptstyle
7983 \@CITE{%
7984 \@for\@citeb:=#2\do{%
7985 \@citea
7986 \def\@citea{,\penalty\@m\ }%
7987 \edef\@citeb{\expandafter\@firstofone\@citeb}%
7988 \if@filesw
7989 \immediate\write\@auxout{\string\citation{\@citeb}}%
7990 \fi
7991 \@ifundefined{b@\@citeb\extra@b@citeb}{%
7992 \mbox{\reset@font\bfseries ?}%
7993 \G@refundefinedtrue
7994 \@latex@warning{%
7995 Citation ‘\@citeb’ on page \thepage \space undefined%
7996 }%
7997 }{%
7998 {\csname b@\@citeb\@extra@b@citeb\endcsname}%
7999 }%
8000 }%
8001 }{#1}%
8002 }$%
8003 }%

```

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.

```

8004 \def\@citex[#1]#2{%
8005 \let\@citea\@empty
8006 \@cite{%
8007 \@for\@citeb:=#2\do{%
8008 \@citea
8009 \def\@citea{,\penalty\@m\ }%

```

```

8010 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8011 \if@filesw
8012 \immediate\write\@auxout{\string\citation{\@citeb}}%
8013 \fi
8014 \ifundefined{b@\@citeb\@extra@b@citeb}{%
8015 \mbox{\reset@font\bfseries ?}%
8016 \G@refundefinedtrue
8017 \@latex@warning{%
8018 Citation '\@citeb' on page \thepage \space undefined%
8019 }%
8020 }{%
8021 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8022 }%
8023 }%
8024 }{#1}%
8025 }%
8026 }{}

```

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.

```

8027 \ifpackageloaded{harvard}{%
8028 \Hy@AtBeginDocument{%
8029 \Hy@Info{*** compatibility with harvard **** }%
8030 \Hy@raiselinksfalse
8031 \def\harvardcite#1#2#3#4{%
8032 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite{#1}{#2}}}%
8033 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite{#1}{#3}}}%
8034 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite{#1}{#4}}}%
8035 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8036 }%
8037 \def\HAR@citetoaux#1{%
8038 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8039 \ifHy@backref
8040 \ifx\@empty\@currentlabel
8041 \else
8042 \@bsphack
8043 \if@filesw
8044 \protected@write\@auxout{}{%
8045 \string\@writefile{brf}{%
8046 \string\backcite{#1}{%
8047 {\thepage}{\@currentlabel}{\@currentHref}%
8048 }%
8049 }%
8050 }%
8051 \fi
8052 \@esphack
8053 \fi
8054 \fi
8055 }%

```

```

8056 \def\harvarditem{%
8057   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}}%
8058 }%
8059 \def\@harvarditem[#1]#2#3#4#5\par{%
8060   \item[]%
8061   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8062   \if@filesw
8063     \begingroup
8064       \def\protect##1{\string ##1\space}%
8065       \ifthenelse{\equal{#1}{\null}}{%
8066         {\def\next{{#4}{#2}{#2}{#3}}}%
8067         {\def\next{{#4}{#2}{#1}{#3}}}%
8068       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8069     \endgroup
8070   \fi
8071   \protect\hspace*{-\labelwidth}%
8072   \protect\hspace*{-\labelsep}%
8073   \ignorespaces
8074   #5%
8075   \ifHy@backref
8076     \newblock
8077     \backref{\csname br@#4\endcsname}%
8078   \fi
8079   \par
8080 }%

```

\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:

```

8081 \long\def\HAR@checkcitations#1#2#3#4{%
8082   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8083   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8084     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8085     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8086       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8087       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8088         \else
8089           \@tempswatrue
8090         \fi
8091       \else
8092         \@tempswatrue
8093       \fi
8094     \else
8095       \@tempswatrue
8096     \fi
8097   }%
8098 }%
8099 }{}

```

38.2 Package chicago

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

```

8100 \@ifpackageloaded{chicago}{%

```

\citeN

```

8101 \def\citeN{%

```



```

8102 \def\@citesep{-1000}%
8103 \def\@cite##1##2{##1}%
8104 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8105 \@citedata@opt
8106 }%

\shortciteN
8107 \def\shortciteN{%
8108 \def\@citesep{-1000}%
8109 \def\@cite##1##2{##1}%
8110 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8111 \@citedata@opt
8112 }%

\@citedata@opt
8113 \def\@citedata@opt{%
8114 \let\@cite@opt\@empty
8115 \@ifnextchar [{%
8116 \@tempswatrue
8117 \@citedatax@opt
8118 }{%
8119 \@tempswafalse
8120 \@citedatax[]%
8121 }%
8122 }%

\@citedatax@opt
8123 \def\@citedatax@opt[#1]{%
8124 \def\@cite@opt{, #1}%
8125 \@citedatax[{#1}]%
8126 }%

8127 }{}

```

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.

```

8128 \ltx@ifclassloaded{slides}{%
8129 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8130 \def\Hy@PageAnchorSlidesPlain{%
8131 \advance\c@page\ltx@one
8132 \edef\Hy@TempPageAnchor{%
8133 \noexpand\hyper@@anchor{%
8134 page.\the\c@slide.\the\c@overlay.\the\c@note%
8135 \ifnum\c@page=\ltx@one
8136 \else
8137 .\the\c@page
8138 \fi
8139 }%
8140 }%
8141 \advance\c@page-\ltx@one

```

```

8142 }%
8143 \def\Hy@PageAnchorSlide{%
8144   \advance\c@page\ltx@one
8145   \ifnum\c@page>\ltx@one
8146     \ltx@ifundefined{theHpage}{%
8147       \protected@edef\Hy@TheSlideOptionalPage{%
8148         \Hy@SlidesFormatOptionalPage{thepage}%
8149       }%
8150     }{%
8151       \protected@edef\Hy@TheSlideOptionalPage{%
8152         \Hy@SlidesFormatOptionalPage{theHpage}%
8153       }%
8154     }%
8155   \else
8156     \def\Hy@TheSlideOptionalPage{}%
8157   \fi
8158   \advance\c@page-\ltx@one
8159   \pdfstringdef\@the@H@page{%
8160     \csname
8161       the%
8162       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8163       \Hy@SlidesPage
8164     \endcsname
8165     \Hy@TheSlideOptionalPage
8166   }%
8167   \ltx@gobblethree
8168 }%
8169 \def\Hy@SlidesPage{slide}%
8170 \g@addto@macro\slide{%
8171   \def\Hy@SlidesPage{slide}%
8172 }%
8173 \g@addto@macro\overlay{%
8174   \def\Hy@SlidesPage{overlay}%
8175 }%
8176 \g@addto@macro\note{%
8177   \def\Hy@SlidesPage{note}%
8178 }%
8179 }{%
8180 \def\Hy@PageAnchorSlidesPlain{}%
8181 \def\Hy@PageAnchorSlide{}%
8182 }
8183 \def\Hy@EveryPageAnchor{%
8184   \Hy@DistillerDestFix
8185   \ifHy@pageanchor
8186     \ifHy@hypertextnames
8187       \ifHy@plainpages
8188         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8189         \Hy@PageAnchorSlidesPlain
8190       \else
8191         \begingroup
8192           \let\@number\@firstofone
8193           \Hy@unicodedefalse
8194           \Hy@PageAnchorSlide
8195           \pdfstringdef\@the@H@page{\thepage}%
8196         \endgroup
8197         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8198         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%

```

```

8199 \fi
8200 \else
8201 \Hy@GlobalStepCount\Hy@pagecounter
8202 \def\Hy@TempPageAnchor{%
8203 \hyper@@anchor{page.\the\Hy@pagecounter}%
8204 }%
8205 \fi
8206 \vbox to 0pt{%
8207 \kern\voffset
8208 \kern\topmargin
8209 \kern-1bp\relax
8210 \hbox to 0pt{%
8211 \kern\hoffset
8212 \kern\ifodd\value{page}%
8213 \oddsidemargin
8214 \else
8215 \evensidemargin
8216 \fi
8217 \kern-1bp\relax
8218 \Hy@TempPageAnchor\relax
8219 \hss
8220 }%
8221 \vss
8222 }%
8223 \fi
8224 }
8225 \g@addto@macro\Hy@EveryPageBoxHook{%
8226 \Hy@EveryPageAnchor
8227 }

```

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.

```

8228 \def\addcontentsline#1#2#3{% toc extension, type, tag
8229 \begingroup
8230 \let\label\@gobble
8231 \ifx\@currentHref\@empty
8232 \Hy@Warning{%
8233 No destination for bookmark of \string\addcontentsline,%
8234 \MessageBreak destination is added%
8235 }%
8236 \phantomsection
8237 \fi
8238 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8239 \begingroup
8240 \def\Hy@tempa{#1}%
8241 \ifx\Hy@tempa\Hy@bookmarkstype
8242 \Hy@WarningNoLine{%
8243 bookmark level for unknown #2 defaults to 0%
8244 }%
8245 \else
8246 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8247 \fi
8248 \endgroup

```

```

8249 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8250 \fi
8251 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8252 \Hy@writebookmark{\csname the#2\endcsname}%
8253 {#3}%
8254 {\@currentHref}%
8255 {\Hy@toclevel}%
8256 {#1}%
8257 \ifHy@verbose
8258 \begingroup
8259 \def\Hy@tempa{#3}%
8260 \@onelevel@sanitize\Hy@tempa
8261 \let\temp@online\on@line
8262 \let\on@line\@empty
8263 \Hy@Info{%
8264 bookmark\temp@online:\MessageBreak
8265 thecounter {\csname the#2\endcsname}\MessageBreak
8266 text {\Hy@tempa}\MessageBreak
8267 reference {\@currentHref}\MessageBreak
8268 toplevel {\Hy@toclevel}\MessageBreak
8269 type {#1}%
8270 }%
8271 \endgroup
8272 \fi
8273 \addtocontents{#1}{%
8274 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
8275 }%
8276 \endgroup
8277 }
8278 \def\contentsline#1#2#3#4{%
8279 \ifx\#4\%
8280 \csname l@#1\endcsname{#2}{#3}%
8281 \else
8282 \ifcase\Hy@linktoc % none
8283 \csname l@#1\endcsname{#2}{#3}%
8284 \or % section
8285 \csname l@#1\endcsname{%
8286 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
8287 }{#3}%
8288 \or % page
8289 \csname l@#1\endcsname{#2}{#3}%
8290 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
8291 }%
8292 \else % all
8293 \csname l@#1\endcsname{%
8294 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
8295 }{#3}%
8296 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
8297 }%
8298 \fi
8299 \fi
8300 }
8301 \</package>
8302 \*check>
8303 \checklatex
8304 \checkcommand\def\addcontentsline#1#2#3{%
8305 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%

```

```

8306 }
8307 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8308 \</check>
8309 \*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.

```

8310 \let\H@definecounter\@definecounter
8311 \def\@definecounter#1{%
8312   \H@definecounter{#1}%
8313   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8314 }

```

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.

```

8315 \let\H@newctr\@newctr
8316 \def\@newctr#1[#2]{%
8317   \H@newctr#1{#2}%
8318   \expandafter\gdef\csname theH#1\endcsname{%
8319     \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
8320   }%
8321 }

```

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.

```

8322 \@ifpackageloaded{amsmath}{%
8323   \def\Hy@make@anchor{%
8324     \Hy@MakeCurrentHrefAuto{AMS}%
8325     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8326   }%
8327   \def\Hy@make@df@tag@#1{%
8328     \gdef\df@tag{%
8329       \maketag@@@{\Hy@make@anchor#1}%
8330       \def\@currentlabel{#1}%
8331     }%
8332   }%
8333   \def\Hy@make@df@tag@@#1{%
8334     \gdef\df@tag{%
8335       \tagform@{\Hy@make@anchor#1}%
8336       \toks@{\xp{p@equation{#1}}}%
8337       \edef\@currentlabel{\the\toks@}%
8338     }%
8339   }%
8340   \let\HyOrg@make@df@tag@@\make@df@tag@@
8341   \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
8342   \let\make@df@tag@@\Hy@make@df@tag@@
8343   \let\make@df@tag@@@ \Hy@make@df@tag@@@

```

```
8344 }{}
```

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

```
8345 \@ifpackagewith{hyperref}{pdftex}{%
8346   \let\H@seteqlabel\@seteqlabel
8347   \def\@seteqlabel#1{%
8348     \H@seteqlabel{#1}%
8349     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8350     \Hy@raisedlink{%
8351       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8352     }%
8353   }%
8354 }{}
```

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.

```
8355 \let\HyOrg@addtoreset\@addtoreset
8356 \def\@addtoreset#1#2{%
8357   \HyOrg@addtoreset{#1}{#2}%
8358   \expandafter\xdef\csname theH#1\endcsname{%
8359     \expandafter\noexpand
8360     \csname the\@ifundefined{theH#2}{H#2\endcsname
8361     .\noexpand\the\noexpand\value{#1}}%
8362   }%
8363 }
```

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

```
8364 \</package>
8365 \< *check>
8366 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8367 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8368   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8369     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8370       \@addtoreset{#2}{#3}%
8371       \@xp\xdef\csname the#2\endcsname{%
8372         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8373       }%
8374     }%
8375   }%
8376 }%
8377 \</check>
8378 \< *package>
```

```

8379 \ifpackageloaded{amsmath}{%
8380   \ifpackagelater{amsmath}{1999/12/14}{%
8381     \renewcommand*{\numberwithin}{3}[\arabic]{%
8382       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8383         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8384           \HyOrg@addtoreset{#2}{#3}%
8385           \@xp\xdef\csname the#2\endcsname{%
8386             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8387           }%
8388           \@xp\xdef\csname theH#2\endcsname{%
8389             \@xp\@nx
8390             \csname the\@ifundefined{theH#3}{H#3\endcsname
8391               .\@nx#1{#2}%
8392             }%
8393           }%
8394         }%
8395       }%
8396     }{%
8397       \Hy@WarningNoLine{%
8398         \string\numberwithin\space of package 'amsmath' %
8399         only fixed\MessageBreak
8400         for version 2000/06/06 v2.12 or newer%
8401       }%
8402     }%
8403 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8404 \ifHy@hyperfigures
8405   \let\Hy@Gin@setfile\Gin@setfile
8406   \def\Gin@setfile#1#2#3{%
8407     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8408   }%
8409 \fi
8410 \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.

```

8411 \ifHy@hyperindex
8412   \def\HyInd@ParenLeft{({}%
8413   \def\HyInd@ParenRight{)}}%
8414   \def\hyperindexformat#1#2{%
8415     \let\HyOrg@hyperpage\hyperpage
8416     \let\hyperpage\@firstofone

```

```

8417   #1{\HyOrg@hyperpage{#2}}%
8418   \let\hyperpage\HyOrg@hyperpage
8419 }%
8420 \Hy@nextfalse
8421 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8422 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8423 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8424 \begingroup
8425   \lccode'\l=\expandafter'\HyInd@EncapChar\relax
8426   \lccode'\l/'=\relax
8427 \lowercase{\endgroup
8428   \ifHy@next
8429     \let\HyInd@org@wrindex\@wrindex
8430     \def\@wrindex#1#2{\HyInd@C@wrindex{#1}#2||\}%
8431     \def\HyInd@C@wrindex#1#2|#3|#4\{%
8432       \ifx\|#3\%
8433         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8434       \else
8435         \HyInd@C@wrindex{#1}{#2}#3\%
8436       \fi
8437     }%
8438     \def\HyInd@C@wrindex#1#2#3#4\{%
8439       \def\Hy@temp@A{#3}%
8440       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8441         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8442       \relax
8443       \HyInd@org@wrindex{#1}{%
8444         #2|hyperindexformat{/#3#4}%
8445       }%
8446     \else
8447       \ifx\|#4\%
8448         \ifx\Hy@temp@A\HyInd@ParenRight
8449           \HyInd@org@wrindex{#1}{#2|#3}%
8450         \else
8451           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8452         \fi
8453       \else
8454         \HyInd@org@wrindex{#1}{%
8455           #2|#3hyperindexformat{/#4}%
8456         }%
8457       \fi
8458     \fi
8459   }%
8460 \else
8461   \def\@wrindex#1{\@C@wrindex#1||\}%
8462   \def\@C@wrindex#1|#2|#3\{%
8463     \if@filesw
8464       \ifx\|#2\%
8465         \protected@write\@indexfile{}\{%
8466           \string\indexentry{#1|hyperpage}{\thepage}%
8467         }%
8468       \else
8469         \HyInd@C@wrindex{#1}#2\%
8470       \fi
8471     \fi
8472   \endgroup
8473 \@esphack

```



```

8474 }%
8475 \def\HyInd@@@wrindex#1#2#3\{%
8476 \def\Hy@temp@A{#2}%
8477 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8478 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8479 \relax
8480 \protected@write\@indexfile{}\{%
8481 \string\indexentry{%
8482 #1|hyperindexformat{/#2#3}%
8483 }\the page}%
8484 }%
8485 \else
8486 \ifx\#3\%
8487 \ifx\Hy@temp@A\HyInd@ParenRight
8488 \protected@write\@indexfile{}\{%
8489 \string\indexentry{#1|#2}\the page}%
8490 }%
8491 \else
8492 \protected@write\@indexfile{}\{%
8493 \string\indexentry{#1|#2hyperpage}\the page}%
8494 }%
8495 \fi
8496 \else
8497 \protected@write\@indexfile{}\{%
8498 \string\indexentry{%
8499 #1|#2hyperindexformat{/#3}%
8500 }\the page}%
8501 }%
8502 \fi
8503 \fi
8504 }%
8505 \fi
8506 }%
8507 \fi
8508 \Hy@DisableOption{hyperindex}
8509 \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.

```

8510 \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.

```

8511 \def\hyperpage#1{%
8512 \HyInd@hyperpage#1\nohyperpage{}\@nil
8513 }
8514 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8515 \HyInd@@hyperpage{#1}%
8516 #2%
8517 \def\Hy@temp{#3}%
8518 \ifx\Hy@temp\@empty
8519 \else
8520 \ltx@ReturnAfterFi{%
8521 \HyInd@hyperpage#3\@nil
8522 }%
8523 \fi
8524 }

```

```

8525 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8526 \def\@hyperpage#1--#2--#3\{\%
8527 \ifx\#2\%
8528   \@commahyperpage{#1}%
8529 \else
8530   \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8531 \fi
8532 }
8533 \def\@commahyperpage#1{\@commahyperpage#1, \}
8534 \def\@commahyperpage#1, #2,#3\{\%
8535 \ifx\#2\%
8536   \HyInd@pagelink{#1}%
8537 \else
8538   \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8539 \fi
8540 }

```

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

```

8541 \def\HyInd@pagelink#1{%
8542   \begingroup
8543   \toks@={}%
8544   \HyInd@removespaces#1 \@nil
8545   \endgroup
8546 }
8547 \def\HyInd@removespaces#1 #2\@nil{%
8548   \toks@=\expandafter{\the\toks@#1}%
8549   \ifx\#2\%
8550     \edef\x{\the\toks@}%
8551     \ifx\x\@empty
8552     \else
8553       \hyperlink{page.\the\toks@}{\the\toks@}%
8554     \fi
8555   \else
8556     \ltx@ReturnAfterFi{%
8557       \HyInd@removespaces#2\@nil
8558     }%
8559   \fi
8560 }

```

45 Compatibility with foiltex

```

8561 \@ifclassloaded{foils}{%
8562   \providecommand*\ext@table{lot}%
8563   \providecommand*\ext@figure{lof}%
8564 }{}

```

46 Compatibility with seminar slide package

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

```

8565 \@ifclassloaded{seminar}{%
8566   \Hy@seminarslidestrue
8567   \providecommand\theHslide{\arabic{slide}}%
8568 }{}%
8569 \Hy@seminarslidesfalse

```

```

8570 }
8571 \@ifpackageloaded{slidesec}{%
8572   \providecommand\theHslidesection {\arabic{slidesection}}%
8573   \providecommand\theHslidesubsection{%
8574     \theHslidesection.\arabic{slidesubsection}}%
8575 }%
8576 \def\slide@heading[#1]#2{%
8577   \H@refstepcounter{slidesection}%
8578   \@addtoreset{slidesubsection}{slidesection}%
8579   \addtocontents{los}{%
8580     \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8581     {\@SCTR}{slideheading.\theslidesection}}%
8582 }%
8583 \def\Hy@tempa{#2}%
8584 \ifx\Hy@tempa\@empty
8585   \else
8586     {%
8587       \edef\@currentlabel{%
8588         \csname p@slidesection\endcsname\theslidesection
8589       }%
8590       \makeslideheading{#2}%
8591     }%
8592   \fi
8593   \gdef\theslideheading{#1}%
8594   \gdef\theslidesubheading{}%
8595   \ifHy@bookmarksnumbered
8596     \def\Hy@slidetitle{\theslidesection\space #1}%
8597   \else
8598     \def\Hy@slidetitle{#1}%
8599   \fi
8600   \ifHy@hypertexnames
8601     \ifHy@naturalnames
8602       \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8603       \Hy@writebookmark
8604         {\theslidesection}%
8605         {\Hy@slidetitle}%
8606         {slideheading.\theslidesection}%
8607         {1}%
8608         {toc}%
8609     \else
8610       \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8611       \Hy@writebookmark
8612         {\theslidesection}%
8613         {\Hy@slidetitle}%
8614         {slideheading.\theHslidesection}%
8615         {1}%
8616         {toc}%
8617     \fi
8618   \else
8619     \Hy@GlobalStepCount\Hy@linkcounter
8620     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8621     \Hy@writebookmark
8622       {\theslidesection}%
8623       {\Hy@slidetitle}%
8624       {slideheading.\the\Hy@linkcounter}%
8625       {1}%
8626       {toc}%

```

```

8627 \fi
8628 }%
8629 \def\slide@subheading[#1]#2{%
8630 \H@refstepcounter{slidesubsection}%
8631 \addtocontents{los}{%
8632 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8633 {\@SCTR}{slideheading.\theslidesubsection}%
8634 }%
8635 \def\Hy@tempa{#2}%
8636 \ifx\Hy@tempa\@empty
8637 \else
8638 {%
8639 \edef\@currentlabel{%
8640 \csname p@slidesubsection\endcsname\theslidesubsection
8641 }%
8642 \makeslidesubheading{#2}%
8643 }%
8644 \fi
8645 \gdef\theslidesubheading{#1}%
8646 \ifHy@bookmarksnumbered
8647 \def\Hy@slidetitle{\theslidesubsection\space #1}%
8648 \else
8649 \def\Hy@slidetitle{#1}%
8650 \fi
8651 \ifHy@hypertextnames
8652 \ifHy@naturalnames
8653 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8654 \Hy@writebookmark
8655 {\theslidesubsection}%
8656 {\Hy@slidetitle}%
8657 {slideheading.\theslidesubsection}%
8658 {2}%
8659 {toc}%
8660 \else
8661 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8662 \Hy@writebookmark
8663 {\theslidesubsection}%
8664 {\Hy@slidetitle}%
8665 {slideheading.\theHslidesubsection}%
8666 {2}%
8667 {toc}%
8668 \fi
8669 \else
8670 \Hy@GlobalStepCount\Hy@linkcounter
8671 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8672 \Hy@writebookmark
8673 {\theslidesubsection}%
8674 {\Hy@slidetitle}%
8675 {slideheading.\the\Hy@linkcounter}%
8676 {1}%
8677 {toc}%
8678 \fi
8679 }%
8680 \providecommand*{\listslidenam}{List of Slides}%
8681 \def\listofslides{%
8682 \section*{%
8683 \listslidenam

```

```

8684 \mkboth{%
8685 \expandafter\MakeUppercase\listslidenam
8686 }{%
8687 \expandafter\MakeUppercase\listslidenam
8688 }%
8689 }%
8690 \def\l@slide##1##2##3##4{%
8691 \slide@undottedcline{%
8692 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8693 }{%}
8694 }%
8695 \let\l@subslide\l@slide
8696 \@startlos
8697 }%
8698 \def\slide@contents{%
8699 \def\l@slide##1##2##3##4{%
8700 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8701 }%
8702 \let\l@subslide\@gobblefour
8703 \@startlos
8704 }%
8705 \def\Slide@contents{%
8706 \def\l@slide##1##2##3##4{%
8707 \ifcase\lslide@flag
8708 \message{##1 ** \the\c@slidesection}%
8709 \ifnum##1>\c@slidesection
8710 \def\lslide@flag{1}%
8711 {%
8712 \large
8713 \slide@ccline{%
8714 \slidenumberline{$\Rightarrow\bullet$}%
8715 {\hyperlink{##4}{##2}}%
8716 }{##3}%
8717 }%
8718 \else
8719 {%
8720 \large
8721 \slide@ccline{%
8722 \slidenumberline{$\surd\;\bullet$}%
8723 {\hyperlink{##4}{##2}}%
8724 }{##3}%
8725 }%
8726 \fi
8727 \or
8728 \def\lslide@flag{2}%
8729 {%
8730 \large
8731 \slide@ccline{%
8732 \slidenumberline{$\bullet$}%
8733 {\hyperlink{##4}{##2}}%
8734 }{##3}%
8735 }%
8736 \or
8737 {%
8738 \large
8739 \slide@ccline{%
8740 \slidenumberline{$\bullet$}%

```

```

8741         {\hyperlink{##4}{##2}}%
8742     }{##3}%
8743 }%
8744 \fi
8745 }%
8746 \def\l@subslide##1##2##3##4{%
8747     \ifnum\l@slide@flag=1 %
8748         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
8749     \fi
8750 }%
8751 \def\l@slide@flag{0}%
8752 \@startlos
8753 }%
8754 }{}

```

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.)

```

8755 \ifHy@texht
8756     \expandafter\endinput
8757 \fi
8758 \let\real@setref\@setref
8759 \def\@setref#1#2#3{% csname, extract group, refname
8760     \ifx#1\relax
8761         \protect\G@refundefinedtrue
8762         \nfss@text{\reset@font\bfseries ??}%
8763         \@latex@warning{%
8764             Reference ‘#3’ on page \thepage \space undefined%
8765         }%
8766     \else
8767         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8768     \fi
8769 }

```

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

```

8770 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8771     \begingroup
8772     \toks0={\hyper@@link{#5}{#4}}%
8773     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8774     \edef\x{\endgroup
8775         \the\toks0 {\the\toks1 }%
8776     }%
8777     \x
8778 }
8779 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8780     \ifx#1\relax
8781         \protect\G@refundefinedtrue
8782         \nfss@text{\reset@font\bfseries ??}%
8783         \@latex@warning{%
8784             Reference ‘#3’ on page \thepage \space undefined%
8785         }%
8786     \else
8787         \protect\hyper@@link
8788         {\expandafter\@fifthoffive#1}%
8789         {page.\expandafter\@secondoffive#1}%
8790         {\expandafter\@secondoffive#1}%
8791     \fi

```

```

8792 }
8793 </package>
8794 <*check>
8795 \checklatex
8796 \checkcommand\def\@setref#1#2#3{%
8797   \ifx#1\relax
8798     \protect\G@refundefinedtrue
8799     \nfss@text{\reset@font\bfseries ??}%
8800     \@latex@warning{%
8801       Reference ‘#3’ on page \thepage\space undefined%
8802     }%
8803   \else
8804     \expandafter#2#1\null
8805   \fi
8806 }
8807 </check>
8808 <*package>

```

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

```

8809 \def\HyRef@StarSetRef#1{%
8810   \begingroup
8811   \Hy@safe@activestru
8812   \edef\x{#1}%
8813   \@onelevel@sanitize\x
8814   \edef\x{\endgroup
8815     \noexpand\HyRef@@StarSetRef
8816     \expandafter\noexpand\csname r@\x\endcsname{\x}%
8817   }%
8818   \x
8819 }
8820 \def\HyRef@@StarSetRef#1#2#3{%
8821   \ifx#1\@undefined
8822     \let#1\relax
8823   \fi
8824   \real@setref#1#3{#2}%
8825 }
8826 \def\@refstar#1{%
8827   \HyRef@StarSetRef{#1}\@firstoffive
8828 }
8829 \def\@pagerefstar#1{%
8830   \HyRef@StarSetRef{#1}\@secondoffive
8831 }
8832 \def\@namerefstar#1{%
8833   \HyRef@StarSetRef{#1}\@thirdoffive
8834 }
8835 \Hy@AtBeginDocument{%
8836   \@ifpackageloaded{varioref}{%
8837     \def\@Refstar#1{%
8838       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8839     }%
8840     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8841       \MakeUppercase#1%
8842     }%
8843     \DeclareRobustCommand*{\Ref}{%
8844       \@ifstar\@Refstar\HyRef@Ref
8845     }%

```

```

8846 \def\HyRef@Ref#1{%
8847 \hyperref[{#1}]{\Ref*{#1}}%
8848 }%
8849 \def\vr@f#1{%
8850 \leavevmode\unskip\vref@space
8851 \hyperref[{#1}]{%
8852 \Ref*{#1}%
8853 \let\vref@space\nobreakspace
8854 \@vpageref[\unskip]{#1}%
8855 }%
8856 }%
8857 \def\vr@f#1{%
8858 \leavevmode\unskip\vref@space
8859 \begingroup
8860 \let\T@pageref\@pagerefstar
8861 \hyperref[{#1}]{%
8862 \ref*{#1}%
8863 \vpageref[\unskip]{#1}%
8864 }%
8865 \endgroup
8866 }%
8867 }{}%
8868 }
8869 \DeclareRobustCommand*\autopageref{%
8870 \ifstar{%
8871 \HyRef@autopagerefname\pageref*%
8872 }\HyRef@autopageref
8873 }
8874 \def\HyRef@autopageref#1{%
8875 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
8876 }
8877 \def\HyRef@autopagerefname{%
8878 \ltx@ifundefined{pageautorefname}{%
8879 \ltx@ifundefined{pagename}{%
8880 \Hy@Warning{No autoref name for 'page'}%
8881 }{%
8882 \pagename\nobreakspace
8883 }%
8884 }{}%
8885 \pageautorefname\nobreakspace
8886 }%
8887 }

```

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

```

8888 \DeclareRobustCommand*\autoref{%
8889 \leavevmode
8890 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
8891 }
8892 \def\HyRef@autoref#1#2{%
8893 \begingroup
8894 \Hy@safe@activetrue
8895 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8896 \endgroup
8897 }
8898 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8899 \HyRef@ShowKeysRef{#2}%
8900 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax

```



```

8901 \edef\HyRef@thisref{%
8902   \expandafter\@fourthoffive#1\@empty\@empty\@empty
8903 }%
8904 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8905 \Hy@safe@activesfalse
8906 #3{%
8907   \expandafter\@fifthoffive#1\@empty\@empty\@empty
8908 }{%
8909   \expandafter\@fourthoffive#1\@empty\@empty\@empty
8910 }{%
8911   \HyRef@currentHtag
8912   \expandafter\@firstoffive#1\@empty\@empty\@empty
8913   \null
8914 }%
8915 \else
8916   \protect\G@refundefinedtrue
8917   \nfss@text{\reset@font\bfseries ??}%
8918   \@latex@warning{%
8919     Reference ‘#2’ on page \thepage\space undefined%
8920   }%
8921 \fi
8922 }
8923 \def\HyRef@testreftype#1.#2\.{%
8924   \ltx@ifundefined{#1autorefname}{%
8925     \ltx@ifundefined{#1name}{%
8926       \HyRef@StripStar#1\*\*\@nil{#1}%
8927       \ltx@ifundefined{\HyRef@name autorefname}{%
8928         \ltx@ifundefined{\HyRef@name name}{%
8929           \def\HyRef@currentHtag{%
8930             \Hy@Warning{No autoref name for ‘#1’}%
8931           }{%
8932             \edef\HyRef@currentHtag{%
8933               \expandafter\noexpand\csname\HyRef@name name\endcsname
8934               \noexpand~%
8935             }%
8936           }%
8937         }{%
8938           \edef\HyRef@currentHtag{%
8939             \expandafter\noexpand
8940             \csname\HyRef@name autorefname\endcsname
8941             \noexpand~%
8942           }%
8943         }%
8944       }{%
8945         \edef\HyRef@currentHtag{%
8946           \expandafter\noexpand\csname#1name\endcsname
8947           \noexpand~%
8948         }%
8949       }%
8950     }{%
8951       \edef\HyRef@currentHtag{%
8952         \expandafter\noexpand\csname#1autorefname\endcsname
8953         \noexpand~%
8954       }%
8955     }%
8956   }
8957 \def\HyRef@StripStar#1*\#2\@nil#3{%

```

```

8958 \def\HyRef@name{#2}%
8959 \ifx\HyRef@name\HyRef@CaseStar
8960 \def\HyRef@name{#1}%
8961 \else
8962 \def\HyRef@name{#3}%
8963 \fi
8964 }
8965 \def\HyRef@CaseStar{*\\}
8966 \def\HyRef@currentHtag{}

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```

8967 \let\HyRef@ShowKeysRef@gobble
8968 \def\HyRef@ShowKeysInit{%
8969 \begingroup\expandafter\expandafter\expandafter\endgroup
8970 \expandafter\ifx\csname SK@@label\endcsname\relax
8971 \else
8972 \ifx\SK@ref\@empty
8973 \else
8974 \def\HyRef@ShowKeysRef{%
8975 \SK@\SK@@ref
8976 }%
8977 \fi
8978 \fi
8979 }
8980 \@ifpackageloaded{showkeys}{%
8981 \HyRef@ShowKeysInit
8982 }{%
8983 \Hy@AtBeginDocument{%
8984 \@ifpackageloaded{showkeys}{%
8985 \HyRef@ShowKeysInit
8986 }{}%
8987 }%
8988 }

```

Defaults for the names that `\autoref` uses.

```

8989 \providecommand*\AMSautorefname{\equationautorefname}
8990 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8991 \providecommand*\Itemautorefname{\itemautorefname}
8992 \providecommand*\itemautorefname{item}
8993 \providecommand*\equationautorefname{Equation}
8994 \providecommand*\footnoteautorefname{footnote}
8995 \providecommand*\itemautorefname{item}
8996 \providecommand*\figureautorefname{Figure}
8997 \providecommand*\tableautorefname{Table}
8998 \providecommand*\partautorefname{Part}
8999 \providecommand*\appendixautorefname{Appendix}
9000 \providecommand*\chapterautorefname{chapter}
9001 \providecommand*\sectionautorefname{section}
9002 \providecommand*\subsectionautorefname{subsection}
9003 \providecommand*\subsubsectionautorefname{subsubsection}
9004 \providecommand*\paragraphautorefname{paragraph}
9005 \providecommand*\subparagraphautorefname{subparagraph}
9006 \providecommand*\FancyVerbLineautorefname{line}
9007 \providecommand*\theoremautorefname{Theorem}
9008 \providecommand*\pageautorefname{page}
9009 \</package>

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdfTeX offers `\pdfescapestring`.

```
9010 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9011 \begingroup\expandafter\expandafter\expandafter\endgroup
9012 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9013 \begingroup
9014 \catcode'\|=0 %
9015 \@makeother\|%
9016 |@firstofone{|endgroup
9017 |def|Hy@pstringdef#1#2{%
9018 |begingroup
9019 |edef~{|string~}%
9020 |xdef|Hy@gtemp{#2}%
9021 |endgroup
9022 |let#1|Hy@gtemp
9023 |@onelevel@sanitize#1%
9024 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9025 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9026 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9027 }%
9028 |def|Hy@ExchangeBackslash#1|#2|@nil{%
9029 #1%
9030 |ifx|\#2|\%
9031 |else
9032 \\\%
9033 |ltx@ReturnAfterFi{%
9034 |Hy@ExchangeBackslash#2|@nil
9035 }%
9036 |fi
9037 }%
9038 }%
9039 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9040 #1%
9041 \ifx\#2\%
9042 \else
9043 \@backslashchar(%
9044 \ltx@ReturnAfterFi{%
9045 \Hy@ExchangeLeftParenthesis#2\@nil
9046 }%
9047 \fi
9048 }%
9049 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9050 #1%
9051 \ifx\#2\%
9052 \else
9053 \@backslashchar)%
9054 \ltx@ReturnAfterFi{%
9055 \Hy@ExchangeRightParenthesis#2\@nil
```

```

9056     }%
9057   \fi
9058 }%
9059 \else
9060   \def\Hy@pstringdef#1#2{%
9061     \begingroup
9062       \edef~{\string~}%
9063       \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9064     \endgroup
9065     \let#1\Hy@gtemp
9066   }%
9067 \fi
9068 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9069 <*pdfTeX>
9070 \providecommand*\XR@ext}{pdf}
9071 \Hy@setbreaklinks{true}
9072 \def\HyPat@ObjRef{%
9073   [0-9]*[1-9][0-9]* 0 R%
9074 }

```

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

```

9075 \let\Hy@pdfminorversion\relax
9076 \begingroup\expandafter\expandafter\expandafter\endgroup
9077 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9078   \begingroup\expandafter\expandafter\expandafter\endgroup
9079   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9080     \else
9081       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9082     \fi
9083   \else
9084     \def\Hy@pdfminorversion{\pdfminorversion}%
9085   \fi
9086   \@ifundefined{Hy@pdfminorversion}{%
9087     \PackageInfo{hyperref}{%
9088       PDF version is not set, because pdfTeX is too old (<1.10a)%
9089     }%
9090   }{%
9091     \ifHy@ocgcolorlinks
9092       \ifnum\Hy@pdfminorversion<5 %
9093         \kvsetkeys{Hyp}{pdfversion=1.5}%
9094       \fi
9095     \fi
9096     \ifHy@setpdfversion
9097       \ifnum\Hy@pdfversion<5 %
9098         \ltx@ifundefined{pdfobjcompresslevel}{%
9099           }{%
9100             \ifHy@verbose
9101             \Hy@InfoNoLine{%

```

```

9102         PDF object streams are disabled, because they are%
9103         \MessageBreak
9104         not supported in requested PDF version %
9105         1.\Hy@pdfversion
9106     }%
9107 \fi
9108 \pdfobjcompresslevel=\ltx@zero
9109 }%
9110 \fi
9111 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9112 \else
9113     \let\Hy@temp\ltx@empty
9114     \def\Hy@temp@A#1#2{%
9115         \ifnum#1>\ltx@zero
9116             \edef\Hy@temp{%
9117                 \Hy@temp
9118                 \space\space
9119                 \the#1\space #2%
9120                 \ifnum#1=\ltx@one\else s\fi
9121                 \MessageBreak
9122             }%
9123         \fi
9124     }%
9125     \Hy@temp@A\pdflastobj{PDF object}%
9126     \Hy@temp@A\pdflastxform{form XObject}%
9127     \Hy@temp@A\pdflastximage{image XObject}%
9128     \Hy@temp@A\pdflastannot{annotation}%
9129     \ltx@ifundefined{pdflastlink}{{%
9130     }{%
9131         \Hy@temp@A\pdflastlink{link}%
9132     }%
9133     \ifx\Hy@temp\ltx@empty
9134         \Hy@pdfminorversion=\Hy@pdfversion\relax
9135     \else
9136         \let\Hy@temp@A\ltx@empty
9137         \ifnum\Hy@pdfversion=4 %
9138             \IfFileExists{pdf14.sty}{%
9139                 \def\Hy@temp@A{%
9140                     \MessageBreak
9141                     Or \string\RequirePackage{pdf14} can be used%
9142                     \MessageBreak
9143                     before \string\documentclass\space as shortcut%
9144                 }%
9145             }{}%
9146         \fi
9147         \Hy@WarningNoLine{%
9148             The PDF version number could not be set,\MessageBreak
9149             because some PDF objects are already written:%
9150             \MessageBreak
9151             \Hy@temp
9152             The version should be set as early as possible:%
9153             \MessageBreak
9154             \space\space
9155             \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9156             \string\relax
9157             \ifnum\Hy@pdfversion<5 %
9158                 \ltx@ifundefined{pdfobjcompresslevel}{%

```

```

9159      }{%
9160      \MessageBreak
9161      \space\space
9162      \string\pdfobjcompresslevel=0\string\relax
9163      }%
9164      \fi
9165      \Hy@temp@A
9166      }%
9167      \fi
9168      \fi
9169      \PackageInfo{hyperref}{%
9170      \expandafter\string\Hy@pdfminorversion
9171      :=\number\Hy@pdfversion\space
9172      }%
9173      \fi
9174      \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9175      }
9176      \Hy@DisableOption{pdfversion}%
9177      \ifHy@ocgcolorlinks
9178      \pdf@ifdraftmode{}{%
9179      \immediate\pdfobj{%
9180      <<%
9181      /Type/OCG%
9182      /Name(View)%
9183      /Usage<<%
9184      /Print<<%
9185      /PrintState/OFF%
9186      >>%
9187      /View<<%
9188      /ViewState/ON%
9189      >>%
9190      >>%
9191      >>%
9192      }%
9193      \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
9194      \immediate\pdfobj{%
9195      <<%
9196      /Type/OCG%
9197      /Name(Print)%
9198      /Usage<<%
9199      /Print<<%
9200      /PrintState/ON%
9201      >>%
9202      /View<<%
9203      /ViewState/OFF%
9204      >>%
9205      >>%
9206      >>%
9207      }%
9208      \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9209      \immediate\pdfobj{%
9210      [%
9211      \OBJ@OCG@view\space\OBJ@OCG@print
9212      ]%
9213      }%
9214      \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9215      \pdfcatalog{%

```

```

9216 /OCProperties<<%
9217 /OCGs \OBJ@OCGs
9218 /D<<%
9219 /OFF[\OBJ@OCG@print]%
9220 /AS[%
9221 <<%
9222 /Event/View%
9223 /OCGs \OBJ@OCGs
9224 /Category[/View]%
9225 >>%
9226 <<%
9227 /Event/Print%
9228 /OCGs \OBJ@OCGs
9229 /Category[/Print]%
9230 >>%
9231 <<%
9232 /Event/Export%
9233 /OCGs \OBJ@OCGs
9234 /Category[/Print]%
9235 >>%
9236 ]%
9237 >>%
9238 >>%
9239 }%
9240 \begingroup
9241 \edef\x{\endgroup
9242 \pdfpageresources{%
9243 /Properties<<%
9244 /OCView \OBJ@OCG@view
9245 /OCPrint \OBJ@OCG@print
9246 >>%
9247 }%
9248 }%
9249 \x
9250 }%
9251 \Hy@AtBeginDocument{%
9252 \def\Hy@colorlink#1{%
9253 \begingroup
9254 \ifHy@ocgcolorlinks
9255 \def\Hy@ocgcolor{#1}%
9256 \setbox0=\hbox\bgroup\color@begingroup
9257 \else
9258 \HyColor@UseColor#1%
9259 \fi
9260 }%
9261 \def\Hy@endcolorlink{%
9262 \ifHy@ocgcolorlinks
9263 \color@endgroup\egroup
9264 \mbox{%
9265 \pdfliteral page{/OC/OCPrint BDC}%
9266 \rlap{\copy0}%
9267 \pdfliteral page{EMC/OC/OCView BDC}%
9268 \begingroup
9269 \expandafter\HyColor@UseColor\Hy@ocgcolor
9270 \box0 %
9271 \endgroup
9272 \pdfliteral page{EMC}%

```

```

9273     }%
9274     \fi
9275     \endgroup
9276   }%
9277 }%
9278 \else
9279   \Hy@DisableOption{ocgcolorlinks}%
9280 \fi

```

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

```

9281 \def\setpdfinkmargin#1{\pdfinkmargin#1}
9282 \ifx\pdfstartlink\@undefined% less than version 14
9283   \let\pdfstartlink\pdfannotlink
9284   \let\pdfinkmargin\@tempdima
9285   \let\pdfxform\pdfform
9286   \let\pdflastxform\pdflastform
9287   \let\pdfrefxform\pdfrefform
9288 \else
9289   \pdfinkmargin1pt %
9290 \fi

```

First set up the default linking

```

9291 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9292 \Hy@WrapperDef\new@pdfink#1{%
9293   \ifhmode
9294     \@savsf\spacefactor
9295   \fi
9296   \Hy@SaveLastskip
9297   \Hy@VerboseAnchor{#1}%
9298   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9299   \Hy@DestName\Hy@pstringDest\@pdfview
9300   \Hy@RestoreLastskip
9301   \ifhmode
9302     \spacefactor\@savsf
9303   \fi
9304 }
9305 \let\pdf@endanchor\@empty

```

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

```

9306 \def\Hy@DestName#1#2{%
9307   \pdfdest name{#1}#2\relax
9308 }

```

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.

```

9309 \providecommand*\@pdfborder{0 0 1}
9310 \providecommand*\@pdfborderstyle{}
9311 \def\Hy@undefinedname{UNDEFINED}
9312 \def\find@pdfink#1#2{%
9313   \leavevmode
9314   \protected@edef\Hy@testname{#2}%
9315   \ifx\Hy@testname\@empty
9316     \Hy@Warning{%

```



```

9317     Empty destination name,\MessageBreak
9318     using '\Hy@undefinedname'%
9319 }%
9320 \let\Hy@testname\Hy@undefinedname
9321 \else
9322 \Hy@pstringdef\Hy@testname{%
9323 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9324 }%
9325 \fi
9326 \Hy@StartlinkName{%
9327 \ifHy@pdfa /F 4\fi
9328 \Hy@setpdfborder
9329 \ifx\@pdfhighlight\@empty
9330 \else
9331 /H\@pdfhighlight
9332 \fi
9333 \ifx\CurrentBorderColor\relax
9334 \else
9335 /C[\CurrentBorderColor]%
9336 \fi
9337 }\Hy@testname
9338 \expandafter\Hy@colorlink\csname @#1color\endcsname
9339 }
9340 \def\Hy@StartlinkName#1#2{%
9341 \pdfstartlink attr{#1}goto name{#2}\relax
9342 }
9343 \def\close@pdfink{%
9344 \Hy@endcolorlink
9345 \Hy@VerboseLinkStop
9346 \pdfendlink
9347 }
9348 \def\hyper@anchor#1{%
9349 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9350 }
9351 \def\hyper@anchorstart#1{%
9352 \new@pdfink{#1}%
9353 \Hy@activeanchortrue
9354 }
9355 \def\hyper@anchorend{%
9356 \pdf@endanchor
9357 \Hy@activeanchorfalse
9358 }
9359 \def\hyper@linkstart#1#2{%
9360 \Hy@VerboseLinkStart{#1}{#2}%
9361 \ltx@ifundefined{@#1bordercolor}{%
9362 \let\CurrentBorderColor\relax
9363 }{%
9364 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9365 }%
9366 \find@pdfink{#1}{#2}%
9367 }
9368 \def\hyper@linkend{\close@pdfink}
9369 \def\hyper@link#1#2#3{%
9370 \Hy@VerboseLinkStart{#1}{#2}%
9371 \ltx@ifundefined{@#1bordercolor}{%
9372 \let\CurrentBorderColor\relax
9373 }{%

```

```

9374 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9375 }%
9376 \find@pdflink{#1}{#2}#3\Hy@xspace@end
9377 \close@pdflink
9378 }
9379 \let\CurrentBorderColor\@linkbordercolor
9380 \def\hyper@linkurl#1#2{%
9381 \begingroup
9382 \Hy@pstringdef\Hy@pstringURI{#2}%
9383 \hyper@chars
9384 \leavevmode
9385 \pdfstartlink
9386 attr{%
9387 \Hy@setpdfborder
9388 \ifx\@pdfhighlight\@empty
9389 \else
9390 /H\@pdfhighlight
9391 \fi
9392 \ifx\@urlbordercolor\relax
9393 \else
9394 /C[\@urlbordercolor]%
9395 \fi
9396 }%
9397 user{%
9398 /Subtype/Link%
9399 \ifHy@pdfa /F 4\fi
9400 /A<<%
9401 /Type/Action%
9402 /S/URI%
9403 /URI(\Hy@pstringURI)%
9404 \ifHy@href@ismap
9405 /IsMap true%
9406 \fi
9407 \Hy@href@nextactionraw
9408 >>%
9409 }%
9410 \relax
9411 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9412 \close@pdflink
9413 \endgroup
9414 }
9415 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9416 \begingroup
9417 \def\Hy@pstringF{#2}%
9418 \Hy@CleanupFile\Hy@pstringF
9419 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9420 \Hy@pstringdef\Hy@pstringD{#3}%
9421 \Hy@MakeRemoteAction
9422 \leavevmode
9423 \pdfstartlink
9424 attr{%
9425 \Hy@setpdfborder
9426 \ifx\@pdfhighlight\@empty
9427 \else
9428 /H\@pdfhighlight
9429 \fi
9430 \ifx\@filebordercolor\relax

```

```

9431      \else
9432      /C[\@filebordercolor]%
9433      \fi
9434    }%
9435    user {%
9436      /Subtype/Link%
9437      \ifHy@pdfa /F 4\fi
9438      /A<<%
9439      /F(\Hy@pstringF)%
9440      /S/GoToR%
9441      \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}

```

```

9442      \ifx\#3\%
9443      /D[\Hy@href@page\@pdfremotestartview]%
9444      \else
9445      /D(\Hy@pstringD)%
9446      \fi
9447      \Hy@href@nextactionraw
9448      >>%
9449    }%
9450    \relax
9451    \Hy@colorlink\@filecolor#1\Hy@xspace@end
9452    \close@pdflink
9453  \endgroup
9454 }
9455 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9456  \begingroup
9457  \Hy@pstringdef\Hy@pstringF{#1}%
9458  \Hy@pstringdef\Hy@pstringP{#3}%
9459  \leavevmode
9460  \pdfstartlink
9461  attr{%
9462    \Hy@setpdfborder
9463    \ifx\@pdfhighlight\@empty
9464    \else
9465      /H\@pdfhighlight
9466    \fi
9467    \ifx\@runbordercolor\relax
9468    \else
9469      /C[\@runbordercolor]%
9470    \fi
9471  }%
9472  user {%
9473    /Subtype/Link%
9474    \ifHy@pdfa /F 4\fi
9475    /A<<%

```

```

9476      /F(\Hy@pstringF)%
9477      /S/Launch%
9478      \Hy@SetNewWindow
9479      \ifx\\#3\\%
9480      \else
9481      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9482      \fi
9483      \Hy@href@nextactionraw
9484      >>%
9485      }%
9486      \relax
9487      \Hy@colorlink\@runcolor#2\Hy@xspace@end
9488      \close@pdflink
9489      \endgroup
9490 }

```

\@pdfproducer

```

9491 \ifx\@pdfproducer\relax
9492 \begingroup\expandafter\expandafter\expandafter\endgroup
9493 \expandafter\ifx\csname luatexversion\endcsname\relax
9494 \def\@pdfproducer{pdfTeX}%
9495 \ifx\TeXversion\@undefined
9496 \else
9497 \ifx\TeXversion\relax
9498 \else
9499 \ifnum\TeXversion>0 %
9500 \def\@pdfproducer{pdfTeX}%
9501 \fi
9502 \fi
9503 \fi
9504 \ifx\pdfTeXversion\@undefined
9505 \else
9506 \ifnum\pdfTeXversion<100 %
9507 \edef\@pdfproducer{%
9508 \@pdfproducer
9509 \the\pdfTeXversion.\pdfTeXrevision
9510 }%
9511 \else
9512 \ifnum\pdfTeXversion<130 %
9513 \edef\@pdfproducer{%
9514 \@pdfproducer-%
9515 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9516 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
9517 \pdfTeXrevision
9518 }%
9519 \else
9520 \ifnum\pdfTeXversion<140 %
9521 \else
9522 \def\@pdfproducer{pdfTeX}%
9523 \fi
9524 \edef\@pdfproducer{%
9525 \@pdfproducer-%
9526 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9527 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9528 \pdfTeXrevision
9529 }%
9530 \fi

```

```

9531 \fi
9532 \fi
9533 \else
9534 \begingroup
9535 \count@=\luatexversion
9536 \divide\count@ by 100 %
9537 \edef\x{\the\count@}%
9538 \count@=-\x\relax
9539 \multiply\count@ by 100 %
9540 \advance\count@ by \luatexversion
9541 \edef\x{\endgroup
9542 \def\noexpand\@pdfproducer{%
9543 LuaTeX-\x.\the\count@.\luatexrevision
9544 }%
9545 }%
9546 \x
9547 \fi
9548 \fi

```

\PDF@SetupDox

```

9549 \def\PDF@SetupDoc{%
9550 \ifx\@pdfpagescrop\@empty
9551 \else
9552 \edef\process@me{%
9553 \pdfpagesattr={%
9554 /CropBox[\@pdfpagescrop]%
9555 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9556 \else
9557 ^^J\the\pdfpagesattr
9558 \fi
9559 }%
9560 }%
9561 \process@me
9562 \fi
9563 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9564 \pdfcatalog{%
9565 /PageMode/\@pdfpagemode
9566 \ifx\@baseurl\@empty
9567 \else
9568 /URI<</Base(\Hy@pstringB)>>%
9569 \fi
9570 }%
9571 \ifx\@pdfstartpage\@empty
9572 \else
9573 \ifx\@pdfstartview\@empty
9574 \else
9575 openaction goto page\@pdfstartpage{\@pdfstartview}%
9576 \fi
9577 \fi
9578 \edef\Hy@temp{%
9579 \ifHy@pdftoolbar\else /HideToolbar true\fi
9580 \ifHy@pdfmenubar\else /HideMenubar true\fi
9581 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9582 \ifHy@pdffitwindow /FitWindow true\fi
9583 \ifHy@pdfcenterwindow /CenterWindow true\fi
9584 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9585 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9586 \Hy@UseNameKey{Direction}\@pdfdirection

```

```

9587 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9588 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9589 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9590 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9591 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9592 \Hy@UseNameKey{Duplex}\@pdfduplex
9593 \ifx\@pdfpicktraybypdfsize\@empty
9594 \else
9595 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9596 \fi
9597 \ifx\@pdfprintpagerange\@empty
9598 \else
9599 /PrintPageRange[\@pdfprintpagerange]%
9600 \fi
9601 \ifx\@pdfnumcopies\@empty
9602 \else
9603 /NumCopies \@pdfnumcopies
9604 \fi
9605 }%
9606 \pdfcatalog{%
9607 \ifx\Hy@temp\@empty
9608 \else
9609 /ViewerPreferences<<\Hy@temp>>%
9610 \fi
9611 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9612 \ifx\@pdflang\@empty
9613 \else
9614 /Lang(\@pdflang)%
9615 \fi
9616 }%
9617 }

```

\PDF@FinishDoc

```

9618 \def\PDF@FinishDoc{%
9619 \pdf@ifdraftmode{}{%
9620 \Hy@UseMaketitleInfos
9621 \HyInfo@GenerateAddons
9622 \pdfinfo{%
9623 /Author(\@pdfauthor)%
9624 /Title(\@pdftitle)%
9625 /Subject(\@pdfsubject)%
9626 /Creator(\@pdfcreator)%
9627 \ifx\@pdfcreationdate\@empty
9628 \else
9629 /CreationDate(\@pdfcreationdate)%
9630 \fi
9631 \ifx\@pdfmoddate\@empty
9632 \else
9633 /ModDate(\@pdfmoddate)%
9634 \fi
9635 \ifx\@pdfproducer\relax
9636 \else
9637 /Producer(\@pdfproducer)%
9638 \fi
9639 /Keywords(\@pdfkeywords)%
9640 \ifx\@pdftrapped\@empty
9641 \else
9642 /Trapped/\@pdftrapped

```

```

9643 \fi
9644 \HyInfo@Addons
9645 }%
9646 }%
9647 \Hy@DisableOption{pdfauthor}%
9648 \Hy@DisableOption{pdftitle}%
9649 \Hy@DisableOption{pdfsubject}%
9650 \Hy@DisableOption{pdfcreator}%
9651 \Hy@DisableOption{pdfcreationdate}%
9652 \Hy@DisableOption{pdfmoddate}%
9653 \Hy@DisableOption{pdfproducer}%
9654 \Hy@DisableOption{pdfkeywords}%
9655 \Hy@DisableOption{pdftrapped}%
9656 \Hy@DisableOption{pdfinfo}%
9657 }

```

`\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`.

```

9658 \def\hyper@pagetransition{%
9659 \ifx\@pdfpagetransition\relax
9660 \else
9661 \expandafter\Hy@RemoveTransPageAttr
9662 \the\pdfpageattr^^J/Trans{}>>\END
9663 \ifx\@pdfpagetransition\@empty
9664 \else
9665 \edef\@processme{%
9666 \global\pdfpageattr{%
9667 \the\pdfpageattr
9668 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9669 }%
9670 }%
9671 \@processme
9672 \fi
9673 \fi
9674 }

```

`\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.

```

9675 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9676 \ifx\#2\%
9677 \global\pdfpageattr{#1}%
9678 \else
9679 \Hy@RemoveTransPageAttr#1#4\END
9680 \fi
9681 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

9682 \def\hyper@pageduration{%
9683 \ifx\@pdfpageduration\relax
9684 \else

```

```

9685 \expandafter
9686 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9687 \ifx\@pdfpageduration\@empty
9688 \else
9689 \edef\@processme{%
9690 \global\pdfpageattr{%
9691 \the\pdfpageattr
9692 ^^J/Dur \@pdfpageduration\space
9693 }%
9694 }%
9695 \@processme
9696 \fi
9697 \fi
9698 }

```

`\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.

```

9699 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9700 \ifx\#2\%
9701 \global\pdfpageattr{#1}%
9702 \else
9703 \Hy@RemoveDurPageAttr#1#4\END
9704 \fi
9705 }

```

`\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).

```

9706 \def\hyper@pagehidden{%
9707 \ifHy@useHidKey
9708 \expandafter
9709 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
9710 \ifHy@pdfpagehidden
9711 \edef\@processme{%
9712 \global\pdfpageattr{%
9713 \the\pdfpageattr
9714 ^^J/Hid true % SPACE
9715 }%
9716 }%
9717 \@processme
9718 \fi
9719 \fi
9720 }

```

`\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.

```

9721 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
9722 \ifx\#2\%
9723 \global\pdfpageattr{#1}%
9724 \else
9725 \Hy@RemoveHidPageAttr#1#4\END
9726 \fi
9727 }

```



```

9728 \pdf@ifdraftmode{}{%
9729   \g@addto@macro\Hy@EveryPageHook{%
9730     \hyper@pagetransition
9731     \hyper@pageduration
9732     \hyper@pagehidden
9733   }%
9734 }

```

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

```

9735 \pdf@{
9736 \*pdf@{
9737 \Hy@AtBeginDocument{%
9738   \ifHy@setpagesize
9739     \expandafter\@firstofone
9740   \else
9741     \expandafter\@gobble
9742   \fi
9743 }%
9744 \ifclassloaded{seminar}{%
9745 \*pdf@{
9746   \setlength{\pdfhorigin}{1truein}%
9747   \setlength{\pdfvorigin}{1truein}%
9748 }%
9749 \ifportrait
9750   \ifdim\paperwidth=\z@
9751   \else
9752     \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9753   \fi
9754   \ifdim\paperheight=\z@
9755   \else
9756     \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9757   \fi
9758 \else
9759   \ifdim\paperheight=\z@
9760   \else
9761     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9762   \fi
9763   \ifdim\paperwidth=\z@
9764   \else
9765     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9766   \fi
9767 \fi
9768 }{%
9769 \ltx@IfUndefined{stockwidth}{%
9770   \ifdim\paperwidth>\z@
9771     \setlength{\pdfpagewidth}{\paperwidth}%
9772   \fi
9773   \ifdim\paperheight>\z@
9774     \setlength{\pdfpageheight}{\paperheight}%
9775   \fi
9776 }{%
9777   \ifdim\stockwidth>\z@
9778     \setlength{\pdfpagewidth}{\stockwidth}%
9779   \fi
9780   \ifdim\stockheight>\z@
9781     \setlength{\pdfpageheight}{\stockheight}%
9782   \fi

```

```

9783 }%
9784 }%
9785 }%
9786 \Hy@DisableOption{setpagesize}%
9787 }
9788 </pdfTeX | xetex>
9789 <*pdfTeX>
9790 \def\Acrobatmenu#1#2{%
9791 \Hy@Acrobatmenu{#1}{#2}{%
9792 \leavevmode
9793 \EdefEscapeName\Hy@temp@menu{#1}%
9794 \pdfstartlink
9795 attr{%
9796 \Hy@setpdfborder
9797 \ifx\@pdfhighlight\@empty
9798 \else
9799 /H\@pdfhighlight
9800 \fi
9801 \ifx\@menubordercolor\relax
9802 \else
9803 /C[\@menubordercolor]%
9804 \fi
9805 }%
9806 user{%
9807 /Subtype/Link%
9808 \ifHy@pdfa /F 4\fi
9809 /A<<%
9810 /S/Named%
9811 /N/\Hy@temp@menu
9812 \Hy@href@nextactionraw
9813 >>%
9814 }%
9815 \relax
9816 \Hy@colorlink\@menucolor#2%
9817 \close@pdflink
9818 }%
9819 }

```

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.

```

9820 \def\Hy@FixNotFirstPage{%
9821 \gdef\Hy@FixNotFirstPage{%
9822 \setbox\AtBeginShipoutBox=\hbox{%
9823 \copy\AtBeginShipoutBox
9824 }%
9825 }%
9826 }

```

```

9827 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
9828 }{%
9829 \AtBeginShipout{\Hy@FixNotFirstPage}%
9830 }
9831 \</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:<a href = "href_string">
name: html:<a name = "name_string">
end: html:</a>
image: html:<img src = "href_string">
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.

```

9832 \<*hypertex>
9833 \providecommand*{\XR@ext}{dvi}
9834 \let\PDF@FinishDoc\ltx@empty
9835 \def\PDF@SetupDoc{%
9836 \ifx\@baseurl\@empty
9837 \else
9838 \special{html:<base href="\@baseurl">}%
9839 \fi
9840 }
9841 \Hy@WrapperDef\hyper@anchor#1{%
9842 \Hy@SaveLastskip
9843 \Hy@VerboseAnchor{#1}%
9844 \begingroup
9845 \let\protect=\string
9846 \hyper@chars
9847 \special{html:<a name=%

```

```

9848 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9849 \endgroup
9850 \Hy@activeanchortrue
9851 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9852 \special{html:</a>}}%
9853 \Hy@activeanchorfalse
9854 \Hy@RestoreLastskip
9855 }
9856 \Hy@WrapperDef\hyper@anchorstart#1{%
9857 \Hy@SaveLastskip
9858 \Hy@VerboseAnchor{#1}%
9859 \begingroup
9860 \hyper@chars
9861 \special{html:<a name=%
9862 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9863 \endgroup
9864 \Hy@activeanchortrue
9865 }
9866 \def\hyper@anchorend{%
9867 \special{html:</a>}}%
9868 \Hy@activeanchorfalse
9869 \Hy@RestoreLastskip
9870 }
9871 \def\@urltype{url}
9872 \def\hyper@linkstart#1#2{%
9873 \Hy@VerboseLinkStart{#1}{#2}%
9874 \expandafter\Hy@colorlink\csname @#1color\endcsname
9875 \def\Hy@tempa{#1}%
9876 \ifx\Hy@tempa\@urltype
9877 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9878 \else
9879 \begingroup
9880 \hyper@chars
9881 \special{html:<a href=%
9882 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}}%
9883 \endgroup
9884 \fi
9885 }
9886 \def\hyper@linkend{%
9887 \special{html:</a>}}%
9888 \Hy@endcolorlink
9889 }
9890 \def\hyper@linkfile#1#2#3{%
9891 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9892 }
9893 \def\hyper@linkurl#1#2{%

```

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

```

9894 \leavevmode
9895 \ifHy@raiselinks
9896 \Hy@SaveSpaceFactor
9897 \Hy@SaveSavedSpaceFactor
9898 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9899 \Hy@RestoreSavedSpaceFactor
9900 \@linkdim\dp\@tempboxa
9901 \lower\@linkdim\hbox{%

```

```

9902 \hyper@chars
9903 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9904 }%
9905 \Hy@colorlink\@urlcolor
9906 \Hy@RestoreSpaceFactor
9907 #1%
9908 \Hy@SaveSpaceFactor
9909 \@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).

```

9910 \advance\@linkdim by -6.5\p@
9911 \raise\@linkdim\hbox{\special{html:</a>}}%
9912 \Hy@endcolorlink
9913 \Hy@RestoreSpaceFactor
9914 \else
9915 \begingroup
9916 \hyper@chars
9917 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9918 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9919 \special{html:</a>}}%
9920 \Hy@endcolorlink
9921 \endgroup
9922 \fi
9923 }

```

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

```

9924 \def\hyper@link#1#2#3{%
9925 \Hy@VerboseLinkStart{#1}{#2}%
9926 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
9927 }

9928 \def\hyper@image#1#2{%
9929 \begingroup
9930 \hyper@chars
9931 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9932 \endgroup
9933 }
9934 </hypertex>
9935 <*\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, L^AT_EX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 1000000sp wide by \baselineskip high is used.

```

9936 \providecommand*\XR@ext{dvi}
9937 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}

```

```

9938 \Hy@WrapperDef\hyper@anchor#1{%
9939 \Hy@SaveLastskip
9940 \Hy@VerboseAnchor{#1}%
9941 \begingroup
9942 \let\protect=\string
9943 \special{mark: #1}%
9944 \endgroup
9945 \Hy@activeanchortrue
9946 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9947 \Hy@activeanchorfalse
9948 \Hy@RestoreLastskip
9949 }
9950 \Hy@WrapperDef\hyper@anchorstart#1{%
9951 \Hy@SaveLastskip
9952 \Hy@VerboseAnchor{#1}%
9953 \special{mark: #1}%
9954 \Hy@activeanchortrue
9955 }
9956 \def\hyper@anchorend{%
9957 \Hy@activeanchorfalse
9958 \Hy@RestoreLastskip
9959 }
9960 \def\hyper@linkstart#1#2{%
9961 \Hy@VerboseLinkStart{#1}{#2}%
9962 \expandafter\Hy@colorlink\csname @#1color\endcsname
9963 \special{button: %
9964 10000000 %
9965 \number\baselineskip\space
9966 #2%
9967 }%
9968 }
9969 \def\hyper@linkend{%
9970 \Hy@endcolorlink
9971 }
9972 \def\hyper@link#1#2#3{%
9973 \Hy@VerboseLinkStart{#1}{#2}%
9974 \leavevmode
9975 \ifHy@raiselinks
9976 \Hy@SaveSpaceFactor
9977 \Hy@SaveSavedSpaceFactor
9978 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9979 \Hy@RestoreSavedSpaceFactor
9980 \@linkdim\dp\@tempboxa
9981 \lower\@linkdim\hbox{%
9982 \special{button: %
9983 \number\wd\@tempboxa\space
9984 \number\ht\@tempboxa\space
9985 #2%
9986 }%
9987 \expandafter\Hy@colorlink\csname @#1color\endcsname
9988 \Hy@RestoreSpaceFactor
9989 #3\Hy@xspace@end
9990 \Hy@SaveSpaceFactor
9991 \Hy@endcolorlink
9992 }%
9993 \@linkdim\ht\@tempboxa
9994 \advance\@linkdim by -6.5\p@

```

```

9995 \raise\@linkdim\hbox{}%
9996 \Hy@RestoreSpaceFactor
9997 \else
9998 \special{button: %
9999 \number\wd\@tempboxa\space
10000 \number\ht\@tempboxa\space
10001 #2%
10002 }%
10003 \expandafter\Hy@colorlink\cname @#1color\endcsname
10004 #3\Hy@xspace@end
10005 \Hy@endcolorlink
10006 \fi
10007 }
10008 \def\hyper@linkurl#1#2{%
10009 \begingroup
10010 \hyper@chars
10011 \leavevmode
10012 \ifHy@raiselinks
10013 \Hy@SaveSpaceFactor
10014 \Hy@SaveSavedSpaceFactor
10015 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10016 \Hy@RestoreSavedSpaceFactor
10017 \@linkdim\dp\@tempboxa
10018 \lower\@linkdim\hbox{%
10019 \special{button: %
10020 \number\wd\@tempboxa\space
10021 \number\ht\@tempboxa\space
10022 launch: \wwwbrowser\space
10023 #2%
10024 }%
10025 \Hy@colorlink\@urlcolor
10026 \Hy@RestoreSpaceFactor
10027 #1\Hy@xspace@end
10028 \Hy@SaveSpaceFactor
10029 \Hy@endcolorlink
10030 }%
10031 \@linkdim\ht\@tempboxa
10032 \advance\@linkdim by -6.5\p@
10033 \raise\@linkdim\hbox{}%
10034 \Hy@RestoreSpaceFactor
10035 \else
10036 \special{button: %
10037 \number\wd\@tempboxa\space
10038 \number\ht\@tempboxa\space
10039 launch: \wwwbrowser\space
10040 #2%
10041 }%
10042 \Hy@colorlink\@urlcolor
10043 #1\Hy@xspace@end
10044 \Hy@endcolorlink
10045 \fi
10046 \endgroup
10047 }
10048 \def\hyper@linkfile#1#2#3{%
10049 \begingroup
10050 \hyper@chars
10051 \leavevmode

```

```

10052 \ifHy@raiselinks
10053 \Hy@SaveSpaceFactor
10054 \Hy@SaveSavedSpaceFactor
10055 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10056 \Hy@RestoreSavedSpaceFactor
10057 \@linkdim\dp\@tempboxa
10058 \lower\@linkdim\hbox{%
10059 \special{button: %
10060 \number\wd\@tempboxa\space
10061 \number\ht\@tempboxa\space
10062 #3,%
10063 file: #2%
10064 }%
10065 \Hy@colorlink\@filecolor
10066 \Hy@RestoreSpaceFactor
10067 #1\Hy@xspace@end
10068 \Hy@SaveSpaceFactor
10069 \Hy@endcolorlink
10070 }%
10071 \@linkdim\ht\@tempboxa
10072 \advance\@linkdim by -6.5\p@
10073 \raise\@linkdim\hbox{}%
10074 \Hy@RestoreSpaceFactor
10075 \else
10076 \special{button: %
10077 \number\wd\@tempboxa\space
10078 \number\ht\@tempboxa\space
10079 #3,%
10080 file: #2%
10081 }%
10082 \Hy@colorlink\@filecolor
10083 #1\Hy@xspace@end
10084 \Hy@endcolorlink
10085 \fi
10086 \endgroup
10087 }
10088 \ifx\@pdfproducer\relax
10089 \def\@pdfproducer{dviwindo + Distiller}%
10090 \fi
10091 \HyInfo@AddonUnsupportedtrue
10092 \def\PDF@FinishDoc{%
10093 \Hy@UseMaketitleInfos
10094 \HyInfo@TrappedUnsupported
10095 \special{PDF: Keywords \@pdfkeywords}%
10096 \special{PDF: Title \@pdftitle}%
10097 \special{PDF: Creator \@pdfcreator}%
10098 \ifx\@pdfcreationdate\@empty
10099 \else
10100 \special{PDF: CreationDate \@pdfcreationdate}%
10101 \fi
10102 \ifx\@pdfmoddate\@empty
10103 \else
10104 \special{PDF: ModDate \@pdfmoddate}%
10105 \fi
10106 \special{PDF: Author \@pdfauthor}%
10107 \ifx\@pdfproducer\relax
10108 \else

```



```

10109 \special{PDF: Producer \@pdfproducer}%
10110 \fi
10111 \special{PDF: Subject \@pdfsubject}%
10112 \Hy@DisableOption{pdfauthor}%
10113 \Hy@DisableOption{pdftitle}%
10114 \Hy@DisableOption{pdfsubject}%
10115 \Hy@DisableOption{pdfcreator}%
10116 \Hy@DisableOption{pdfcreationdate}%
10117 \Hy@DisableOption{pdfmoddate}%
10118 \Hy@DisableOption{pdfproducer}%
10119 \Hy@DisableOption{pdfkeywords}%
10120 \Hy@DisableOption{pdftrapped}%
10121 \Hy@DisableOption{pdfinfo}%
10122 }
10123 \def\PDF@SetupDoc{%
10124 \ifx\@baseurl\@empty
10125 \else
10126 \special{PDF: Base \@baseurl}%
10127 \fi
10128 \ifx\@pdfpagescrop\@empty\else
10129 \special{PDF: BBox \@pdfpagescrop}%
10130 \fi
10131 \def\Hy@temp{%
10132 \ifx\@pdfstartpage\@empty
10133 \else
10134 \ifx\@pdfstartview\@empty
10135 \else
10136 \edef\Hy@temp{%
10137 ,Page=\@pdfstartpage
10138 ,View=\@pdfstartview
10139 }%
10140 \fi
10141 \fi
10142 \edef\Hy@temp{%
10143 \noexpand\pdfmark{%
10144 pdfmark=/DOCVIEW,%
10145 PageMode=/\@pdfpagemode
10146 \Hy@temp
10147 }%
10148 }%
10149 \Hy@temp
10150 \ifx\@pdfpagescrop\@empty
10151 \else
10152 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10153 \fi
10154 \edef\Hy@temp{%
10155 \ifHy@pdftoolbar\else /HideToolbar true\fi
10156 \ifHy@pdfmenubar\else /HideMenubar true\fi
10157 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10158 \ifHy@pdfwindow /FitWindow true\fi
10159 \ifHy@pdfcenterwindow /CenterWindow true\fi
10160 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10161 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10162 \Hy@UseNameKey{Direction}\@pdfdirection
10163 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10164 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10165 \Hy@UseNameKey{PrintArea}\@pdfprintarea

```

```

10166 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10167 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10168 \Hy@UseNameKey{Duplex}\@pdfduplex
10169 \ifx\@pdfpicktraybypdfsize\@empty
10170 \else
10171 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10172 \fi
10173 \ifx\@pdfprintpagerange\@empty
10174 \else
10175 /PrintPageRange[\@pdfprintpagerange]%
10176 \fi
10177 \ifx\@pdfnumcopies\@empty
10178 \else
10179 /NumCopies \@pdfnumcopies
10180 \fi
10181 }%
10182 \pdfmark{pdfmark=/PUT,%
10183 Raw={%
10184 \string{Catalog\string}<<%
10185 \ifx\Hy@temp\@empty
10186 \else
10187 /ViewerPreferences<<\Hy@temp>>%
10188 \fi
10189 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10190 \ifx\@pdflang\@empty
10191 \else
10192 /Lang(\@pdflang)%
10193 \fi
10194 >>%
10195 }%
10196 }%
10197 }
10198 </dviwindo>
10199 < *dvipdfm | xetex >

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10200 \providecommand*{\XR@ext}{pdf}
10201 \Hy@setbreaklinks{true}
10202 \def\HyPat@ObjRef{%
10203 @[\^ ]+}%
10204 }
10205 \newsavebox{\pdfm@box}
10206 \def\@pdfm@mark#1{\special{pdf:#1}}
10207 \Hy@WrapperDef\@pdfm@dest#1{%
10208 \Hy@SaveLastskip
10209 \Hy@VerboseAnchor{#1}%
10210 \begingroup
10211 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10212 \def\x{XYZ}%
10213 \ifx\x\@pdfview
10214 \def\x{XYZ @xpos @ypos null}%
10215 \else
10216 \def\x{FitH}%
10217 \ifx\x\@pdfview
10218 \def\x{FitH @ypos}%

```

```

10219 \else
10220 \def\x{FitBH}%
10221 \ifx\x\@pdfview
10222 \def\x{FitBH @ypos}%
10223 \else
10224 \def\x{FitV}%
10225 \ifx\x\@pdfview
10226 \def\x{FitV @xpos}%
10227 \else
10228 \def\x{FitBV}%
10229 \ifx\x\@pdfview
10230 \def\x{FitBV @xpos}%
10231 \else
10232 \def\x{Fit}%
10233 \ifx\x\@pdfview
10234 \let\x\@pdfview
10235 \else
10236 \def\x{FitB}%
10237 \ifx\x\@pdfview
10238 \let\x\@pdfview
10239 \else
10240 \def\x{FitR}%
10241 \ifx\x\@pdfview
10242 \Hy@Warning{'pdfview=FitR' is not supported}%
10243 \def\x{XYZ @xpos @ypos null}%
10244 \else
10245 \@onelevel@sanitize\@pdfview
10246 \Hy@Warning{%
10247   Unknown value '\@pdfview' for pdfview%
10248 }%
10249 \def\x{XYZ @xpos @ypos null}%
10250 \fi
10251 \fi
10252 \fi
10253 \fi
10254 \fi
10255 \fi
10256 \fi
10257 \fi
10258 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10259 \endgroup
10260 \Hy@RestoreLastskip
10261 }
10262 \providecommand*\@pdfview{XYZ}
10263 \providecommand*\@pdfborder{0 0 1}
10264 \providecommand*\@pdfborderstyle{}
10265 \def\hyper@anchor#1{%
10266 \@pdfm@dest{#1}%
10267 }
10268 \def\hyper@anchorstart#1{%
10269 \Hy@activeanchortrue
10270 \@pdfm@dest{#1}%
10271 }
10272 \def\hyper@anchorend{%
10273 \Hy@activeanchorfalse
10274 }
10275 \newcounter{Hy@AnnotLevel}

```

```

10276 \ifHy@ocgcolorlinks
10277 \def\OBJ@OCG@view{@OCG@view}%
10278 \@pdfm@mark{%
10279   obj \OBJ@OCG@view <<%
10280     /Type/OCG%
10281     /Name(View)%
10282     /Usage<<%
10283     /Print<<%
10284     /PrintState/OFF%
10285     >>%
10286     /View<<%
10287     /ViewState/ON%
10288     >>%
10289     >>%
10290     >>%
10291   }%
10292 \@pdfm@mark{close \OBJ@OCG@view}%
10293 \def\OBJ@OCG@print{@OCG@print}%
10294 \@pdfm@mark{%
10295   obj \OBJ@OCG@print <<%
10296     /Type/OCG%
10297     /Name(Print)%
10298     /Usage<<%
10299     /Print<<%
10300     /PrintState/ON%
10301     >>%
10302     /View<<%
10303     /ViewState/OFF%
10304     >>%
10305     >>%
10306     >>%
10307   }%
10308 \@pdfm@mark{close \OBJ@OCG@print}%
10309 \def\OBJ@OCGs{@OCGs}%
10310 \@pdfm@mark{%
10311   obj \OBJ@OCGs [%
10312     \OBJ@OCG@view\space\OBJ@OCG@print
10313   ]%
10314 }%
10315 \@pdfm@mark{close \OBJ@OCGs}%
10316 \@pdfm@mark{%
10317   put @catalog <<%
10318     /OCProperties<<%
10319     /OCGs \OBJ@OCGs
10320     /D<<%
10321     /OFF[\OBJ@OCG@print]%
10322     /AS[%
10323       <<%
10324         /Event/View%
10325         /OCGs \OBJ@OCGs
10326         /Category[/View]%
10327       >>%
10328       <<%
10329         /Event/Print%
10330         /OCGs \OBJ@OCGs
10331         /Category[/Print]%
10332       >>%

```

```

10333         <<%
10334         /Event/Export%
10335         /OCGs \OBJ@OCGs
10336         /Category[/Print]%
10337         >>%
10338     ]%
10339     >>%
10340     >>%
10341     >>%
10342 }%
10343 \AtBeginShipout{%
10344     \setbox\AtBeginShipoutBox=\hbox{%
10345         \copy\AtBeginShipoutBox
10346         \@pdfm@mark{%
10347             put @resources <<%
10348             /Properties<<%
10349             /OCView \OBJ@OCG@view
10350             /OCPrint \OBJ@OCG@print
10351             >>%
10352             >>%
10353         }%
10354     }%
10355 }%
10356 \Hy@AtBeginDocument{%
10357     \def\Hy@colorlink#1{%
10358         \begingroup
10359         \ifHy@ocgcolorlinks
10360             \def\Hy@ocgcolor{#1}%
10361             \setbox0=\hbox\bgroup\color@begingroup
10362         \else
10363             \HyColor@UseColor#1%
10364         \fi
10365     }%
10366     \def\Hy@endcolorlink{%
10367         \ifHy@ocgcolorlinks
10368             \color@endgroup\egroup
10369             \mbox{%
10370                 \@pdfm@mark{content /OC/OCPrint BDC}%
10371                 \rlap{\copy0}%
10372                 \@pdfm@mark{content EMC/OC/OCView BDC}%
10373                 \begingroup
10374                 \expandafter\HyColor@UseColor\Hy@ocgcolor
10375                 \box0 %
10376                 \endgroup
10377                 \@pdfm@mark{content EMC}%
10378             }%
10379         \fi
10380     \endgroup
10381 }%
10382 }%
10383 \else
10384     \Hy@DisableOption{ocgcolorlinks}%
10385 \fi
10386 \def\Hy@BeginAnnot#1{%
10387     \stepcounter{Hy@AnnotLevel}%
10388     \ifnum\value{Hy@AnnotLevel}=\@ne
10389         #1%

```

```

10390 \fi
10391 }
10392 \def\Hy@endAnnot{%
10393 \ifnum\value{Hy@AnnotLevel}=\@ne
10394 \Hy@endcolorlink
10395 \@pdfm@mark{eann}%
10396 \fi
10397 \addtocounter{Hy@AnnotLevel}\m@ne
10398 }

10399 \def\Hy@undefinedname{UNDEFINED}
10400 \def\hyper@linkstart#1#2{%
10401 \Hy@VerboseLinkStart{#1}{#2}%
10402 \leavevmode
10403 \Hy@BeginAnnot{%
10404 \protected@edef\Hy@testname{#2}%
10405 \ifx\Hy@testname\@empty
10406 \Hy@Warning{%
10407 Empty destination name,\MessageBreak
10408 using '\Hy@undefinedname'%
10409 }%
10410 \let\Hy@testname\Hy@undefinedname
10411 \else
10412 \Hy@pstringdef\Hy@testname{%
10413 \expandafter\HyperDestNameFilter\expandafter{%
10414 \Hy@testname
10415 }%
10416 }%
10417 \fi
10418 \@pdfm@mark{%
10419 bann<<%
10420 /Type/Annot%
10421 /Subtype/Link%
10422 \ifHy@pdfa /F 4\fi
10423 \Hy@setpdfborder
10424 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10425 \else
10426 /C[\csname @#1bordercolor\endcsname]%
10427 \fi
10428 /A<<%
10429 /S/GoTo%
10430 /D(\Hy@testname)%
10431 \Hy@href@nextactionraw
10432 >>%
10433 >>%
10434 }%
10435 \expandafter\Hy@colorlink\csname @#1color\endcsname
10436 }%
10437 }
10438 \def\hyper@linkend{\Hy@endAnnot}%
10439 \def\hyper@link#1#2#3{%
10440 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10441 }
10442 \def\hyper@linkfile#1#2#3{%
10443 \leavevmode
10444 \Hy@BeginAnnot{%
10445 \def\Hy@pstringF{#2}%
10446 \Hy@CleanupFile\Hy@pstringF

```

```

10447 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10448 \Hy@pstringdef\Hy@pstringD{#3}%
10449 \Hy@MakeRemoteAction
10450 \@pdfm@mark{%
10451   bann<<%
10452   /Type/Annot%
10453   /Subtype/Link%
10454   \ifHy@pdfa /F 4\fi
10455   \Hy@setpdfborder
10456   \ifx\@filebordercolor\relax
10457   \else
10458     /C[\@filebordercolor]%
10459   \fi
10460   /A<<%
10461   /S/GoToR%
10462   /F(\Hy@pstringF)%
10463   /D%
10464   \ifx\#3\%
10465     [\Hy@href@page\@pdfremotestartview]%
10466   \else
10467     (\Hy@pstringD)%
10468   \fi
10469   \Hy@SetNewWindow
10470   \Hy@href@nextactionraw
10471   >>%
10472 >>%
10473 }%
10474 \Hy@colorlink\@filecolor
10475 }%
10476 #1\Hy@xspace@end
10477 \Hy@EndAnnot
10478 }
10479 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10480 \leavevmode
10481 \Hy@BeginAnnot{%
10482 \Hy@pstringdef\Hy@pstringF{#1}%
10483 \Hy@pstringdef\Hy@pstringP{#3}%
10484 \@pdfm@mark{%
10485   bann<<%
10486   /Type/Annot%
10487   /Subtype/Link%
10488   \ifHy@pdfa /F 4\fi
10489   \Hy@setpdfborder
10490   \ifx\@runbordercolor\relax
10491   \else
10492     /C[\@runbordercolor]%
10493   \fi
10494   /A<<%
10495   /F(\Hy@pstringF)%
10496   /S/Launch%
10497   \Hy@SetNewWindow
10498   \ifx\#3\%
10499   \else
10500     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10501   \fi
10502   \Hy@href@nextactionraw
10503   >>%

```

```

10504     >>%
10505   }%
10506   \Hy@colorlink\@runcolor
10507 }%
10508 #2\Hy@xspace@end
10509 \Hy@endAnnot
10510 }
10511 \def\hyper@linkurl#1#2{%
10512   \leavevmode
10513   \Hy@BeginAnnot{%
10514     \Hy@pstringdef\Hy@pstringURI{#2}%
10515     \@pdfm@mark{%
10516       bann<<%
10517         /Type/Annot%
10518         /Subtype/Link%
10519         \ifHy@pdfa /F 4\fi
10520         \Hy@setpdfborder
10521         \ifx\@urlbordercolor\relax
10522           \else
10523             /C[\@urlbordercolor]%
10524           \fi
10525         /A<<%
10526         /S/URI%
10527         /URI(\Hy@pstringURI)%
10528         \ifHy@href@ismap
10529           /IsMap true%
10530         \fi
10531         \Hy@href@nextactionraw
10532       >>%
10533     >>%
10534   }%
10535   \Hy@colorlink\@urlcolor
10536 }%
10537 #1\Hy@xspace@end
10538 \Hy@endAnnot
10539 }
10540 \def\Acrobatmenu#1#2{%
10541   \Hy@Acrobatmenu{#1}{#2}{%
10542     \Hy@BeginAnnot{%
10543       \EdefEscapeName\Hy@temp@menu{#1}%
10544       \@pdfm@mark{%
10545         bann<<%
10546           /Type/Annot%
10547           /Subtype/Link%
10548           \ifHy@pdfa /F 4\fi
10549           \Hy@setpdfborder
10550           \ifx\@menubordercolor\relax
10551             \else
10552               /C[\@menubordercolor]%
10553             \fi
10554           /A<<%
10555           /S/Named%
10556           /N/\Hy@temp@menu
10557           \Hy@href@nextactionraw
10558         >>%
10559       >>%
10560     }%

```



```

10561 \Hy@colorlink\@menucolor
10562 }%
10563 #2\Hy@xspace@end
10564 \Hy@EndAnnot
10565 }%
10566 }
10567 \ifx\@pdfproducer\relax
10568 \def\@pdfproducer{dvi.pdf}%

```

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

```

10569 \begingroup\expandafter\expandafter\expandafter\endgroup
10570 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10571 \else
10572 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10573 \fi
10574 \fi
10575 \def\PDF@FinishDoc{%
10576 \Hy@UseMaketitleInfos
10577 \HyInfo@GenerateAddons
10578 \@pdfm@mark{%
10579 docinfo<<%
10580 /Title(\@pdftitle)%
10581 /Subject(\@pdfsubject)%
10582 /Creator(\@pdfcreator)%
10583 \ifx\@pdfcreationdate\@empty
10584 \else
10585 /CreationDate(\@pdfcreationdate)%
10586 \fi
10587 \ifx\@pdfmoddate\@empty
10588 \else
10589 /ModDate(\@pdfmoddate)%
10590 \fi
10591 /Author(\@pdfauthor)%
10592 \ifx\@pdfproducer\relax
10593 \else
10594 /Producer(\@pdfproducer)%
10595 \fi
10596 /Keywords(\@pdfkeywords)%
10597 \ifx\@pdftrapped\@empty
10598 \else
10599 /Trapped/\@pdftrapped
10600 \fi
10601 \HyInfo@Addons
10602 >>%
10603 }%
10604 \Hy@DisableOption{pdfauthor}%
10605 \Hy@DisableOption{pdftitle}%
10606 \Hy@DisableOption{pdfsubject}%
10607 \Hy@DisableOption{pdfcreator}%
10608 \Hy@DisableOption{pdfcreationdate}%
10609 \Hy@DisableOption{pdfmoddate}%
10610 \Hy@DisableOption{pdfproducer}%
10611 \Hy@DisableOption{pdfkeywords}%
10612 \Hy@DisableOption{pdftrapped}%
10613 \Hy@DisableOption{pdfinfo}%
10614 }
10615 \def\PDF@SetupDoc{%

```

```

10616 \edef\Hy@temp{%
10617   \ifHy@pdftoolbar\else /HideToolbar true\fi
10618   \ifHy@pdfmenubar\else /HideMenubar true\fi
10619   \ifHy@pdfwindowui\else /HideWindowUI true\fi
10620   \ifHy@pdfwindow /FitWindow true\fi
10621   \ifHy@pdfcenterwindow /CenterWindow true\fi
10622   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10623   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10624   \Hy@UseNameKey{Direction}\@pdfdirection
10625   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10626   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10627   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10628   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10629   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10630   \Hy@UseNameKey{Duplex}\@pdfduplex
10631   \ifx\@pdfpicktraybypdfsize\@empty
10632   \else
10633     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10634   \fi
10635   \ifx\@pdfprintpagerange\@empty
10636   \else
10637     /PrintPageRange[\@pdfprintpagerange]%
10638   \fi
10639   \ifx\@pdfnumcopies\@empty
10640   \else
10641     /NumCopies \@pdfnumcopies
10642   \fi
10643 }%
10644 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10645 \@pdfm@mark{%
10646   docview<<%
10647     \ifx\@pdfstartpage\@empty
10648     \else
10649       \ifx\@pdfstartview\@empty
10650       \else
10651         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10652       \fi
10653     \fi
10654     \ifx\@baseurl\@empty
10655     \else
10656       /URI<</Base(\Hy@pstringB)>>%
10657     \fi
10658     /PageMode/\@pdfpagemode
10659     \ifx\Hy@temp\@empty
10660     \else
10661       /ViewerPreferences<<\Hy@temp>>%
10662     \fi
10663     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10664     \ifx\@pdflang\@empty
10665     \else
10666       /Lang(\@pdflang)%
10667     \fi
10668   >>%
10669 }%
10670 \ifx\@pdfpagescrop\@empty
10671 \else
10672   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>%

```

```

10673 \fi
10674 }
10675 </dvipdfm | xetex>
10676 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

10677 \def\hyper@pagetransition{%
10678 \ifx\@pdfpagetransition\relax
10679 \else
10680 \ifx\@pdfpagetransition\@empty
10681 \else
10682 \special{pdf:put @thispage %
10683 <</Trans<</S/\@pdfpagetransition>>>>%
10684 }%
10685 \fi
10686 \fi
10687 }

```

\hyper@pageduration

```

10688 \def\hyper@pageduration{%
10689 \ifx\@pdfpageduration\relax
10690 \else
10691 \ifx\@pdfpageduration\@empty
10692 \else
10693 \special{pdf:put @thispage %
10694 <</Dur \@pdfpageduration>>>%
10695 }%
10696 \fi
10697 \fi
10698 }

```

\hyper@pagehidden

```

10699 \def\hyper@pagehidden{%
10700 \ifHy@useHidKey
10701 \special{pdf:put @thispage %
10702 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10703 }%
10704 \fi
10705 }

```

```

10706 \g@addto@macro\Hy@EveryPageBoxHook{%
10707 \hyper@pagetransition
10708 \hyper@pageduration
10709 \hyper@pagehidden
10710 }
10711 </dvipdfm | xetex>

```

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

```

10712 < *dvipdfm>
10713 \AtBeginShipoutFirst{%
10714 \ifHy@setpagesize
10715 \begingroup
10716 \ifundefined{stockwidth}{%
10717 \ifdim\paperwidth>\z@
10718 \ifdim\paperheight>\z@
10719 \special{papersize=\the\paperwidth,\the\paperheight}%

```

```

10720     \fi
10721     \fi
10722   }{%
10723     \ifdim\stockwidth>\z@
10724     \ifdim\stockheight>\z@
10725       \special{papersize=\the\stockwidth,\the\stockheight}%
10726     \fi
10727     \fi
10728   }%
10729 \endgroup
10730 \fi
10731 \Hy@DisableOption{setpagesize}%
10732 }
10733 </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.

```

10734 <*vtexhtml>
10735 \providecommand*{\XR@ext}{htm}
10736 \RequirePackage{vtexhtml}
10737 \newif\if@Localurl
10738 \let\PDF@FinishDoc\ltx@empty
10739 \def\PDF@SetupDoc{%
10740   \ifx\@baseurl\@empty
10741     \else
10742       \special{!direct <base href="\@baseurl">}%
10743     \fi
10744 }
10745 \def\@urltype{url}
10746 \def\hyper@link#1#2#3{%
10747   \Hy@VerboseLinkStart{#1}{#2}%
10748   \leavevmode
10749   \special{!direct <a href=%
10750     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10751   #3\Hy@xspace@end
10752   \special{!direct </a>}%
10753 }
10754 \def\hyper@linkurl#1#2{%
10755   \begingroup
10756     \hyper@chars
10757     \leavevmode
10758     \MathBSuppress=1\relax
10759     \special{!direct <a href=%
10760       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10761     #1\Hy@xspace@end
10762     \MathBSuppress=0\relax
10763     \special{!direct </a>}%
10764   \endgroup
10765 }
10766 \def\hyper@linkfile#1#2#3{%
10767   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\##3\fi}%
10768 }
10769 \def\hyper@linkstart#1#2{%
10770   \Hy@VerboseLinkStart{#1}{#2}%
10771   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype

```

```

10772 \@@Localurltrue
10773 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10774 \else
10775 \@@Localurlfalse
10776 \begingroup
10777 \hyper@chars
10778 \special{!aref \HyperDestNameFilter{#2}}%
10779 \endgroup
10780 \fi
10781 }
10782 \def\hyper@linkend{%
10783 \if@Localurl
10784 \special{!endaref}%
10785 \else
10786 \special{!direct </a>}%
10787 \fi
10788 }
10789 \Hy@WrapperDef\hyper@anchorstart#1{%
10790 \Hy@SaveLastskip
10791 \Hy@VerboseAnchor{#1}%
10792 \begingroup
10793 \hyper@chars
10794 \special{!aname #1}%
10795 \special{!direct <a name=%
10796 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10797 \endgroup
10798 \Hy@activeanchortrue
10799 }
10800 \def\hyper@anchorend{%
10801 \special{!direct </a>}%
10802 \Hy@activeanchorfalse
10803 \Hy@RestoreLastskip
10804 }
10805 \Hy@WrapperDef\hyper@anchor#1{%
10806 \Hy@SaveLastskip
10807 \Hy@VerboseAnchor{#1}%
10808 \begingroup
10809 \let\protect=\string
10810 \hyper@chars
10811 \leavevmode
10812 \special{!aname #1}%
10813 \special{!direct <a name=%
10814 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10815 \endgroup
10816 \Hy@activeanchortrue
10817 \bgroup\anchor@spot\egroup
10818 \special{!direct </a>}%
10819 \Hy@activeanchorfalse
10820 \Hy@RestoreLastskip
10821 }
10822 \def\@Form[#1]{%
10823 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10824 }
10825 \let\@endForm\ltx@empty
10826 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10827 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10828 }

```

```

10829 \def\@TextField[#1]#2{% parameters, label
10830   \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10831 }
10832 \def\@CheckBox[#1]#2{% parameters, label
10833   \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10834 }
10835 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10836   \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10837 }
10838 \def\@PushButton[#1]#2{% parameters, label
10839   \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10840 }
10841 \def\@Reset[#1]#2{%
10842   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10843 }
10844 \def\@Submit[#1]#2{%
10845   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10846 }
10847 \</vtexhtml>
10848 \*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.

```

10849 \ifx\mediaheight\@undefined
10850 \else
10851   \ifx\mediaheight\relax
10852   \else
10853     \ifHy@setpagesize
10854       \providecommand*\VTeXInitMediaSize{%
10855         \ltx@ifundefined{stockwidth}{%
10856           \ifdim\paperheight>0pt %
10857             \setlength\mediaheight\paperheight
10858           \fi
10859           \ifdim\paperheight>0pt %
10860             \setlength\mediawidth\paperwidth
10861           \fi
10862         }{%
10863           \ifdim\stockheight>0pt %
10864             \setlength\mediaheight\stockheight
10865           \fi
10866           \ifdim\stockwidth>0pt %
10867             \setlength\mediawidth\stockwidth
10868           \fi
10869         }%
10870       }%
10871       \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10872     \fi
10873     \Hy@DisableOption{setpagesize}%
10874   \fi
10875 \fi

```

Older versions of VTeX require xyz in lower case.

```

10876 \providecommand*\@pdfview{xyz}
10877 \providecommand*\@pdfborder{0 0 1}
10878 \providecommand*\@pdfborderstyle{}
10879 \let\CurrentBorderColor\@linkbordercolor
10880 \Hy@WrapperDef\hyper@anchor#1{%

```

```

10881 \Hy@SaveLastskip
10882 \Hy@VerboseAnchor{#1}%
10883 \begingroup
10884 \let\protect=\string
10885 \hyper@chars
10886 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10887 \endgroup
10888 \Hy@activeanchortrue
10889 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10890 \Hy@activeanchorfalse
10891 \Hy@RestoreLastskip
10892 }
10893 \Hy@WrapperDef\hyper@anchorstart#1{%
10894 \Hy@SaveLastskip
10895 \Hy@VerboseAnchor{#1}%
10896 \begingroup
10897 \hyper@chars
10898 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10899 \endgroup
10900 \Hy@activeanchortrue
10901 }
10902 \def\hyper@anchorend{%
10903 \Hy@activeanchorfalse
10904 \Hy@RestoreLastskip
10905 }
10906 \def\@urltype{url}
10907 \def\Hy@undefinedname{UNDEFINED}
10908 \def\hyper@linkstart#1#2{%
10909 \Hy@VerboseLinkStart{#1}{#2}%
10910 \Hy@pstringdef\Hy@pstringURI{#2}%
10911 \expandafter\Hy@colorlink\csname @#1color\endcsname
10912 \ltx@ifundefined{#1bordercolor}{%
10913 \let\CurrentBorderColor\relax
10914 }{%
10915 \edef\CurrentBorderColor{%
10916 \csname @#1bordercolor\endcsname
10917 }%
10918 }%
10919 \def\Hy@tempa{#1}%
10920 \ifx\Hy@tempa\@urltype
10921 \special{!%
10922 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10923 \ifHy@href@ismap
10924 /IsMap true%
10925 \fi
10926 \Hy@href@nextactionraw
10927 >,%
10928 a=<%
10929 \ifHy@pdfa /F 4\fi
10930 \Hy@setpdfborder
10931 \ifx\CurrentBorderColor\relax
10932 \else
10933 /C [\CurrentBorderColor]%
10934 \fi
10935 >%
10936 }%
10937 \else

```

```

10938 \protected@edef\Hy@testname{#2}%
10939 \ifx\Hy@testname\@empty
10940 \Hy@Warning{%
10941   Empty destination name,\MessageBreak
10942   using '\Hy@undefinedname'%
10943 }%
10944 \let\Hy@testname\Hy@undefinedname
10945 \fi
10946 \special{!%
10947   aref \expandafter\HyperDestNameFilter
10948   \expandafter{\Hy@testname};%
10949   a=<%
10950   \ifHy@pdfa /F 4\fi
10951   \Hy@setpdfborder
10952   \ifx\CurrentBorderColor\relax
10953   \else
10954     /C [\CurrentBorderColor]%
10955   \fi
10956   >%
10957 }%
10958 \fi
10959 }
10960 \def\hyper@linkend{%
10961 \special{!endaref}%
10962 \Hy@endcolorlink
10963 }
10964 \def\hyper@linkfile#1#2#3{%
10965 \leavevmode
10966 \def\Hy@pstringF{#2}%
10967 \Hy@CleanupFile\Hy@pstringF
10968 \special{!%
10969   aref <%
10970   \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10971   f=\Hy@pstringF>#3;%
10972   a=<%
10973   \ifHy@pdfa /F 4\fi
10974   \Hy@setpdfborder
10975   \ifx\@filebordercolor\relax
10976   \else
10977     /C [\@filebordercolor]%
10978   \fi
10979   >%
10980 }%
10981 \Hy@colorlink\@filecolor
10982 #1\Hy@xspace@end
10983 \Hy@endcolorlink
10984 \special{!endaref}%
10985 }
10986 \def\hyper@linkurl#1#2{%
10987 \begingroup
10988 \Hy@pstringdef\Hy@pstringURI{#2}%
10989 \hyper@chars
10990 \leavevmode
10991 \special{!%
10992   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10993   \ifHy@href@ismap
10994   /IsMap true%

```



```

10995     \fi
10996     \Hy@href@nextactionraw
10997     >,%
10998     a=<%
10999     \ifHy@pdfa /F 4\fi
11000     \Hy@setpdfborder
11001     \ifx\@urlbordercolor\relax
11002     \else
11003     /C [\@urlbordercolor]%
11004     \fi
11005     >%
11006     }%
11007     \Hy@colorlink\@urlcolor
11008     #1\Hy@xspace@end
11009     \Hy@endcolorlink
11010     \special{!endaref}%
11011 \endgroup
11012 }
11013 \def\hyper@link#1#2#3{%
11014 \Hy@VerboseLinkStart{#1}{#2}%
11015 \ltx@ifundefined{#1bordercolor}{%
11016 \let\CurrentBorderColor\relax
11017 }{%
11018 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11019 }%
11020 \leavevmode
11021 \protected@edef\Hy@testname{#2}%
11022 \ifx\Hy@testname\@empty
11023 \Hy@Warning{%
11024 Empty destination name,\MessageBreak
11025 using '\Hy@undefinedname'%
11026 }%
11027 \let\Hy@testname\Hy@undefinedname
11028 \fi
11029 \special{!%
11030 aref \expandafter\HyperDestNameFilter
11031 \expandafter{\Hy@testname};%
11032 a=<%
11033 \ifHy@pdfa /F 4\fi
11034 \Hy@setpdfborder
11035 \ifx\CurrentBorderColor\relax
11036 \else
11037 /C [\CurrentBorderColor]%
11038 \fi
11039 >%
11040 }%
11041 \expandafter
11042 \Hy@colorlink\csname @#1color\endcsname
11043 #3\Hy@xspace@end
11044 \Hy@endcolorlink
11045 \special{!endaref}%
11046 }
11047 \def\hyper@image#1#2{%
11048 \hyper@linkurl{#2}{#1}%
11049 }
11050 \def\@hyper@launch run:#1\\#2#3{%
11051 \Hy@pstringdef\Hy@pstringF{#1}%

```

```

11052 \Hy@pstringdef\Hy@pstringP{#3}%
11053 \leavevmode
11054 \special{!aref %
11055   <u=%
11056     /Type/Action%
11057     /S/Launch%
11058     /F(\Hy@pstringF)%
11059     \Hy@SetNewWindow
11060     \ifx\#3\%
11061     \else
11062       /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11063     \fi
11064     \Hy@href@nextactionraw
11065   >,%
11066   a=<%
11067     \ifHy@pdfa /F 4\fi
11068     \Hy@setpdfborder
11069     \ifx\@runbordercolor\relax
11070     \else
11071       /C[\@runbordercolor]%
11072     \fi
11073   >%
11074 }%
11075 \Hy@colorlink\@runcolor
11076 #2\Hy@xspace@end
11077 \Hy@endcolorlink
11078 \special{!endaref}%
11079 }
11080 \def\Acrobatmenu#1#2{%
11081   \EdefEscapeName\Hy@temp@menu{#1}%
11082   \Hy@Acrobatmenu{#1}{#2}{%
11083     \special{!%
11084       aref <u=/S /Named /N /\Hy@temp@menu>,%
11085       a=<%
11086         \ifHy@pdfa /F 4\fi
11087         \Hy@setpdfborder
11088         \ifx\@menubordercolor\relax
11089         \else
11090           /C[\@menubordercolor]%
11091         \fi
11092       >%
11093     }%
11094     \Hy@colorlink\@menucolor
11095     #2\Hy@xspace@end
11096     \Hy@endcolorlink
11097     \special{!endaref}%
11098   }%
11099 }

```

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

The code below makes sense for VTeX 7.02 or later.

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

```

11100 \ifnum\Hy@VTeXversion<702 %
11101 \else
11102   \def\hyper@pagetransition{%
11103     \ifx\@pdfpagetransition\relax
11104     \else
11105       \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```
11106 \else
11107 \hvtex@parse@trans\@pdfpagetransition
11108 \fi
11109 \fi
11110 }%
```

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

Syntax of V_TE_X \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:

```
11111 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11112 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11113 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11114 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11115 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11116 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11117 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
11118 \def\hvtex@par@dimension{/Dm}%
11119 \def\hvtex@par@direction{/Di}%
11120 \def\hvtex@par@duration{/D}%
11121 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11122 \def\hvtex@gettoken{%
11123 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11124 }%
```

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

```
11125 \def\hvtex@gettoken@#1 #2\@nil{%
11126 \edef\hvtex@token{#1}%
11127 \edef\hvtex@buffer{#2}%
11128 }%
11129 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11130 \let\hvtex@trans@code\@empty
11131 \let\hvtex@param@dimension\@empty
11132 \let\hvtex@param@direction\@empty
```

```

11133 \let\hvtex@param@duration\@empty
11134 \let\hvtex@param@motion\@empty
11135 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11136 \hvtex@gettoken
11137 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11138 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11139 \else
11140 \hvtex@gettoken
11141 \fi
11142 \fi
11143 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11144 \hvtex@trans@params
11145 }%

```

Reentrant macro to parse optional parameters.

```

11146 \def\hvtex@trans@params{%
11147 \ifx\hvtex@buffer\@empty
11148 \else
11149 \hvtex@gettoken
11150 \let\hvtex@trans@par\hvtex@token
11151 \ifx\hvtex@buffer\@empty
11152 \else
11153 \hvtex@gettoken
11154 \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

11155 \let\hvtex@param@duration\hvtex@token
11156 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

11157 \expandafter\edef\expandafter\hvtex@param@motion
11158 \expandafter{\expandafter\@gobble\hvtex@token}%
11159 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

11160 \expandafter\edef\expandafter\hvtex@param@dimension
11161 \expandafter{\expandafter\@gobble\hvtex@token}%
11162 \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).

```

11163 \let\hvtex@param@direction\hvtex@token
11164 \fi\fi\fi\fi
11165 \fi
11166 \fi
11167 \ifx\hvtex@buffer\@empty
11168 \let\next\hvtex@produce@trans
11169 \else
11170 \let\next\hvtex@trans@params
11171 \fi
11172 \next
11173 }%

```

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

```

11174 \def\hvtex@produce@trans{%
11175 \let\vtex@trans@special\@empty
11176 \if S\hvtex@trans@code
11177 \edef\vtex@trans@special{\hvtex@trans@code
11178 \hvtex@param@dimension\hvtex@param@motion}%
11179 \else\if B\hvtex@trans@code
11180 \edef\vtex@trans@special{%
11181 \hvtex@trans@code\hvtex@param@dimension
11182 }%
11183 \else\if X\hvtex@trans@code
11184 \edef\vtex@trans@special{%
11185 \hvtex@trans@code\hvtex@param@motion
11186 }%
11187 \else\if W\hvtex@trans@code
11188 \edef\vtex@trans@special{%
11189 \hvtex@trans@code\hvtex@param@direction
11190 }%
11191 \else\if D\hvtex@trans@code
11192 \let\vtex@trans@special\hvtex@trans@code
11193 \else\if R\hvtex@trans@code
11194 \let\vtex@trans@special\hvtex@trans@code
11195 \else\if G\hvtex@trans@code
11196 \edef\vtex@trans@special{%
11197 \hvtex@trans@code\hvtex@param@direction
11198 }%
11199 \fi\fi\fi\fi\fi\fi
11200 \ifx\vtex@trans@special\@empty
11201 \else
11202 \ifx\hvtex@param@duration\@empty
11203 \else
11204 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11205 \multiply\dimen@\@m
11206 \edef\vtex@trans@special{%
11207 \vtex@trans@special,\strip@pt\dimen@
11208 }%
11209 \fi

```

And all the mess is just for this.

```

11210 \special{!trans \vtex@trans@special}%
11211 \fi
11212 }%

11213 \def\hyper@pageduration{%
11214 \ifx\@pdfpageduration\relax
11215 \else
11216 \ifx\@pdfpageduration\@empty
11217 \special{!duration-}%
11218 \else
11219 \special{!duration \@pdfpageduration}%
11220 \fi
11221 \fi
11222 }%
11223 \def\hyper@pagehidden{%
11224 \ifHy@useHidKey

```

```

11225     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11226   \fi
11227 }%
11228 \g@addto@macro\Hy@EveryPageBoxHook{%
11229   \hyper@pagetransition
11230   \hyper@pageduration
11231   \hyper@pagehidden
11232 }%
11233 \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

```

11234 \ifx\@pdfproducer\relax
11235   \def\@pdfproducer{VTeX}%
11236   \ifnum\Hy@VTeXversion>\z@
11237     \count@\VTeXversion
11238     \divide\count@ 100 %
11239     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11240     \multiply\count@ -100 %
11241     \advance\count@\VTeXversion
11242     \edef\@pdfproducer{%
11243       \@pdfproducer
11244       .\ifnum\count@<10 0\fi\the\count@
11245       \ifx\VTeXOS\@undefined\else
11246         \ifnum\VTeXOS>0 %
11247           \ifnum\VTeXOS<6 %
11248             \space(
11249             \ifcase\VTeXOS
11250             \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11251             \fi
11252             )%
11253           \fi
11254         \fi
11255       \fi
11256       ,\space
11257       \ifnum\OpMode=\@ne PDF\else PS\fi
11258       \space backend%
11259       \ifx\gexmode\@undefined\else
11260         \ifnum\gexmode>\z@\space with GeX\fi
11261       \fi
11262     }%
11263   \fi
11264 \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).

```

11265 \def\PDF@SetupDoc{%
11266   \ifx\@pdfpagescrop\@empty
11267   \else
11268     \special{!pdfinfo b=<\@pdfpagescrop>}%
11269   \fi
11270   \ifx\@pdfstartpage\@empty
11271   \else
11272     \ifx\@pdfstartview\@empty
11273     \else
11274       \special{!onopen Page\@pdfstartpage}%
11275     \fi
11276   \fi
11277   \special{!pdfinfo p=</\@pdfpagemode>}%
11278   \ifx\@baseurl\@empty
11279   \else
11280     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11281   \fi
11282   \special{!pdfinfo v=<<<%
11283     \ifHy@pdftoolbar\else /HideToolbar true\fi
11284     \ifHy@pdfmenubar\else /HideMenubar true\fi
11285     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11286     \ifHy@pdffitwindow /FitWindow true\fi
11287     \ifHy@pdfcenterwindow /CenterWindow true\fi
11288     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11289     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11290     \Hy@UseNameKey{Direction}\@pdfdirection
11291     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11292     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11293     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11294     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11295     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11296     \Hy@UseNameKey{Duplex}\@pdfduplex
11297     \ifx\@pdfpicktraybypdfsize\@empty
11298     \else
11299       /PickTrayByPDFSize \@pdfpicktraybypdfsize
11300     \fi
11301     \ifx\@pdfprintpagerange\@empty
11302     \else
11303       /PrintPageRange[\@pdfprintpagerange]%
11304     \fi
11305     \ifx\@pdfnumcopies\@empty
11306     \else
11307       /NumCopies \@pdfnumcopies

```

```

11308   \fi
11309   >>>}%
11310   \ifx\@pdfpagelayout\@empty
11311   \else
11312     \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11313   \fi
11314 }%
11315 \HyInfo@AddonUnsupportedtrue
11316 \define@key{Hyp}{pdfcreationdate}{%
11317   \Hy@Warning{%
11318     VTeX does not support pdfcreationdate.\MessageBreak
11319     Therefore its setting is ignored%
11320   }%
11321 }
11322 \define@key{Hyp}{pdfmoddate}{%
11323   \Hy@Warning{%
11324     VTeX does not support pdfmoddate.\MessageBreak
11325     Therefore its setting is ignored%
11326   }%
11327 }
11328 \def\PDF@FinishDoc{%
11329   \Hy@UseMaketitleInfos
11330   \HyInfo@TrappedUnsupported
11331   \special{!pdfinfo a=<\@pdfauthor>}%
11332   \special{!pdfinfo t=<\@pdftitle>}%
11333   \special{!pdfinfo s=<\@pdfsubject>}%
11334   \special{!pdfinfo c=<\@pdfcreator>}%
11335   \ifx\@pdfproducer\relax
11336   \else
11337     \special{!pdfinfo r=<\@pdfproducer>}%
11338   \fi
11339   \special{!pdfinfo k=<\@pdfkeywords>}%
11340   \Hy@DisableOption{pdfauthor}%
11341   \Hy@DisableOption{pdftitle}%
11342   \Hy@DisableOption{pdfsubject}%
11343   \Hy@DisableOption{pdfcreator}%
11344   \Hy@DisableOption{pdfcreationdate}%
11345   \Hy@DisableOption{pdfmoddate}%
11346   \Hy@DisableOption{pdfproducer}%
11347   \Hy@DisableOption{pdfkeywords}%
11348   \Hy@DisableOption{pdftrapped}%
11349   \Hy@DisableOption{pdfinfo}%
11350 }
11351 </vtx>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.


```

11352 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11353 <package>\providecommand*{\Hy@DistillerDestFix}{%
11354 <*pdfmark | dviwindo>
11355 \def\Hy@DistillerDestFix{%
11356 \begingroup
11357 \let\x\literalps@out

```

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

```

11358 \ifnum \@ifundefined{OpMode}{0}{%
11359 \ifundefined{gexmode}{0}{%
11360 \ifnum\gexmode>0 \OpMode\else 0\fi
11361 }>1 %
11362 \def\x##1{%
11363 \immediate\special{!=##1}%
11364 }%
11365 \fi
11366 \x{%
11367 /product where{%
11368 pop %
11369 product(Distiller)search{%
11370 pop pop pop %
11371 version(.)search{%
11372 exch pop exch pop%
11373 (3011)eq{%
11374 gsave %
11375 newpath 0 0 moveto closepath clip%
11376 /Courier findfont 10 scalefont setfont %
11377 72 72 moveto(.)show %
11378 grestore%
11379 }if%
11380 }{pop}ifelse%
11381 }{pop}ifelse%
11382 }if%
11383 }%
11384 \endgroup
11385 }
11386 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

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

```

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

```

and the correct definitions of the following PostScript procedures:

```

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

```

```

11387 <*pdfmark>
11388 \Hy@breaklinks@unsupported
11389 \def\HyPat@ObjRef{%

```

```

11390 \[{}+}%
11391 }
11392 \Hy@WrapperDef\hyper@anchor#1{%
11393 \Hy@SaveLastskip
11394 \Hy@VerboseAnchor{#1}%
11395 \begingroup
11396 \pdfmark[\anchor@spot]{%
11397 pdfmark=/DEST,%
11398 linktype=anchor,%
11399 View=/\@pdfview \@pdfviewparams,%
11400 DestAnchor={#1}%
11401 }%
11402 \endgroup
11403 \Hy@RestoreLastskip
11404 }
11405 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11406 \Hy@WrapperDef\hyper@anchorstart#1{%
11407 \Hy@SaveLastskip
11408 \Hy@VerboseAnchor{#1}%
11409 \literalps@out{H.S}%
11410 \Hy@AllowHyphens
11411 \xdef\hyper@currentanchor{#1}%
11412 \Hy@activeanchortrue
11413 }
11414 \def\hyper@anchorend{%
11415 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11416 \pdfmark{%
11417 pdfmark=/DEST,%
11418 linktype=anchor,%
11419 View=/\@pdfview \@pdfviewparams,%
11420 DestAnchor=\hyper@currentanchor,%
11421 }%
11422 \Hy@activeanchorfalse
11423 \Hy@RestoreLastskip
11424 }
11425 \def\hyper@linkstart#1#2{%
11426 \Hy@VerboseLinkStart{#1}{#2}%
11427 \ifHy@breaklinks
11428 \else
11429 \leavevmode
11430 \ifmmode
11431 \def\Hy@LinkMath{$}%
11432 \else
11433 \let\Hy@LinkMath\ltx@empty
11434 \fi
11435 \Hy@SaveSpaceFactor
11436 \hbox\bgroup
11437 \Hy@RestoreSpaceFactor
11438 \Hy@LinkMath
11439 \fi
11440 \expandafter\Hy@colorlink\csname @#1color\endcsname
11441 \literalps@out{H.S}%
11442 \Hy@AllowHyphens
11443 \xdef\hyper@currentanchor{#2}%
11444 \gdef\hyper@currentlinktype{#1}%
11445 }
11446 \def\hyper@linkend{%

```

```

11447 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L.}%
11448 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11449   \let\Hy@tempcolor\relax
11450 }{%
11451   \edef\Hy@tempcolor{%
11452     \csname @\hyper@currentlinktype bordercolor\endcsname
11453   }%
11454 }%
11455 \pdfmark{%
11456   pdfmark=/ANN,%
11457   linktype=link,%
11458   Subtype=/Link,%
11459   PDFAFlags=4,%
11460   Dest=\hyper@currentanchor,%
11461   AcroHighlight=\@pdfhighlight,%
11462   Border=\@pdfborder,%
11463   BorderStyle=\@pdfborderstyle,%
11464   Color=\Hy@tempcolor,%
11465   Raw=H.B%
11466 }%
11467 \Hy@endcolorlink
11468 \ifHy@breaklinks
11469 \else
11470   \Hy@LinkMath
11471   \Hy@SaveSpaceFactor
11472   \egroup
11473   \Hy@RestoreSpaceFactor
11474 \fi
11475 }

```

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.

```

11476 \begingroup
11477 \catcode'P=12 %
11478 \catcode'T=12 %
11479 \lowercase{\endgroup
11480 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11481 }
11482 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11483 \def\hyper@pagetransition{%
11484   \ifx\@pdfpagetransition\relax
11485   \else
11486     \ifx\@pdfpagetransition\@empty
11487       % 1. Does an old entry have to be deleted?
11488       % 2. If 1=yes, how to delete?
11489     \else
11490       \pdfmark{%
11491         pdfmark=/PUT,%
11492         Raw={%
11493           \string{ThisPage\string}%
11494           <</Trans << /S /\@pdfpagetransition\space >> >>%
11495         }%
11496       }%
11497     \fi

```

```

11498 \fi
11499 }

```

\hyper@pageduration

```

11500 \def\hyper@pageduration{%
11501   \ifx\@pdfpageduration\relax
11502   \else
11503     \ifx\@pdfpageduration\@empty
11504       % 1. Does an old entry have to be deleted?
11505       % 2. If 1=yes, how to delete?
11506     \else
11507       \pdfmark{%
11508         pdfmark=/PUT,%
11509         Raw={%
11510           \string{ThisPage\string}%
11511           <</Dur \@pdfpageduration>>%
11512         }%
11513       }%
11514     \fi
11515   \fi
11516 }

```

\hyper@pagehidden

```

11517 \def\hyper@pagehidden{%
11518   \ifHy@useHidKey
11519   \pdfmark{%
11520     pdfmark=/PUT,%
11521     Raw={%
11522       \string{ThisPage\string}%
11523       <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11524     }%
11525   }%
11526   \fi
11527 }

11528 \g@addto@macro\Hy@EveryPageBoxHook{%
11529   \hyper@pagetransition
11530   \hyper@pageduration
11531   \hyper@pagehidden
11532 }

11533 \def\hyper@image#1#2{%
11534   \hyper@linkurl{#2}{#1}%
11535 }

11536 \def\Hy@undefinedname{UNDEFINED}
11537 \def\hyper@link#1#2#3{%
11538   \Hy@VerboseLinkStart{#1}{#2}%
11539   \ltx@ifundefined{@#1bordercolor}{%
11540     \let\Hy@tempcolor\relax
11541   }{%
11542     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11543   }%
11544   \begingroup
11545     \protected@edef\Hy@testname{#2}%
11546     \ifx\Hy@testname\@empty
11547       \Hy@Warning{%
11548         Empty destination name,\MessageBreak
11549         using '\Hy@undefinedname'%

```

```

11550 }%
11551 \let\Hy@testname\Hy@undefinedname
11552 \fi
11553 \pdfmark[#{3}]{%
11554   Color=\Hy@tempcolor,%
11555   linktype={#1},%
11556   AcroHighlight=\@pdfhighlight,%
11557   Border=\@pdfborder,%
11558   BorderStyle=\@pdfborderstyle,%
11559   pdfmark=/ANN,%
11560   Subtype=/Link,%
11561   PDFAFlags=4,%
11562   Dest=\Hy@testname
11563 }%
11564 \endgroup
11565 }
11566 \newtoks\pdf@docset
11567 \def\PDF@FinishDoc{%
11568   \Hy@UseMaketitleInfos
11569   \HyInfo@GenerateAddons
11570   \let\Hy@temp\@empty
11571   \ifx\@pdfcreationdate\@empty
11572   \else
11573     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11574   \fi
11575   \ifx\@pdfmoddate\@empty
11576   \else
11577     \expandafter\def\expandafter\Hy@temp\expandafter{%
11578       \Hy@temp
11579       ModDate=\@pdfmoddate,%
11580     }%
11581   \fi
11582   \ifx\@pdfproducer\relax
11583   \else
11584     \expandafter\def\expandafter\Hy@temp\expandafter{%
11585       \Hy@temp
11586       Producer=\@pdfproducer,%
11587     }%
11588   \fi
11589   \expandafter
11590   \pdfmark\expandafter{%
11591     \Hy@temp
11592     pdfmark=/DOCINFO,%
11593     Title=\@pdftitle,%
11594     Subject=\@pdfsubject,%
11595     Creator=\@pdfcreator,%
11596     Author=\@pdfauthor,%
11597     Keywords=\@pdfkeywords,%
11598     Trapped=\@pdftrapped
11599 }%
11600 \ifx\HyInfo@Addons\@empty
11601 \else
11602   \pdfmark{%
11603     pdfmark=/DOCINFO,%
11604     Raw={\HyInfo@Addons}%
11605   }%
11606 \fi

```

```

11607 \Hy@DisableOption{pdfauthor}%
11608 \Hy@DisableOption{pdftitle}%
11609 \Hy@DisableOption{pdfsubject}%
11610 \Hy@DisableOption{pdfcreator}%
11611 \Hy@DisableOption{pdfcreationdate}%
11612 \Hy@DisableOption{pdfmoddate}%
11613 \Hy@DisableOption{pdfproducer}%
11614 \Hy@DisableOption{pdfkeywords}%
11615 \Hy@DisableOption{pdftrapped}%
11616 \Hy@DisableOption{pdfinfo}%
11617 }
11618 \def\PDF@SetupDoc{%
11619 \def\Hy@temp{}%
11620 \ifx\@pdfstartpage\@empty
11621 \else
11622 \ifx\@pdfstartview\@empty
11623 \else
11624 \edef\Hy@temp{%
11625 ,Page=\@pdfstartpage
11626 ,View=\@pdfstartview
11627 }%
11628 \fi
11629 \fi
11630 \edef\Hy@temp{%
11631 \noexpand\pdfmark{%
11632 pdfmark=/DOCVIEW,%
11633 PageMode=/\@pdfpagemode
11634 \Hy@temp
11635 }%
11636 }%
11637 \Hy@temp
11638 \ifx\@pdfpagescrop\@empty
11639 \else
11640 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11641 \fi
11642 \edef\Hy@temp{%
11643 \ifHy@pdftoolbar\else /HideToolbar true\fi
11644 \ifHy@pdfmenubar\else /HideMenubar true\fi
11645 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11646 \ifHy@pdffitwindow /FitWindow true\fi
11647 \ifHy@pdfcenterwindow /CenterWindow true\fi
11648 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11649 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11650 \Hy@UseNameKey{Direction}\@pdfdirection
11651 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11652 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11653 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11654 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11655 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11656 \Hy@UseNameKey{Duplex}\@pdfduplex
11657 \ifx\@pdfpicktraybypdfsize\@empty
11658 \else
11659 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11660 \fi
11661 \ifx\@pdfprintpagerange\@empty
11662 \else
11663 /PrintPageRange[\@pdfprintpagerange]%

```

```

11664 \fi
11665 \ifx\@pdfnumcopies\@empty
11666 \else
11667 /NumCopies \@pdfnumcopies
11668 \fi
11669 }%
11670 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11671 \pdfmark{%
11672 pdfmark=/PUT,%
11673 Raw={%
11674 \string{Catalog\string}<<%
11675 \ifx\Hy@temp\@empty
11676 \else
11677 /ViewerPreferences<<\Hy@temp>>%
11678 \fi
11679 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11680 \ifx\@pdflang\@empty
11681 \else
11682 /Lang(\@pdflang)%
11683 \fi
11684 \ifx\@baseurl\@empty
11685 \else
11686 /URI<</Base(\Hy@pstringB)>>%
11687 \fi
11688 >>%
11689 }%
11690 }%
11691 }
11692 \pdfmark
11693 \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.

```

11694 \newif\ifHy@pdfmarkerror
11695 \def\pdfmark{\@ifnextchar[\pdfmark@]{\pdfmark@[]}}
11696 \def\pdfmark@[#1]#2{%
11697 \Hy@pdfmarkerrorfalse
11698 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11699 \@processme
11700 \let\pdf@type\relax
11701 \kvsetkeys{PDF}{#2}%
11702 \ifHy@pdfmarkerror
11703 \else
11704 \ifx\pdf@type\relax
11705 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11706 \ifx\\#1\\%
11707 \else
11708 \pdf@rect{#1}%
11709 \fi
11710 \else
11711 \ifx\\#1\\%
11712 \literalps@out{%
11713 [\the\pdf@toks\space\pdf@type\space pdfmark%

```

```

11714     }%
11715   \else
11716     \ltx@ifundefined{@\pdf@linktype color}{%
11717       \Hy@colorlink\@linkcolor
11718     }{%
11719       \expandafter\Hy@colorlink
11720         \csname @\pdf@linktype color\endcsname
11721     }%
11722     \pdf@rect{#1}%
11723     \literalps@out{%
11724       [\the\pdf@toks\space\pdf@type\space pdfmark%
11725     }%
11726     \Hy@endcolorlink
11727   \fi
11728 \fi
11729 \fi
11730 }

```

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}

```

```

11731 \newsavebox{\pdf@box}
11732 \providecommand*{\Hy@setouterhbox}{\sbox}
11733 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11734 \def\Hy@DEST{/DEST}
11735 \def\pdf@rect#1{%
11736   \begingroup
11737   \chardef\x=1 %
11738   \def\Hy@temp{#1}%
11739   \ifx\Hy@temp\ltx@empty
11740     \chardef\x=0 %
11741   \else
11742     \def\y{\anchor@spot}%
11743     \ifx\Hy@temp\y
11744       \def\y{\relax}%
11745     \ifx\anchor@spot\y
11746       \chardef\x=0 %
11747     \fi
11748   \fi
11749 \fi
11750 \expandafter\endgroup
11751 \ifcase\x
11752   \literalps@out{H.S}%
11753   \literalps@out{H.R}%
11754 \else
11755   \leavevmode
11756   \Hy@SaveSpaceFactor
11757   \ifmmode

```



```

11758 \def\Hy@LinkMath{$}%
11759 \else
11760 \let\Hy@LinkMath\ltx@empty
11761 \fi
11762 \ifHy@breaklinks
11763 \Hy@setouterhbox\pdf@box{%
11764 \Hy@RestoreSpaceFactor
11765 \Hy@LinkMath
11766 \Hy@AllowHyphens#1\Hy@xspace@end
11767 \Hy@LinkMath
11768 \Hy@SaveSpaceFactor
11769 }%
11770 \else
11771 \sbox\pdf@box{%
11772 \Hy@RestoreSpaceFactor
11773 \Hy@LinkMath
11774 #1\Hy@xspace@end
11775 \Hy@LinkMath
11776 \Hy@SaveSpaceFactor
11777 }%
11778 \fi
11779 \dimen@ \ht \pdf@box
11780 \ifdim \dp \pdf@box = \z@
11781 \literalps@out{H.S}%
11782 \else
11783 \lower \dp \pdf@box \hbox{\literalps@out{H.S}}%
11784 \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...).

```

11785 \ifHy@breaklinks
11786 \ifhmode
11787 \Hy@breaklinksunhbox\pdf@box
11788 \else
11789 \box\pdf@box
11790 \fi
11791 \else
11792 \expandafter\box\pdf@box
11793 \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

11794 \ifdim \dimen@ = \z@
11795 \literalps@out{H.R}%
11796 \else
11797 \raise \dimen@ \hbox{\literalps@out{H.R}}%
11798 \fi
11799 \Hy@RestoreSpaceFactor
11800 \fi
11801 \ifx \pdf@type \Hy@DEST
11802 \else
11803 \pdf@addtoksx{H.B}%
11804 \fi
11805 }

```

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.

```

11806 \newtoks\pdf@toks
11807 \newtoks\pdf@defaulttoks
11808 \pdf@defaulttoks={} %
11809 \def\pdf@addtoks#1#2{%
11810   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}} %
11811   \@processme
11812 }
11813 \def\pdf@addtoksx#1{%
11814   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}} %
11815   \@processme
11816 }
11817 \def\PDFdefaults#1{%
11818   \pdf@defaulttoks={#1} %
11819 }

```

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

```

11820 % what is the type of pdfmark?
11821 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11822 % what is the link type?
11823 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11824 \def\pdf@linktype{link}
11825 % parameter is a stream of PDF
11826 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11827 % parameter is a name
11828 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11829 % parameter is a array
11830 \define@key{PDF}{Border}{%
11831   \edef\Hy@temp{#1}%
11832   \ifx\Hy@temp\@empty
11833   \else
11834     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11835   \fi
11836 }
11837 \let\Hy@BorderArrayPatch\@empty
11838 % parameter is a dictionary
11839 \define@key{PDF}{BorderStyle}{%
11840   \edef\Hy@temp{#1}%
11841   \ifx\Hy@temp\@empty
11842   \else
11843     \pdf@addtoks{<<#1>>}{BS}%
11844   \fi
11845 }
11846 % parameter is a array
11847 \define@key{PDF}{Color}{%
11848   \ifx\relax#1\relax
11849   \else
11850     \pdf@addtoks{[#1]}{Color}% hash-ok
11851   \fi
11852 }
11853 % parameter is a string
11854 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11855 % parameter is a integer
11856 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11857 % parameter is a array
11858 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok

```

```

11859 % parameter is a string
11860 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11861 % parameter is a string or file
11862 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11863 % parameter is a destination
11864 \define@key{PDF}{Dest}{%
11865   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11866   \ifx\Hy@pstringDest\@empty
11867     \Hy@pdfmarkerrortrue
11868     \Hy@Warning{Destination with empty name ignored}%
11869   \else
11870     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11871   \fi
11872 }
11873 \define@key{PDF}{DestAnchor}{%
11874   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11875   \ifx\Hy@pstringDest\@empty
11876     \Hy@pdfmarkerrortrue
11877     \Hy@Warning{Destination with empty name ignored}%
11878   \else
11879     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11880   \fi
11881 }
11882 % parameter is a string
11883 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11884 % parameter is a string
11885 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11886 % parameter is a int
11887 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11888 \define@key{PDF}{PDFAFlags}{%
11889   \ifHy@pdfa
11890     \pdf@addtoks{#1}{F}%
11891   \fi
11892 }
11893 % parameter is a name
11894 \define@key{PDF}{AcroHighlight}{%
11895   \begingroup
11896     \edef\x{#1}%
11897     \expandafter\endgroup\ifx\x\@empty
11898     \else
11899       \pdf@addtoks{#1}{H}%
11900     \fi
11901 }
11902 % parameter is a string
11903 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11904 % parameter is a string
11905 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11906 % parameter is a string
11907 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11908 % parameter is a string
11909 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11910 % parameter is a Boolean
11911 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11912 % parameter is a integer or name
11913 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11914 % parameter is a name
11915 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}

```

```

11916 % parameter is a string
11917 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11918 % parameter is a array
11919 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11920 % parameter is a integer
11921 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11922 % parameter is a name
11923 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11924 % parameter is a string
11925 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11926 % parameter is a string
11927 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11928 % parameter is a string
11929 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11930 % parameter is an array
11931 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11932 % parameter is a string
11933 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11934 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11935 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11936 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11937 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11938 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11939 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11940 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11941 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11942 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11943 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11944 \define@key{PDF}{Trapped}{%
11945   \edef\Hy@temp{#1}%
11946   \ifx\Hy@temp\@empty
11947     \else
11948       \pdf@addtoks{/#1}{Trapped}%
11949     \fi
11950 }
11951
11952 </pdfmarkbase>
11953 <*pdfmark>
11954 \def\Acrobatmenu#1#2{%
11955   \EdefEscapeName\Hy@temp@menu{#1}%
11956   \Hy@Acrobatmenu{#1}{#2}{%
11957     \pdfmark[{#2}]{%
11958       linktype=menu,%
11959       pdfmark=/ANN,%
11960       AcroHighlight=\@pdfhighlight,%
11961       Border=\@pdfborder,%
11962       BorderStyle=\@pdfborderstyle,%
11963       Color=\@menubordercolor,%
11964       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11965       Subtype=/Link,%
11966       PDFAFlags=4%
11967     }%
11968   }%
11969 }

```

And now for some useful examples:

```

11970 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
11971 \def\PDFNextPage@[#1]#2{%
11972   \pdfmark[{#2}]{%
11973     #1,%
11974     Border=\@pdfborder,%
11975     BorderStyle=\@pdfborderstyle,%
11976     Color=.2 .1 .5,%
11977     pdfmark=/ANN,%
11978     Subtype=/Link,%
11979     PDFAFlags=4,%
11980     Page=/Next%
11981   }%
11982 }
11983 \def\PDFPreviousPage{%
11984   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11985 }
11986 \def\PDFPreviousPage@[#1]#2{%
11987   \pdfmark[{#2}]{%
11988     #1,%
11989     Border=\@pdfborder,%
11990     BorderStyle=\@pdfborderstyle,%
11991     Color=.4 .4 .1,%
11992     pdfmark=/ANN,%
11993     Subtype=/Link,%
11994     PDFAFlags=4,%
11995     Page=/Prev%
11996   }%
11997 }
11998 \def\PDFOpen#1{%
11999   \pdfmark{#1,pdfmark=/DOCVIEW}%
12000 }

```

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

```

12001 \def\hyper@linkurl#1#2{%
12002   \begingroup
12003     \Hy@pstringdef\Hy@pstringURI{#2}%
12004     \hyper@chars
12005     \leavevmode
12006     \pdfmark[{#1}]{%
12007       pdfmark=/ANN,%
12008       linktype=url,%
12009       AcroHighlight=\@pdfhighlight,%
12010       Border=\@pdfborder,%
12011       BorderStyle=\@pdfborderstyle,%
12012       Color=\@urlbordercolor,%
12013       Action={<<%
12014         /Subtype/URI%
12015         /URI(\Hy@pstringURI)%
12016         \ifHy@href@ismap
12017         /IsMap true%
12018       \fi
12019       >>},%
12020       Subtype=/Link,%
12021       PDFAFlags=4%
12022     }%
12023   \endgroup
12024 }
12025 \def\hyper@linkfile#1#2#3{%

```

```

12026 \begingroup
12027 \def\Hy@pstringF{#2}%
12028 \Hy@CleanupFile\Hy@pstringF
12029 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12030 \Hy@pstringdef\Hy@pstringD{#3}%
12031 \Hy@MakeRemoteAction
12032 \leavevmode
12033 \pdfmark[{#1}]{%
12034   pdfmark=/ANN,%
12035   Subtype=/Link,%
12036   PDFAFlags=4,%
12037   AcroHighlight=\@pdfhighlight,%
12038   Border=\@pdfborder,%
12039   BorderStyle=\@pdfborderstyle,%
12040   linktype=file,%
12041   Color=\@filebordercolor,%
12042   Action={%
12043     <<%
12044       /S/GoToR%
12045       \Hy@SetNewWindow
12046       /F(\Hy@pstringF)%
12047       /D%
12048       \ifx\#3\%
12049         [\Hy@href@page\@pdfremotestartview]%
12050       \else
12051         (\Hy@pstringD)cvn%
12052       \fi
12053       \Hy@href@nextactionraw
12054     >>%
12055   }%
12056 }%
12057 \endgroup
12058 }
12059 \def\@hyper@launch run:#1\#2#3{%
12060 \begingroup
12061 \Hy@pstringdef\Hy@pstringF{#1}%
12062 \Hy@pstringdef\Hy@pstringP{#3}%
12063 \leavevmode
12064 \pdfmark[{#2}]{%
12065   pdfmark=/ANN,%
12066   Subtype=/Link,%
12067   PDFAFlags=4,%
12068   AcroHighlight=\@pdfhighlight,%
12069   Border=\@pdfborder,%
12070   BorderStyle=\@pdfborderstyle,%
12071   linktype=run,%
12072   Color=\@runbordercolor,%
12073   Action={%
12074     <<%
12075       /S/Launch%
12076       \Hy@SetNewWindow
12077       /F(\Hy@pstringF)%
12078       \ifx\#3\%
12079       \else
12080         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12081       \fi
12082       \Hy@href@nextactionraw

```

```

12083     >>%
12084     }%
12085     }%
12086   \endgroup
12087 }
12088 \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.

```

12089 (*dvips)
12090 \providecommand*\XR@ext\pdf{
12091 \let\Hy@raisedlink\ltx@empty
12092 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
12093 \def\headerps@out#1{\special{! #1}}%
12094 \input{pdfmark.def}%
12095 \ifx\@pdfproducer\relax
12096   \def\@pdfproducer{dvips + Distiller}%
12097 \fi
12098 \providecommand*\@pdfborder{0 0 1}
12099 \providecommand*\@pdfborderstyle{}
12100 \providecommand*\@pdfview{XYZ}
12101 \providecommand*\@pdfviewparams{ H.V}
12102 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12103 \g@addto@macro\Hy@FirstPageHook{%
12104   \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.

```

12105   /DvipsToPDF{72.27 mul Resolution div} def%
12106   /PDFToDvips{72.27 div Resolution mul} def%
12107   /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.

```

12108   /BorderArrayPatch{%
12109     [exch{%
12110       dup dup type/integertype eq exch type/realtype eq or%
12111       {BPToDvips}if%

```

```

12112    }forall]%
12113    }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.

```

12114    /HyperBorder {1 PDFToDvips} def%
12115    /H.V {pdf@hoff pdf@voff null} def%
12116    /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

```

12117    /H.S {%
12118        currentpoint %
12119        HyperBorder add /pdf@lly exch def %
12120        dup DvipsToPDF 72 add /pdf@hoff exch def %
12121        HyperBorder sub /pdf@llx exch def%
12122    } 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

```

12123    /H.L {%
12124        2 sub dup%
12125        /HyperBasePt exch def %
12126        PDFToDvips /HyperBaseDvips exch def %
12127        currentpoint %
12128        HyperBaseDvips sub /pdf@ury exch def%
12129        /pdf@urx exch def%
12130    } def%
12131    /H.A {%
12132        H.L %
12133    % |pdf@voff| = the distance from the top of the page to a point
12134    % |\baselineskip| above the current point in PDF coordinates
12135        currentpoint exch pop %
12136        vsize 72 sub exch DvipsToPDF %
12137        HyperBasePt sub % baseline skip
12138        sub /pdf@voff exch def%
12139    } def%
12140    /H.R {%
12141        currentpoint %
12142        HyperBorder sub /pdf@ury exch def %
12143        HyperBorder add /pdf@urx exch def %
12144    % |pdf@voff| = the distance from the top of the page to the current point, in
12145    % PDF coordinates
12146        currentpoint exch pop vsize 72 sub %
12147        exch DvipsToPDF sub /pdf@voff exch def%
12148    } def%
12149    }%
12150 }
12151 \AtBeginShipoutFirst{%
12152     \ifHy@setpagesize
12153     \begingroup
12154     \@ifundefined{stockwidth}{%
12155         \ifdim\paperwidth>\z@

```



```

12156      \ifdim\paperheight>\z@
12157      \special{papersize=\the\paperwidth,\the\paperheight}%
12158      \fi
12159      \fi
12160    }{%
12161      \ifdim\stockwidth>\z@
12162      \ifdim\stockheight>\z@
12163      \special{papersize=\the\stockwidth,\the\stockheight}%
12164      \fi
12165      \fi
12166    }%
12167  \endgroup
12168 \fi
12169 \Hy@DisableOption{setpagesize}%
12170 }
12171 </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.

```

12172 (*vtexpdfmark)
12173 \providecommand*{\XR@ext}{pdf}
12174 \let\Hy@raisedlink\ltx@empty
12175 \def\litalps@out#1{\special{pS:#1}}%
12176 \def\headerps@out#1{\immediate\special{pS:#1}}%
12177 \input{pdfmark.def}%
12178 \ifx\@pdfproducer\relax
12179   \ifnum\OpMode=\@ne
12180     \def\@pdfproducer{VTeX}%
12181   \else
12182     \def\@pdfproducer{VTeX + Distiller}%
12183   \fi
12184 \fi
12185 \providecommand*\@pdfborder{0 0 1}
12186 \providecommand*\@pdfborderstyle{}
12187 \providecommand*\@pdfview{XYZ}
12188 \providecommand*\@pdfviewparams{ H.V}
12189 \g@addto@macro\Hy@FirstPageHook{%
12190   \headerps@out{%
12191     /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.

```

12192   /HyperBorder {1} def%
12193   /H.V {pdf@hoff pdf@voff null} def%
12194   /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: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

12195   /H.S {%
12196     currentpoint %
12197     HyperBorder sub%

```

```

12198    /pdf@lly exch def %
12199    dup 72 add /pdf@hoff exch def %
12200    HyperBorder sub%
12201    /pdf@llx exch def%
12202    } def%

```

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

```

12203    /H.L {%
12204        2 sub%
12205        /HyperBasePt exch def %
12206        currentpoint %
12207        HyperBasePt add HyperBorder add%
12208        /pdf@ury exch def %
12209        HyperBorder add%
12210        /pdf@urx exch def%
12211    } def%
12212    /H.A {%
12213        H.L %
12214        currentpoint exch pop %
12215        vsize 72 sub exch %
12216        HyperBasePt add add%
12217        /pdf@voff exch def%
12218    } def%

```

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

```

12219    /H.R {%
12220        currentpoint %
12221        HyperBorder add%
12222        /pdf@ury exch def %
12223        HyperBorder add%
12224        /pdf@urx exch def %
12225        currentpoint exch pop vsize 72 sub add%
12226        /pdf@voff exch def%
12227    } def%
12228    }%
12229 }
12230 </vtxpdfmark>

```

47.11 Textures

```

12231 <*textures>
12232 \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.

```

12233 \begingroup
12234 \obeylines %
12235 \gdef\Hy@ps@CR{\noexpand
12236 }%
12237 \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`.

```
12238 \def\literalps@out#1{%
12239   \special{postscript 0 0 transform}%
12240   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12241 }%
12242 %
```

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.

```
12243 \def\headerps@out#1{%
12244   \special{%
12245     prepostscript TeXdict begin\Hy@ps@CR
12246       #1\Hy@ps@CR
12247     end%
12248   }%
12249 }%
12250 %
```

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.

```
12251 \g@addto@macro\Hy@FirstPageHook{%
12252   \headerps@out{%
12253     /betterpdfmark {%
12254       systemdict begin %
12255         dup /BP eq%
12256         {cleartomark gsave nulldevice []}%
12257         {dup /EP eq%
12258           {cleartomark cleartomark grestore}}%
12259         {cleartomark}%
12260         ifelse%
12261       }ifelse %
12262     end%
12263   }def\Hy@ps@CR
12264   ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12265 }% end of \headerps@out
12266 }% end of \AtBeginShipoutFirst
12267 %
12268 \input{pdfmark.def}%
12269 %
12270 \ifx\@pdfproducer\relax
12271   \def\@pdfproducer{Textures + Distiller}%
12272 \fi
12273 \providecommand*\@pdfborder{0 0 1}
12274 \providecommand*\@pdfborderstyle{}
12275 \providecommand*\@pdfview{XYZ}
```

```

12276 \providecommand*\@pdfviewparams{ H.V}
12277 %

```

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 .

```

12278 \Hy@AtBeginDocument{%
12279 \headerps@out{%

```

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

```

12280 /vsize {\Hy@pageheight} def%
12281 /DvipsToPDF {} def%
12282 /PDFToDvips {} def%
12283 /BPToDvips {} def%
12284 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12285 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12286 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12287 /H.S {%
12288 currentpoint %
12289 HyperBorder add /pdf@lly exch def %
12290 dup DvipsToPDF 72 add /pdf@hoff exch def %
12291 HyperBorder sub /pdf@llx exch def%
12292 } def\Hy@ps@CR
12293 /H.L {%
12294 2 sub %
12295 PDFToDvips /HyperBase exch def %
12296 currentpoint %
12297 HyperBase sub /pdf@ury exch def%
12298 /pdf@urx exch def%
12299 } def\Hy@ps@CR
12300 /H.A {%
12301 H.L %
12302 currentpoint exch pop %
12303 vsize 72 sub exch DvipsToPDF %
12304 HyperBase sub % baseline skip
12305 sub /pdf@voff exch def%
12306 } def\Hy@ps@CR
12307 /H.R {%
12308 currentpoint %
12309 HyperBorder sub /pdf@ury exch def %
12310 HyperBorder add /pdf@urx exch def %
12311 currentpoint exch pop vsize 72 sub %
12312 exch DvipsToPDF sub /pdf@voff exch def%
12313 } def\Hy@ps@CR
12314 }%
12315 }
12316 \Hy@AtBeginDocument{%
12317 \ifHy@colorlinks
12318 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12319 \fi
12320 }

```

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.

```

12321 \expandafter\let\expandafter\keepPDF@SetupDoc
12322 \csname PDF@SetupDoc\endcsname
12323 \def\PDF@SetupDoc{%
12324   \ifx\@baseurl\@empty
12325   \else
12326     \special{html:<base href="\@baseurl">}%
12327   \fi
12328   \keepPDF@SetupDoc
12329 }
12330 \Hy@WrapperDef\hyper@anchor#1{%
12331   \Hy@SaveLastskip
12332   \Hy@VerboseAnchor{#1}%
12333   \begingroup
12334     \let\protect=\string
12335     \special{html:<a name=%
12336       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12337   \endgroup
12338   \Hy@activeanchortrue
12339   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12340   \special{html:</a>}%
12341   \Hy@activeanchorfalse
12342   \Hy@RestoreLastskip
12343 }
12344 \Hy@WrapperDef\hyper@anchorstart#1{%
12345   \Hy@SaveLastskip
12346   \Hy@VerboseAnchor{#1}%
12347   \begingroup
12348     \hyper@chars
12349     \special{html:<a name=%
12350       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12351   \endgroup
12352   \Hy@activeanchortrue
12353 }
12354 \def\hyper@anchorend{%
12355   \special{html:</a>}%
12356   \Hy@activeanchorfalse
12357   \Hy@RestoreLastskip
12358 }
12359 \def\@urltype{url}
12360 \def\hyper@linkstart#1#2{%
12361   \Hy@VerboseLinkStart{#1}{#2}%
12362   \expandafter\Hy@colorlink\csname @#1color\endcsname
12363   \def\Hy@tempa{#1}%
12364   \ifx\Hy@tempa\@urltype
12365     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12366   \else
12367     \begingroup
12368       \hyper@chars
12369       \special{%
12370         html:<a href=%
12371         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12372       }%
12373     \endgroup
12374   \fi
12375 }
12376 \def\hyper@linkend{%
12377   \special{html:</a>}%

```

```

12378 \Hy@endcolorlink
12379 }
12380 \def\hyper@linkfile#1#2#3{%
12381 \hyper@linkurl{#1}{%
12382 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
12383 }%
12384 }
12385 \def\hyper@linkurl#1#2{%
12386 \leavevmode
12387 \ifHy@raiselinks
12388 \Hy@SaveSpaceFactor
12389 \Hy@SaveSavedSpaceFactor
12390 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12391 \Hy@RestoreSavedSpaceFactor
12392 \@linkdim\dp\@tempboxa
12393 \lower\@linkdim\hbox{%
12394 \hyper@chars
12395 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12396 }%
12397 \Hy@colorlink\@urlcolor
12398 \Hy@RestoreSpaceFactor
12399 #1\Hy@xspace@end
12400 \Hy@SaveSpaceFactor
12401 \@linkdim\ht\@tempboxa
12402 \advance\@linkdim by -6.5\p@
12403 \raise\@linkdim\hbox{\special{html:</a>}}%
12404 \Hy@endcolorlink
12405 \Hy@RestoreSpaceFactor
12406 \else
12407 \begingroup
12408 \hyper@chars
12409 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12410 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12411 \special{html:</a>}}%
12412 \Hy@endcolorlink
12413 \endgroup
12414 \fi
12415 }

```

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

```

12416 \def\hyper@link#1#2#3{%
12417 \Hy@VerboseLinkStart{#1}{#2}%
12418 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
12419 }
12420 \def\hyper@image#1#2{%
12421 \begingroup
12422 \hyper@chars
12423 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
12424 \endgroup
12425 }
12426 </textures>

```

47.12 dvipsone

```

12427 % \subsection{dvipsone driver}
12428 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12429 % |\special| commands.
12430 (*dvipsone)

```

```

12431 \providecommand*\XR@ext}{pdf}
12432 \let\Hy@raisedlink\ltx@empty
12433 \providecommand*\@pdfborder{0 0 1}
12434 \providecommand*\@pdfborderstyle{}
12435 \def\literalps@out#1{\special{ps:#1}}%
12436 \def\headerps@out#1{\special{headertext=#1}}%
12437 \input{pdfmark.def}%
12438 \ifx\@pdfproducer\relax
12439   \def\@pdfproducer{dvipsone + Distiller}%
12440 \fi
12441 \HyInfo@AddonUnsupportedtrue
12442 \def\PDF@FinishDoc{%
12443   \Hy@UseMaketitleInfos
12444   \HyInfo@TrappedUnsupported
12445   \special{PDF: Keywords \@pdfkeywords}%
12446   \special{PDF: Title \@pdftitle}%
12447   \special{PDF: Creator \@pdfcreator}%
12448   \ifx\@pdfcreationdate\@empty
12449   \else
12450     \special{PDF: CreationDate \@pdfcreationdate}%
12451   \fi
12452   \ifx\@pdfmoddate\@empty
12453   \else
12454     \special{PDF: ModDate \@pdfmoddate}%
12455   \fi
12456   \special{PDF: Author \@pdfauthor}%
12457   \ifx\@pdfproducer\relax
12458   \else
12459     \special{PDF: Producer \@pdfproducer}%
12460   \fi
12461   \special{PDF: Subject \@pdfsubject}%
12462   \Hy@DisableOption{pdfauthor}%
12463   \Hy@DisableOption{pdftitle}%
12464   \Hy@DisableOption{pdfsubject}%
12465   \Hy@DisableOption{pdfcreator}%
12466   \Hy@DisableOption{pdfcreationdate}%
12467   \Hy@DisableOption{pdfmoddate}%
12468   \Hy@DisableOption{pdfproducer}%
12469   \Hy@DisableOption{pdfkeywords}%
12470   \Hy@DisableOption{pdftrapped}%
12471   \Hy@DisableOption{pdfinfo}%
12472 }
12473 \def\PDF@SetupDoc{%
12474   \def\Hy@temp{}%
12475   \ifx\@pdfstartpage\@empty
12476   \else
12477     \ifx\@pdfstartview\@empty
12478     \else
12479       \edef\Hy@temp{%
12480         ,Page=\@pdfstartpage
12481         ,View=\@pdfstartview
12482       }%
12483     \fi
12484   \fi
12485   \edef\Hy@temp{%
12486     \noexpand\pdfmark{%
12487       pdfmark=/DOCVIEW,%

```

```

12488     PageMode=/\@pdfpagemode
12489     \Hy@temp
12490 }%
12491 }%
12492 \Hy@temp
12493 \ifx\@pdfpagescrop\@empty
12494 \else
12495   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12496 \fi
12497 \edef\Hy@temp{%
12498   \ifHy@pdftoolbar\else /HideToolbar true\fi
12499   \ifHy@pdfmenubar\else /HideMenubar true\fi
12500   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12501   \ifHy@pdfwindow /FitWindow true\fi
12502   \ifHy@pdfcenterwindow /CenterWindow true\fi
12503   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12504   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12505   \Hy@UseNameKey{Direction}\@pdfdirection
12506   \Hy@UseNameKey{ViewArea}\@pdfviewarea
12507   \Hy@UseNameKey{ViewClip}\@pdfviewclip
12508   \Hy@UseNameKey{PrintArea}\@pdfprintarea
12509   \Hy@UseNameKey{PrintClip}\@pdfprintclip
12510   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12511   \Hy@UseNameKey{Duplex}\@pdfduplex
12512   \ifx\@pdfpicktraybypdfsize\@empty
12513   \else
12514     /PickTrayByPDFSize \@pdfpicktraybypdfsize
12515   \fi
12516   \ifx\@pdfprintpagerange\@empty
12517   \else
12518     /PrintPageRange[\@pdfprintpagerange]%
12519   \fi
12520   \ifx\@pdfnumcopies\@empty
12521   \else
12522     /NumCopies \@pdfnumcopies
12523   \fi
12524 }%
12525 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12526 \pdfmark{%
12527   pdfmark=/PUT,%
12528   Raw={%
12529     \string{Catalog\string}<<%
12530     \ifx\Hy@temp\@empty
12531     \else
12532       /ViewerPreferences<<\Hy@temp>>%
12533     \fi
12534     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12535     \ifx\@pdflang\@empty
12536     \else
12537       /Lang(\@pdflang)%
12538     \fi
12539     \ifx\@baseurl\@empty
12540     \else
12541       /URI<</Base(\Hy@pstringB)>>%
12542     \fi
12543     >>%
12544   }%

```



```

12545 }%
12546 }
12547 \providecommand*\@pdfview{XYZ}
12548 \providecommand*\@pdfviewparams{ %
12549   gsave revscl currentpoint grestore %
12550   72 add exch pop null exch null%
12551 }
12552 \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 T_EX.

```

12553 \g@addto@macro\Hy@FirstPageHook{%
12554   \headerps@out{%

```

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

```

12555   /DvipsToPDF { 65781 div } def%
12556   /PDFToDvips { 65781 mul } def%
12557   /BPToDvips{65781 mul}def%
12558   /HyperBorder { 1 PDFToDvips } def%
12559   /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.

```

12560   /BorderArrayPatch{%
12561     [exch{%
12562       dup dup type/integertype eq exch type/realtype eq or%
12563       {BPToDvips}if%
12564     }forall]%
12565   }def%
12566   /H.S {%
12567     currentpoint %
12568     HyperBorder add /pdf@lly exch def %
12569     dup DvipsToPDF 72 add /pdf@hoff exch def %
12570     HyperBorder sub /pdf@llx exch def%
12571   } def%
12572   /H.L {%
12573     2 sub %
12574     PDFToDvips /HyperBase exch def %
12575     currentpoint %
12576     HyperBase sub /pdf@ury exch def%
12577     /pdf@urx exch def%
12578   } def%
12579   /H.A {%
12580     H.L %
12581     currentpoint exch pop %
12582     HyperBase sub % baseline skip
12583     DvipsToPDF /pdf@voff exch def%
12584   } def%
12585   /H.R {%
12586     currentpoint %
12587     HyperBorder sub /pdf@ury exch def %
12588     HyperBorder add /pdf@urx exch def %
12589     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12590   } def%
12591 }%

```

```

12592 }
12593 </dvipsone>

```

47.13 TeX4ht

```

12594 <*tex4ht>
12595 \providecommand*{\XR@ext}{html}
12596 \let\Hy@raisedlink\ltx@empty
12597 \@ifpackageloaded{tex4ht}{%
12598   \Hy@InfoNoLine{tex4ht is already loaded}%
12599 }{%
12600   \RequirePackage[htex4ht]{tex4ht}%
12601 }
12602 \hyperlinkfileprefix{}
12603 \let\PDF@FinishDoc\ltx@empty
12604 \def\PDF@SetupDoc{%
12605   \ifx\@baseurl\@empty
12606     \else
12607       \special{t4ht=<base href="\@baseurl">}%
12608     \fi
12609 }
12610 \Hy@WrapperDef\hyper@anchor#1{%
12611   \Hy@SaveLastskip
12612   \Hy@VerboseAnchor{#1}%
12613   \begingroup
12614     \let\protect=\string
12615     \special{t4ht=<a name=%
12616       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12617   \endgroup
12618   \Hy@Activeanchortrue
12619   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12620   \special{t4ht=</a>}%
12621   \Hy@activeanchorfalse
12622   \Hy@RestoreLastskip
12623 }
12624 \Hy@WrapperDef\hyper@anchorstart#1{%
12625   \Hy@SaveLastskip
12626   \Hy@VerboseAnchor{#1}%
12627   \begingroup
12628     \hyper@chars\special{t4ht=<a name=%
12629       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12630   \endgroup
12631   \Hy@Activeanchortrue
12632 }
12633 \def\hyper@anchorend{%
12634   \special{t4ht=</a>}%
12635   \Hy@activeanchorfalse
12636   \Hy@RestoreLastskip
12637 }
12638 \def\@urltype{url}
12639 \def\hyper@linkstart#1#2{%
12640   \Hy@VerboseLinkStart{#1}{#2}%
12641   \expandafter\Hy@colorlink\csname @#1color\endcsname
12642   \def\Hy@tempa{#1}%
12643   \ifx\Hy@tempa\@urltype
12644     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12645   \else
12646     \begingroup

```

```

12647 \hyper@chars
12648 \special{t4ht=<a href=%
12649 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12650 \endgroup
12651 \fi
12652 }
12653 \def\hyper@linkend{%
12654 \special{t4ht=</a>}%
12655 \Hy@endcolorlink
12656 }
12657 \def\hyper@linkfile#1#2#3{%
12658 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\#3\fi}%
12659 }
12660 \def\hyper@linkurl#1#2{%
12661 \leavevmode
12662 \ifHy@raiselinks
12663 \Hy@SaveSpaceFactor
12664 \Hy@SaveSavedSpaceFactor
12665 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12666 \Hy@RestoreSavedSpaceFactor
12667 \@linkdim\dp\@tempboxa
12668 \lower\@linkdim\hbox{%
12669 \begingroup
12670 \hyper@chars
12671 \special{%
12672 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12673 }%
12674 \endgroup
12675 }%
12676 \Hy@colorlink\@urlcolor
12677 \Hy@RestoreSpaceFactor
12678 #1\Hy@xspace@end
12679 \Hy@SaveSpaceFactor
12680 \Hy@endcolorlink
12681 \@linkdim\ht\@tempboxa
12682 \advance\@linkdim by -6.5\p@
12683 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12684 \Hy@RestoreSpaceFactor
12685 \else
12686 \begingroup
12687 \hyper@chars
12688 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12689 \Hy@colorlink\@urlcolor
12690 #1\Hy@xspace@end
12691 \Hy@endcolorlink
12692 \special{t4ht=</a>}%
12693 \endgroup
12694 \fi
12695 }

```

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

```

12696 \def\hyper@link#1#2#3{%
12697 \Hy@VerboseLinkStart{#1}{#2}%
12698 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12699 }
12700 \def\hyper@image#1#2{%
12701 \begingroup
12702 \hyper@chars

```

```

12703 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12704 \endgroup
12705 }
12706 \let\autoref\ref
12707 \ifx \rEfLiNK \UnDef
12708 \def\rEfLiNK #1#2{#2}%
12709 \fi
12710 \let\backref\ltx@gobble
12711 \AtBeginDocument{%
12712 \expandafter
12713 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12714 \expandafter\def\csname Make:Label\endcsname#1#2{%
12715 \ifhmode
12716 \Hy@SaveSpaceFactor
12717 \else
12718 \global\Hy@SavedSpaceFactor=1000 %
12719 \fi
12720 \Hy@OrgMakeLabel{#1}{%
12721 \Hy@RestoreSpaceFactor
12722 #2\Hy@xspace@end%
12723 \Hy@SaveSpaceFactor
12724 }%
12725 \Hy@RestoreSpaceFactor
12726 }%
12727 }
12728 </tex4ht>
12729 <*tex4htcfg>
12730 \IfFileExists{\jobname.cfg}{\endinput}{%
12731 \Preamble{html}
12732 \begin{document}%
12733 \EndPreamble
12734 \def\TeX{TeX}
12735 \def\OMEGA{Omega}
12736 \def\LaTeX{LaTeX}
12737 \def\LaTeXe{LaTeX2e}
12738 \def\eTeX{e-TeX}
12739 \def\MF{Metafont}
12740 \def\MP{MetaPost}
12741 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

12742 <*pdfmark>
12743 \long\def\@Form[#1]{%
12744 \g@addto@macro\Hy@FirstPageHook{%
12745 \headerps@out{%
12746 [%
12747 /_objdef{pdfDocEncoding}%
12748 /type/dict%
12749 /OBJ pdfmark%
12750 [%
12751 {pdfDocEncoding}%
12752 <<%
12753 /Type/Encoding%

```

12754 /Differences[%
12755 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12756 /tilde %
12757 39/quotesingle %
12758 96/grave %
12759 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12760 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12761 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12762 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12763 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12764 164/currency %
12765 166/brokenbar %
12766 168/dieresis/copyright/ordfeminine %
12767 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12768 /twosuperior/threesuperior/acute/mu %
12769 183/periodcentered/cedilla/onesuperior/ordmasculine %
12770 188/onequarter/onehalf/threequarters %
12771 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12772 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12773 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12774 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12775 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12776 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12777 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12778 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12779 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12780 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12781]%
12782 >>%
12783 /PUT pdfmark%
12784 [%
12785 /_objdef{ZaDb}%
12786 /type/dict%
12787 /OBJ pdfmark%
12788 [%
12789 {ZaDb}%
12790 <<%
12791 /Type/Font%
12792 /Subtype/Type1%
12793 /Name/ZaDb%
12794 /BaseFont/ZapfDingbats%
12795 >>%
12796 /PUT pdfmark%
12797 [%
12798 /_objdef{Helv}%
12799 /type/dict%
12800 /OBJ pdfmark%
12801 [%
12802 {Helv}%
12803 <<%
12804 /Type/Font%
12805 /Subtype/Type1%
12806 /Name/Helv%
12807 /BaseFont/Helvetica%
12808 /Encoding{pdfDocEncoding}%
12809 >>%
12810 /PUT pdfmark%

```

12811 [%
12812   /__objdef{aform}%
12813   /type/dict%
12814 /OBJ pdfmark%
12815 [%
12816   /__objdef{afields}%
12817   /type/array%
12818 /OBJ pdfmark%
12819 {%
12820   [%
12821     /BBox[0 0 100 100]%
12822     /__objdef{Check}%
12823   /BP pdfmark %
12824   1 0 0 setrgbcolor%
12825   /ZapfDingbats 80 selectfont %
12826   20 20 moveto%
12827   (4)show%
12828   [/EP pdfmark%
12829   [%
12830     /BBox[0 0 100 100]%
12831     /__objdef{Cross}%
12832   /BP pdfmark %
12833   1 0 0 setrgbcolor%
12834   /ZapfDingbats 80 selectfont %
12835   20 20 moveto%
12836   (8)show%
12837   [/EP pdfmark%
12838   [%
12839     /BBox[0 0 250 100]%
12840     /__objdef{Submit}%
12841   /BP pdfmark %
12842   0.6 setgray %
12843   0 0 250 100 rectfill %
12844   1 setgray %
12845   2 2 moveto %
12846   2 98 lineto %
12847   248 98 lineto %
12848   246 96 lineto %
12849   4 96 lineto %
12850   4 4 lineto %
12851   fill %
12852   0.34 setgray %
12853   248 98 moveto %
12854   248 2 lineto %
12855   2 2 lineto %
12856   4 4 lineto %
12857   246 4 lineto %
12858   246 96 lineto %
12859   fill%
12860   /Helvetica 76 selectfont %
12861   0 setgray %
12862   8 22.5 moveto%
12863   (Submit)show%
12864   [/EP pdfmark%
12865   [%
12866     /BBox[0 0 250 100]%
12867     /__objdef{SubmitP}%

```

```

12868 /BP pdfmark %
12869 0.6 setgray %
12870 0 0 250 100 rectfill %
12871 0.34 setgray %
12872 2 2 moveto %
12873 2 98 lineto %
12874 248 98 lineto %
12875 246 96 lineto %
12876 4 96 lineto %
12877 4 4 lineto %
12878 fill %
12879 1 setgray %
12880 248 98 moveto %
12881 248 2 lineto %
12882 2 2 lineto %
12883 4 4 lineto %
12884 246 4 lineto %
12885 246 96 lineto %
12886 fill%
12887 /Helvetica 76 selectfont %
12888 0 setgray %
12889 10 20.5 moveto%
12890 (Submit)show%
12891 [/EP pdfmark%
12892 } ?pdfmark%
12893 [%
12894 {aform}%
12895 <<%
12896 /Fields{afields}%
12897 /DR<<%
12898 /Font<<%
12899 /ZaDb{ZaDb}%
12900 /Helv{Helv}%
12901 >>%
12902 >>%
12903 /DA(/Helv 10 Tf 0 g)%
12904 /CO{corder}%
12905 \ifHy@pdfa
12906 \else
12907 \ifHyField@NeedAppearances
12908 /NeedAppearances true%
12909 \fi
12910 \fi
12911 >>%
12912 /PUT pdfmark%
12913 [%
12914 {Catalog}%
12915 <<%
12916 /AcroForm{aform}%
12917 >>%
12918 /PUT pdfmark%
12919 [%
12920 /__objdef{corder}%
12921 /type/array%
12922 /OBJ pdfmark% dps
12923 }}%
12924 \kvsetkeys{Form}{#1}%

```

```

12925 }
12926 \let\@endForm\ltx@empty
12927 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12928   \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12929 }
12930 \def\@TextField[#1]#2{% parameters, label
12931   \def\Fld@name{#2}%
12932   \let\Fld@default\ltx@empty
12933   \let\Fld@value\@empty
12934   \def\Fld@width{\DefaultWidthofText}%
12935   \def\Fld@height{%
12936     \ifFld@multiline
12937       \DefaultHeightofTextMultiline
12938     \else
12939       \DefaultHeightofText
12940     \fi
12941   }%
12942   \begingroup
12943     \expandafter\HyField@SetKeys\expandafter{%
12944       \DefaultOptionsofText,#1%
12945     }%
12946     \HyField@FlagsText
12947     \ifFld@hidden\def\Fld@width{1sp}\fi
12948     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12949     \LayoutTextField{#2}{%
12950       \leavevmode
12951       \Hy@escapeform\PDFForm@Text
12952       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
12953         pdfmark=/ANN,Raw={\PDFForm@Text}%
12954       }%
12955     }%
12956   \endgroup
12957 }
12958 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12959   \def\Fld@name{#2}%
12960   \let\Fld@default\relax
12961   \let\Fld@value\relax
12962   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12963   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12964   \begingroup
12965     \Fld@menulength=0 %
12966     \@tempdima\z@
12967     \@for\@curropt:=#3\do{%
12968       \expandafter\Fld@checkequals\@curropt==\%
12969       \Hy@StepCount\Fld@menulength
12970       \settowidth{\@tempdimb}{\@currDisplay}%
12971       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12972     }%
12973     \advance\@tempdima by 15\p@
12974     \begingroup
12975       \HyField@SetKeys{#1}%
12976     \edef\x{\endgroup
12977       \noexpand\expandafter
12978       \noexpand\HyField@SetKeys
12979       \noexpand\expandafter{%
12980         \expandafter\noexpand\curname DefaultOptionsof%
12981         \ifFld@radio

```



```

12982         Radio%
12983     \else
12984         \ifFld@combo
12985             \ifFld@popdown
12986                 PopdownBox%
12987             \else
12988                 ComboBox%
12989             \fi
12990         \else
12991             ListBox%
12992         \fi
12993     \fi
12994 \endcsname
12995 }%
12996 }\x
12997 \HyField@SetKeys{#1}%
12998 \ifFld@hidden\def\Fld@width{1sp}\fi
12999 \ifx\Fld@value\relax
13000     \let\Fld@value\Fld@default
13001 \fi
13002 \LayoutChoiceField{#2}{%
13003     \ifFld@radio
13004         \HyField@FlagsRadioButton
13005         \@@Radio{#3}%
13006     \else
13007         \begingroup
13008             \HyField@FlagsChoice
13009             \ifdim\Fld@width<\@tempdima
13010                 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13011                 \edef\Fld@width{\the\@tempdima}%
13012             \fi
13013             \ifFld@combo
13014                 \else
13015                     \@tempdima=\the\Fld@menulength\Fld@charsize
13016                     \advance\@tempdima by \Fld@borderwidth bp %
13017                     \advance\@tempdima by \Fld@borderwidth bp %
13018                     \edef\Fld@height{\the\@tempdima}%
13019                 \fi
13020                 \@@ListBox{#3}%
13021             \endgroup
13022         \fi
13023     }%
13024 \endgroup
13025 }
13026 \def\@@Radio#1{%
13027     \Fld@listcount=0 %
13028     \EdefEscapeName\Fld@default{\Fld@default}%
13029     \@for\@curropt:=#1\do{%
13030         \expandafter\Fld@checkequals\@curropt==\%
13031         \EdefEscapeName\@currValue{\@currValue}%
13032         \Hy@StepCount\Fld@listcount
13033         \@currDisplay\space
13034         \Hy@escapeform\PDFForm@Radio
13035         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13036             pdfmark=/ANN,%
13037             Raw={%
13038                 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%

```

```

13039     }%
13040   } % deliberate space between radio buttons
13041 }%
13042 }
13043 \newcount\Fld@listcount
13044 \def\@@ListBox#1{%
13045   \HyField@PDFChoices{#1}%
13046   \Hy@escapeform\PDFForm@List
13047   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13048     pdfmark=/ANN,Raw={\PDFForm@List}%
13049   }%
13050 }
13051 \def\@PushButton[#1]#2{% parameters, label
13052   \def\Fld@name{#2}%
13053   \begingroup
13054     \expandafter\HyField@SetKeys\expandafter{%
13055       \DefaultOptionsofPushButton,#1%
13056     }%
13057     \ifHy@pdfa
13058       \Hy@Error{%
13059         PDF/A: Push button with JavaScript is prohibited%
13060       }\@ehc
13061       \LayoutPushButtonField{%
13062         \leavevmode
13063         \MakeButtonField{#2}%
13064       }%
13065     \else
13066       \HyField@FlagsPushButton
13067       \ifFld@hidden\def\Fld@width{1sp}\fi
13068       \LayoutPushButtonField{%
13069         \leavevmode
13070         \Hy@escapeform\PDFForm@Push
13071         \pdfmark[\MakeButtonField{#2}]{%
13072           pdfmark=/ANN,Raw={\PDFForm@Push}%
13073         }%
13074       }%
13075     \fi
13076   \endgroup
13077 }
13078 \def\@Submit[#1]#2{%
13079   \def\Fld@width{\DefaultWidthofSubmit}%
13080   \def\Fld@height{\DefaultHeightofSubmit}%
13081   \begingroup
13082     \expandafter\HyField@SetKeys\expandafter{%
13083       \DefaultOptionsofSubmit,#1%
13084     }%
13085     \HyField@FlagsPushButton
13086     \HyField@FlagsSubmit
13087     \ifFld@hidden\def\Fld@width{1sp}\fi
13088     \Hy@escapeform\PDFForm@Submit
13089     \pdfmark[\MakeButtonField{#2}]{%
13090       pdfmark=/ANN,%
13091       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
13092     }%
13093   \endgroup
13094 }
13095 \def\@Reset[#1]#2{%

```

```

13096 \def\Fld@width{\DefaultWidthofReset}%
13097 \def\Fld@height{\DefaultHeightofReset}%
13098 \begingroup
13099 \expandafter\HyField@SetKeys\expandafter{%
13100   \DefaultOptionsofReset,#1%
13101 }%
13102 \leavevmode
13103 \ifHy@pdfa
13104   \Hy@Error{%
13105     PDF/A: Reset action is prohibited%
13106   } \@ehc
13107   \MakeButtonField{#2}%
13108 \else
13109   \HyField@FlagsPushButton
13110   \ifFld@hidden\def\Fld@width{1sp}\fi
13111   \Hy@escapeform\PDFForm@Reset
13112   \pdfmark[\MakeButtonField{#2}]{%
13113     pdfmark=/ANN,Raw={\PDFForm@Reset}%
13114   }%
13115 \fi
13116 \endgroup
13117 }%
13118 \def\@CheckBox[#1]#2{% parameters, label
13119   \def\Fld@name{#2}%
13120   \def\Fld@default{0}%
13121   \begingroup
13122     \def\Fld@width{\DefaultWidthofCheckBox}%
13123     \def\Fld@height{\DefaultHeightofCheckBox}%
13124     \expandafter\HyField@SetKeys\expandafter{%
13125       \DefaultOptionsofCheckBox,#1%
13126     }%
13127     \HyField@FlagsCheckBox
13128     \ifFld@hidden\def\Fld@width{1sp}\fi
13129     \LayoutCheckField{#2}{%
13130       \leavevmode
13131       \Hy@escapeform\PDFForm@Check
13132       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13133         pdfmark=/ANN,Raw={\PDFForm@Check}%
13134       }%
13135     }%
13136   \endgroup
13137 }
13138 \</pdfmark>

```

48.2 HyperTeX

```

13139 \<*hypertex>
13140 \def\@Form[#1]{%
13141   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13142 }
13143 \let\@endForm\ltx@empty
13144 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13145   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13146 }
13147 \def\@TextField[#1]#2{% parameters, label
13148   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13149 }
13150 \def\@CheckBox[#1]#2{% parameters, label

```

```

13151 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13152 }
13153 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13154 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13155 }
13156 \def\@PushButton[#1]#2{% parameters, label
13157 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13158 }
13159 \def\@Reset[#1]#2{%
13160 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13161 }
13162 \def\@Submit[#1]#2{%
13163 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13164 }
13165 \</hypertex>

```

48.3 TeX4ht

```

13166 \*tex4ht)
13167 \def\@Form[#1]{%
13168 \kvsetkeys{Form}{#1}%
13169 \HCode{<form action="\Form@action" method="\Form@method">}%
13170 }
13171 \def\@endForm{\HCode{</form>}}
13172 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13173 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13174 }
13175 \def\@TextField[#1]#2{% parameters, label
13176 \let\Hy@reserved@a\@empty
13177 \def\Fld@name{#2}%
13178 \let\Fld@default\ltx@empty
13179 \bgroup
13180 \Field@toks={ }%
13181 \kvsetkeys{Field}{#1}%
13182 \HCode{<label for="\Fld@name">#2</label>}%
13183 \ifFld@password
13184 \@@PasswordField
13185 \else
13186 \@@TextField
13187 \fi
13188 \egroup
13189 }
13190 \def\@@PasswordField{%
13191 \HCode{%
13192 <input type="password" %
13193 id="\Fld@name" %
13194 name="\Fld@name" %
13195 \ifFld@hidden type="hidden" \fi
13196 value="\Fld@default" %
13197 \the\Field@toks
13198 >%
13199 }%
13200 }
13201 \def\@@TextField{%
13202 \ifFld@multiline
13203 \HCode{<textarea %
13204 \ifFld@readonly readonly \fi
13205 id="\Fld@name" %

```

```

13206     name="\Fld@name" %
13207     \ifFld@hidden type="hidden" \fi
13208     \the\Field@toks>%
13209 }%
13210 \Fld@default
13211 \HCode{</textarea>}%
13212 \else
13213 \HCode{<input type="textbox" %
13214     \ifFld@readonly readonly \fi
13215     id="\Fld@name" %
13216     name="\Fld@name" %
13217     \ifFld@hidden type="hidden" \fi
13218     value="\Fld@default" %
13219     \the\Field@toks>%
13220 }%
13221 \fi
13222 }
13223 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13224 \def\Fld@name{#2}%
13225 \let\Fld@default\ltx@empty
13226 \let\Hy@reserved@a\relax
13227 \begingroup
13228 \expandafter\Fld@findlength#3\\%
13229 \Field@toks={ }%
13230 \kvsetkeys{Field}{#1}%
13231 #2%
13232 \ifFld@radio
13233 \expandafter\@@Radio#3\\%
13234 \else
13235 \expandafter\@@Menu#3\\%
13236 \fi
13237 \endgroup
13238 }
13239 \def\Fld@findlength#1\\{%
13240 \Fld@menulength=0 %
13241 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13242 }
13243 \def\@@Menu#1\\{%
13244 \HCode{<select size="\the\Fld@menulength" %
13245     name="\Fld@name" %
13246     \the\Field@toks>%
13247 }%
13248 \@for\@curropt:=#1\do{%
13249 \expandafter\Fld@checkequals\@curropt==\\%
13250 \HCode{<option %
13251     \ifx\@curropt\Fld@default selected \fi
13252     value="\@currValue">\@currDisplay</option>%
13253 }%
13254 }%
13255 \HCode{</select>}%
13256 }
13257 \def\@@Radio#1\\{%
13258 \@for\@curropt:=#1\do{%
13259 \expandafter\Fld@checkequals\@curropt==\\%
13260 \HCode{<input type="radio" %
13261     \ifx\@curropt\Fld@default checked \fi
13262     name="\Fld@name" %

```

```

13263     value="\@currValue" %
13264     \the\Field@toks>%
13265 }%
13266 \@currDisplay
13267 }%
13268 }
13269 \def\@PushButton[#1]#2{% parameters, label
13270 \def\Fld@name{#2}%
13271 \bgroup
13272 \Field@toks={ }%
13273 \kvsetkeys{Field}{#1}%
13274 \HCode{<input type="button" %
13275     name="\Fld@name" %
13276     value="#2" %
13277     \the\Field@toks>%
13278 }%
13279 \HCode{</button>}%
13280 \egroup
13281 }
13282 \def\@Submit[#1]#2{%
13283 \HCode{<button type="submit">#2</button>}%
13284 }
13285 \def\@Reset[#1]#2{%
13286 \HCode{<button type="reset">#2</button>}%
13287 }
13288 \def\@CheckBox[#1]#2{% parameters, label
13289 \let\Hy@reserved@a\@empty
13290 \def\Fld@name{#2}%
13291 \def\Fld@default{0}%
13292 \bgroup
13293 \Field@toks={ }%
13294 \kvsetkeys{Field}{#1}%
13295 \HCode{<input type="checkbox" %
13296     \ifFld@checked checked \fi
13297     \ifFld@disabled disabled \fi
13298     \ifFld@readonly readonly \fi
13299     name="\Fld@name" %
13300     \ifFld@hidden type="hidden" \fi
13301     value="\Fld@default" %
13302     \the\Field@toks>%
13303     #2%
13304 }%
13305 \egroup
13306 }
13307 </tex4ht>

```

48.4 pdfTeX

```

13308 <*pdfTeX>
13309 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13310 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13311 }
13312 \def\MakeFieldObject#1#2{\sbox0{#1}%
13313 \immediate\pdfxform0 %
13314 \expandafter\edef\csname #2Object\endcsname{%
13315     \the\pdfxform\space 0 R%
13316 }%
13317 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfxform}}}%

```

```

13318 }%
13319 \let\HyField@afields\ltx@empty
13320 \begingroup\expandafter\expandafter\expandafter\endgroup
13321 \expandafter\ifx\csname pdfastlink\endcsname\relax
13322 \let\HyField@AddToFields\relax
13323 \PackageInfo{hyperref}{%
13324   You need pdfTeX 1.40.0 for setting the /Fields entry.%
13325   \MessageBreak
13326   Adobe Reader/Acrobat accepts an empty /Field array,%
13327   \MessageBreak
13328   but other PDF viewers might complain%
13329 }%
13330 \else
13331 \let\HyField@AuxAddToFields\ltx@gobble
13332 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
13333 \Hy@AtBeginDocument{%
13334   \if@filesw
13335     \immediate\write\@mainaux{%
13336       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13337     }%
13338   \fi
13339   \let\HyField@AfterAuxOpen\@firstofone
13340   \def\HyField@AuxAddToFields#1{%
13341     \xdef\HyField@afields{%
13342       \ifx\HyField@afields\@empty
13343         \else
13344           \HyField@afields
13345           \space
13346         \fi
13347       #1 0 R%
13348     }%
13349   }%
13350 }%
13351 \def\HyField@AddToFields{%
13352   \expandafter\HyField@@AddToFields\expandafter{%
13353     \the\pdfastlink
13354   }%
13355 }%
13356 \def\HyField@@AddToFields#1{%
13357   \HyField@AfterAuxOpen{%
13358     \if@filesw
13359       \write\@mainaux{%
13360         \string\HyField@AuxAddToFields{#1}%
13361       }%
13362     \fi
13363   }%
13364 }%
13365 \fi
13366 \def\@Form[#1]{%
13367   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13368   \kvsetkeys{Form}{#1}%
13369   \pdf@ifdraftmode{}{%
13370     \Hy@FormObjects
13371     \ifnum\pdfTeXversion>13 %
13372       \pdfrefobj\OBJ\pdfdocencoding
13373       \pdfrefobj\OBJ@ZaDb
13374       \pdfrefobj\OBJ@Helv

```

```

13375 \fi
13376 \AtVeryEndDocument{%
13377 \immediate\pdfobj{%
13378 <<%
13379 /Fields[\HyField@afields]%
13380 /DR<<%
13381 /Font<<%
13382 /ZaDb \OBJ@ZaDb\space 0 R%
13383 /Helv \OBJ@Helv\space 0 R%
13384 >>%
13385 >>%
13386 /DA(/Helv 10 Tf 0 g)%
13387 \ifHy@pdfa
13388 \else
13389 \ifHyField@NeedAppearances
13390 /NeedAppearances true%
13391 \fi
13392 \fi
13393 >>%
13394 }%
13395 \edef\OBJ@acroform{\the\pdfflastobj}%
13396 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13397 }%
13398 }%
13399 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

13400 \begingroup
13401 \fontfamily{pzd}%
13402 \fontencoding{U}%
13403 \fontseries{m}%
13404 \fontshape{n}%
13405 \selectfont
13406 \char123 %
13407 \endgroup
13408 }{Ding}%
13409 \MakeFieldObject{%
13410 \fbox{\textcolor{yellow}{\textsf{Submit}}}}%
13411 }{Submit}%
13412 \MakeFieldObject{%
13413 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}}%
13414 }{SubmitP}%
13415 }
13416 \let\@endForm\ltx@empty
13417 \def\@TextField[#1]#2{% parameters, label
13418 \def\Fld@name{#2}%
13419 \let\Fld@default\ltx@empty
13420 \let\Fld@value\@empty
13421 \def\Fld@width{\DefaultWidthofText}%
13422 \def\Fld@height{%
13423 \ifFld@multiline
13424 \DefaultHeightofTextMultiline
13425 \else
13426 \DefaultHeightofText
13427 \fi
13428 }%
13429 \begingroup
13430 \expandafter\HyField@SetKeys\expandafter{%

```



```

13431 \DefaultOptionsofText,#1%
13432 }%
13433 \PDFForm@Name
13434 \HyField@FlagsText
13435 \ifFld@hidden\def\Fld@width{1sp}\fi
13436 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13437 \LayoutTextField{#2}{%
13438 \leavevmode
13439 \Hy@escapeform\PDFForm@Text
13440 \pdfstartlink user {\PDFForm@Text}\relax
13441 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13442 \HyField@AddToFields
13443 }%
13444 \endgroup
13445 }
13446 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13447 \def\Fld@name{#2}%
13448 \let\Fld@default\relax
13449 \let\Fld@value\relax
13450 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13451 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13452 \beginngroup
13453 \Fld@menulength=0 %
13454 \@tempdima\z@
13455 \@for\@curropt:=#3\do{%
13456 \expandafter\Fld@checkequals\@curropt==\\%
13457 \Hy@StepCount\Fld@menulength
13458 \settowidth{\@tempdimb}{\@currDisplay}%
13459 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13460 }%
13461 \advance\@tempdima by 15\p@
13462 \beginngroup
13463 \HyField@SetKeys{#1}%
13464 \edef\x{\endgroup
13465 \noexpand\expandafter
13466 \noexpand\HyField@SetKeys
13467 \noexpand\expandafter{%
13468 \expandafter\noexpand\csname DefaultOptionsof%
13469 \ifFld@radio
13470 Radio%
13471 \else
13472 \ifFld@combo
13473 \ifFld@popdown
13474 PopdownBox%
13475 \else
13476 ComboBox%
13477 \fi
13478 \else
13479 ListBox%
13480 \fi
13481 \fi
13482 \endcsname
13483 }%
13484 }\x
13485 \HyField@SetKeys{#1}%
13486 \PDFForm@Name
13487 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

13488 \ifx\Fld@value\relax
13489 \let\Fld@value\Fld@default
13490 \fi
13491 \LayoutChoiceField{#2}{%
13492 \ifFld@radio
13493 \HyField@FlagsRadioButton
13494 \@@Radio{#3}%
13495 \else
13496 \beginngroup
13497 \HyField@FlagsChoice
13498 \ifdim\Fld@width<\@tempdima
13499 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13500 \edef\Fld@width{\the\@tempdima}%
13501 \fi
13502 \ifFld@combo
13503 \else
13504 \@tempdima=\the\Fld@menulength\Fld@charsize
13505 \advance\@tempdima by \Fld@borderwidth bp %
13506 \advance\@tempdima by \Fld@borderwidth bp %
13507 \edef\Fld@height{\the\@tempdima}%
13508 \fi
13509 \@@ListBox{#3}%
13510 \endgroup
13511 \fi
13512 }%
13513 \endgroup
13514 }
13515 \def\@@Radio#1{%
13516 \Fld@listcount=0 %
13517 \EdefEscapeName\Fld@default{\Fld@default}%
13518 \@for\@curropt:=#1\do{%
13519 \expandafter\Fld@checkequals\@curropt==\\%
13520 \EdefEscapeName\@currValue{\@currValue}%
13521 \Hy@StepCount\Fld@listcount
13522 \@currDisplay\space
13523 \leavevmode
13524 \Hy@escapeform\PDFForm@Radio
13525 \pdfstartlink user {%
13526 \PDFForm@Radio
13527 /AP<<%
13528 /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.

```

13529 /\@currValue\space \DingObject
13530 >>%
13531 >>%
13532 }%
13533 \relax
13534 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13535 \ifnum\Fld@listcount=1 %
13536 \HyField@AddToFields
13537 \fi
13538 \space % deliberate space between radio buttons
13539 }%
13540 }
13541 \newcount\Fld@listcount

```

```

13542 \def\@@ListBox#1{%
13543   \HyField@PDFChoices{#1}%
13544   \leavevmode
13545   \Hy@escapeform\PDFForm@List
13546   \pdfstartlink user {\PDFForm@List}\relax
13547   \MakeChoiceField{\Fld@width}{\Fld@height}%
13548   \pdfendlink
13549   \HyField@AddToFields
13550 }
13551 \def\@PushButton[#1]#2{% parameters, label
13552   \def\Fld@name{#2}%
13553   \begingroup
13554     \expandafter\HyField@SetKeys\expandafter{%
13555       \DefaultOptionsofPushButton,#1%
13556     }%
13557     \PDFForm@Name
13558     \ifHy@pdfa
13559       \Hy@Error{%
13560         PDF/A: Push button with JavaScript is prohibited%
13561       }\@ehc
13562       \LayoutPushButtonField{%
13563         \leavevmode
13564         \MakeButtonField{#2}%
13565       }%
13566     \else
13567       \HyField@FlagsPushButton
13568       \ifFld@hidden\def\Fld@width{1sp}\fi
13569       \LayoutPushButtonField{%
13570         \leavevmode
13571         \Hy@escapeform\PDFForm@Push
13572         \pdfstartlink user {\PDFForm@Push}\relax
13573         \MakeButtonField{#2}%
13574         \pdfendlink
13575         \HyField@AddToFields
13576       }%
13577     \fi
13578   \endgroup
13579 }
13580 \def\@Submit[#1]#2{%
13581   \def\Fld@width{\DefaultWidthofSubmit}%
13582   \def\Fld@height{\DefaultHeightofSubmit}%
13583   \begingroup
13584     \expandafter\HyField@SetKeys\expandafter{%
13585       \DefaultOptionsofSubmit,#1%
13586     }%
13587     \HyField@FlagsPushButton
13588     \HyField@FlagsSubmit
13589     \ifFld@hidden\def\Fld@width{1sp}\fi
13590     \leavevmode
13591     \Hy@escapeform\PDFForm@Submit
13592     \pdfstartlink user {%
13593       \PDFForm@Submit
13594       /AP<</N \SubmitObject/D \SubmitPObject>>%
13595     }%
13596     \relax
13597     \MakeButtonField{#2}%
13598     \pdfendlink

```

```

13599 \HyField@AddToFields
13600 \endgroup
13601 }
13602 \def\@Reset[#1]#2{%
13603 \def\Fld@width{\DefaultWidthofReset}%
13604 \def\Fld@height{\DefaultHeightofReset}%
13605 \begingroup
13606 \expandafter\HyField@SetKeys\expandafter{%
13607 \DefaultOptionsofReset,#1%
13608 }%
13609 \leavevmode
13610 \ifHy@pdfa
13611 \Hy@Error{%
13612 PDF/A: Reset action is prohibited%
13613 }\@ehc
13614 \MakeButtonField{#2}%
13615 \else
13616 \HyField@FlagsPushButton
13617 \ifFld@hidden\def\Fld@width{1sp}\fi
13618 \Hy@escapeform\PDFForm@Reset
13619 \pdfstartlink user {\PDFForm@Reset}\relax
13620 \MakeButtonField{#2}%
13621 \pdfendlink
13622 \HyField@AddToFields
13623 \fi
13624 \endgroup
13625 }
13626 \def\@CheckBox[#1]#2{% parameters, label
13627 \def\Fld@name{#2}%
13628 \def\Fld@default{0}%
13629 \begingroup
13630 \def\Fld@width{\DefaultWidthofCheckBox}%
13631 \def\Fld@height{\DefaultHeightofCheckBox}%
13632 \expandafter\HyField@SetKeys\expandafter{%
13633 \DefaultOptionsofCheckBox,#1%
13634 }%
13635 \PDFForm@Name
13636 \HyField@FlagsCheckBox
13637 \ifFld@hidden\def\Fld@width{1sp}\fi
13638 \LayoutCheckField{#2}{%
13639 \leavevmode
13640 \Hy@escapeform\PDFForm@Check
13641 \pdfstartlink user {\PDFForm@Check}\relax
13642 \MakeCheckField{\Fld@width}{\Fld@height}%
13643 \pdfendlink
13644 \HyField@AddToFields
13645 }%
13646 \endgroup
13647 }
13648 \def\Hy@FormObjects{%
13649 \pdfobj {%
13650 <<%
13651 /Type/Encoding%
13652 /Differences[%
13653 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13654 /ring/tilde %
13655 39/quotesingle %

```

```

13656 96/grave %
13657 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13658 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13659 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13660 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13661 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13662 164/currency %
13663 166/brokenbar %
13664 168/dieresis/copyright/ordfeminine %
13665 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13666 /twosuperior/threesuperior/acute/mu %
13667 183/periodcentered/cedilla/onesuperior/ordmasculine %
13668 188/onequarter/onehalf/threequarters %
13669 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13670 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13671 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13672 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13673 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13674 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13675 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13676 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13677 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13678 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13679 ]%
13680 >>%
13681 }%
13682 \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13683 \pdfobj{%
13684 <<%
13685 /Type/Font%
13686 /Subtype/Type1%
13687 /Name/ZaDb%
13688 /BaseFont/ZapfDingbats%
13689 >>%
13690 }%
13691 \xdef\OBJ@ZaDb{\the\pdfastobj}%
13692 \pdfobj{%
13693 <<%
13694 /Type/Font%
13695 /Subtype/Type1%
13696 /Name/Helv%
13697 /BaseFont/Helvetica%
13698 /Encoding \OBJ@pdfdocencoding\space 0 R%
13699 >>%
13700 }%
13701 \xdef\OBJ@Helv{\the\pdfastobj}%
13702 \global\let\Hy@FormObjects\relax
13703 }
13704 </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.

```
13705 <*\dvipdfm | xetex>
```

\@Gauge

```
13706 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
```

```

13707 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13708 }

```

\@Form

```

13709 \def\@Form[#1]{%
13710   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13711   \kvsetkeys{Form}{#1}%
13712   \Hy@FormObjects
13713   \@pdfm@mark{obj @afields []}%
13714   \@pdfm@mark{obj @corder []}%
13715   \@pdfm@mark{%
13716     obj @aform <<%
13717     /Fields @afields%
13718     /DR<<%
13719     /Font<<%
13720     /ZaDb @OBJZaDb%
13721     /Helv @OBJHelv%
13722     >>%
13723     >>%
13724     /DA(/Helv 10 Tf 0 g)%
13725     /CO @corder%
13726     \ifHy@pdfa
13727     \else
13728       \ifHyField@NeedAppearances
13729       /NeedAppearances true%
13730       \fi
13731     \fi
13732     >>%
13733   }%
13734   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13735 }

```

\@endForm

```

13736 \let\@endForm\ltx@empty

```

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

```

13737 \def\dvipdfm@setdim{%
13738   height \the\ht\pdfm@box\space
13739   width \the\wd\pdfm@box\space
13740   depth \the\dp\pdfm@box\space
13741 }

```

\HyField@AnnotCount

```

13742 \newcount\HyField@AnnotCount
13743 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

13744 \def\HyField@AdvanceAnnotCount{%
13745   \global\advance\HyField@AnnotCount\@ne
13746 }

```

\HyField@TheAnnotCount

```

13747 \def\HyField@TheAnnotCount{%
13748   \the\HyField@AnnotCount
13749 }

```

\@TextField

```

13750 \def\@TextField[#1]#2{% parameters, label
13751   \def\Fld@name{#2}%
13752   \let\Fld@default\ltx@empty
13753   \let\Fld@value\@empty
13754   \def\Fld@width{\DefaultWidthofText}%
13755   \def\Fld@height{%
13756     \ifFld@multiline
13757       \DefaultHeightofTextMultiline
13758     \else
13759       \DefaultHeightofText
13760     \fi
13761   }%
13762   \begingroup
13763     \expandafter\HyField@SetKeys\expandafter{%
13764       \DefaultOptionsofText,#1%
13765     }%
13766     \PDFForm@Name
13767     \HyField@FlagsText
13768     \ifFld@hidden\def\Fld@width{1sp}\fi
13769     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13770     \setbox\pdfm@box=\hbox{%
13771       \MakeTextField{\Fld@width}{\Fld@height}%
13772     }%
13773     \HyField@AdvanceAnnotCount
13774     \LayoutTextField{#2}{%
13775       \leavevmode
13776       \Hy@escapeform\PDFForm@Text
13777       \@pdfm@mark{%
13778         ann @text\HyField@TheAnnotCount\space
13779         \dvipdfm@setdim << \PDFForm@Text >>%
13780       }%
13781     }%
13782     \unhbox\pdfm@box
13783     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
13784     % record in @afields array
13785   \endgroup
13786 }

```

\@ChoiceMenu

```

13787 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13788   \def\Fld@name{#2}%
13789   \let\Fld@default\relax
13790   \let\Fld@value\relax
13791   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13792   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13793   \begingroup
13794     \Fld@menulength=0 %
13795     \@tempdima\z@
13796     \@for\@curropt:=#3\do{%
13797       \expandafter\Fld@checkequals\@curropt==\\%
13798       \Hy@StepCount\Fld@menulength
13799       \settowidth{\@tempdimb}{\@currDisplay}%
13800       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13801     }%
13802     \advance\@tempdima by 15\p@
13803   \begingroup

```

```

13804 \HyField@SetKeys{#1}%
13805 \edef\x{\endgroup
13806 \noexpand\expandafter
13807 \noexpand\HyField@SetKeys
13808 \noexpand\expandafter{%
13809 \expandafter\noexpand\csname DefaultOptionsof%
13810 \ifFld@radio
13811 Radio%
13812 \else
13813 \ifFld@combo
13814 \ifFld@popdown
13815 PopdownBox%
13816 \else
13817 ComboBox%
13818 \fi
13819 \else
13820 ListBox%
13821 \fi
13822 \fi
13823 \endcsname
13824 }%
13825 }\x
13826 \HyField@SetKeys{#1}%
13827 \PDFForm@Name
13828 \ifFld@hidden\def\Fld@width{1sp}\fi
13829 \ifx\Fld@value\relax
13830 \let\Fld@value\Fld@default
13831 \fi
13832 \LayoutChoiceField{#2}{%
13833 \ifFld@radio
13834 \HyField@FlagsRadioButton
13835 \@@Radio{#3}%
13836 \else
13837 \begingroup
13838 \HyField@FlagsChoice
13839 \ifdim\Fld@width<\@tempdima
13840 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13841 \edef\Fld@width{\the\@tempdima}%
13842 \fi
13843 \ifFld@combo
13844 \else
13845 \@tempdima=\the\Fld@menulength\Fld@charsize
13846 \advance\@tempdima by \Fld@borderwidth bp %
13847 \advance\@tempdima by \Fld@borderwidth bp %
13848 \edef\Fld@height{\the\@tempdima}%
13849 \fi
13850 \@@ListBox{#3}%
13851 \endgroup
13852 \fi
13853 }%
13854 \endgroup
13855 }

```

\@@Radio

```

13856 \def\@@Radio#1{%
13857 \Fld@listcount=0 %
13858 \EdefEscapeName\Fld@default{\Fld@default}%
13859 \setbox\pdfm@box=\hbox{%

```



```

13860 \MakeRadioField{\Fld@width}{\Fld@height}%
13861 }%
13862 \@for\@curropt:=#1\do{%
13863 \expandafter\Fld@checkequals\@curropt==\\%
13864 \EdefEscapeName\@currValue{\@currValue}%
13865 \Hy@StepCount\Fld@listcount
13866 \@currDisplay\space
13867 \leavevmode
13868 \Hy@escapeform\PDFForm@Radio
13869 \ifnum\Fld@listcount=1 %
13870 \HyField@AdvanceAnnotCount
13871 \fi
13872 \@pdfm@mark{%
13873 ann %
13874 \ifnum\Fld@listcount=1 %
13875 @radio\HyField@TheAnnotCount%
13876 \space
13877 \fi
13878 \dvipdfm@setdim
13879 <<%
13880 \PDFForm@Radio
13881 /AP<</N<</\@currValue /null>>>>%
13882 >>%
13883 }%
13884 \unhcopy\pdfm@box\space% deliberate space between radio buttons
13885 \ifnum\Fld@listcount=1 %
13886 \@pdfm@mark{%
13887 put @afields @radio\HyField@TheAnnotCount
13888 }%
13889 \fi
13890 }%
13891 }

```

\Fld@listcount

```

13892 \newcount\Fld@listcount

```

\@@ListBox

```

13893 \def\@@ListBox#1{%
13894 \HyField@PDFChoices{#1}%
13895 \setbox\pdfm@box=\hbox{%
13896 \MakeChoiceField{\Fld@width}{\Fld@height}%
13897 }%
13898 \leavevmode
13899 \Hy@escapeform\PDFForm@List
13900 \HyField@AdvanceAnnotCount
13901 \@pdfm@mark{%
13902 ann @list\HyField@TheAnnotCount\space
13903 \dvipdfm@setdim
13904 <<\PDFForm@List>>%
13905 }%
13906 \unhbox\pdfm@box
13907 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
13908 }

```

\@PushButton

```

13909 \def\@PushButton[#1]#2{% parameters, label
13910 \def\Fld@name{#2}%

```

```

13911 \begingroup
13912 \expandafter\HyField@SetKeys\expandafter{%
13913 \DefaultOptionsofPushButton,#1%
13914 }%
13915 \PDFForm@Name
13916 \ifHy@pdfa
13917 \Hy@Error{%
13918 PDF/A: Push button with JavaScript is prohibited%
13919 }\@ehc
13920 \LayoutPushButtonField{%
13921 \leavevmode
13922 \MakeButtonField{#2}%
13923 }%
13924 \else
13925 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13926 \HyField@FlagsPushButton
13927 \ifFld@hidden\def\Fld@width{1sp}\fi
13928 \HyField@AdvanceAnnotCount
13929 \LayoutPushButtonField{%
13930 \leavevmode
13931 \Hy@escapeform\PDFForm@Push
13932 \@pdfm@mark{%
13933 ann @push\HyField@TheAnnotCount\space
13934 \dvi pdfm@setdim
13935 <<\PDFForm@Push>>%
13936 }%
13937 }%
13938 \unhbox\pdfm@box
13939 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
13940 \fi
13941 \endgroup
13942 }

```

\@Submit

```

13943 \def\@Submit[#1]#2{%
13944 \def\Fld@width{\DefaultWidthofSubmit}%
13945 \def\Fld@height{\DefaultHeightofSubmit}%
13946 \begingroup
13947 \expandafter\HyField@SetKeys\expandafter{%
13948 \DefaultOptionsofSubmit,#1%
13949 }%
13950 \HyField@FlagsPushButton
13951 \HyField@FlagsSubmit
13952 \ifFld@hidden\def\Fld@width{1sp}\fi
13953 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13954 \leavevmode
13955 \Hy@escapeform\PDFForm@Submit
13956 \HyField@AdvanceAnnotCount
13957 \@pdfm@mark{%
13958 ann @submit\HyField@TheAnnotCount\space
13959 \dvi pdfm@setdim
13960 <<\PDFForm@Submit>>%
13961 }%
13962 \unhbox\pdfm@box%
13963 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
13964 \endgroup
13965 }

```

`\@Reset`

```
13966 \def\@Reset[#1]#2{%
13967   \def\Fld@width{\DefaultWidthofReset}%
13968   \def\Fld@height{\DefaultHeightofReset}%
13969   \begingroup
13970     \expandafter\HyField@SetKeys\expandafter{%
13971       \DefaultOptionsofReset,#1%
13972     }%
13973     \leavevmode
13974     \ifHy@pdfa
13975       \Hy@Error{%
13976         PDF/A: Reset action is prohibited%
13977       }\@ehc
13978       \MakeButtonField{#2}%
13979     \else
13980       \HyField@FlagsPushButton
13981       \ifFld@hidden\def\Fld@width{1sp}\fi
13982       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13983       \Hy@escapeform\PDFForm@Reset
13984       \HyField@AdvanceAnnotCount
13985       \@pdfm@mark{%
13986         ann @reset\HyField@TheAnnotCount\space
13987         \dvipdfm@setdim
13988         <<\PDFForm@Reset>>%
13989       }%
13990       \unhbox\pdfm@box
13991       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
13992     \fi
13993   \endgroup
13994 }
```

`\@CheckBox`

```
13995 \def\@CheckBox[#1]#2{% parameters, label
13996   \def\Fld@name{#2}%
13997   \def\Fld@default{0}%
13998   \begingroup
13999     \def\Fld@width{\DefaultWidthofCheckBox}%
14000     \def\Fld@height{\DefaultHeightofCheckBox}%
14001     \expandafter\HyField@SetKeys\expandafter{%
14002       \DefaultOptionsofCheckBox,#1%
14003     }%
14004     \PDFForm@Name
14005     \HyField@FlagsCheckBox
14006     \ifFld@hidden\def\Fld@width{1sp}\fi
14007     \setbox\pdfm@box=\hbox{%
14008       \MakeCheckField{\Fld@width}{\Fld@height}%
14009     }%
14010     \HyField@AdvanceAnnotCount
14011     \LayoutCheckField{#2}{%
14012       \leavevmode
14013       \Hy@escapeform\PDFForm@Check
14014       \@pdfm@mark{%
14015         ann @check\HyField@TheAnnotCount\space
14016         \dvipdfm@setdim
14017         <<\PDFForm@Check>>%
14018       }%
14019       \unhbox\pdfm@box
```

```

14020 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
14021 }%
14022 \endgroup
14023 }

14024 \def\Hy@FormObjects{%
14025 \@pdfm@mark{obj @OBJpdfdocencoding%
14026 <<%
14027 /Type/Encoding%
14028 /Differences[%
14029 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14030 39/quotesingle %
14031 96/grave %
14032 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14033 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14034 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14035 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14036 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14037 164/currency %
14038 166/brokenbar %
14039 168/dieresis/copyright/ordfeminine %
14040 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14041 /twosuperior/threesuperior/acute/mu %
14042 183/periodcentered/cedilla/onesuperior/ordmasculine %
14043 188/onequarter/onehalf/threequarters %
14044 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14045 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14046 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14047 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14048 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14049 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14050 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14051 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14052 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14053 /thorn/ydieresis%
14054 ]%
14055 >>%
14056 }%
14057 \@pdfm@mark{obj @OBJZaDb%
14058 <<%
14059 /Type/Font%
14060 /Subtype/Type1%
14061 /Name/ZaDb%
14062 /BaseFont/ZapfDingbats%
14063 >>%
14064 }%
14065 \@pdfm@mark{obj @OBJHelv%
14066 <<%
14067 /Type/Font%
14068 /Subtype/Type1%
14069 /Name/Helv%
14070 /BaseFont/Helvetica%
14071 /Encoding @OBJpdfdocencoding%
14072 >>%
14073 }%
14074 \global\let\Hy@FormObjects\relax
14075 }
14076 </dvipdfm|xetex>

```

48.6 Common forms part

14077 $\langle *pdfform \rangle$

$\backslash Hy@escapestring$

```
14078 \begingroup\expandafter\expandafter\expandafter\endgroup
14079 \expandafter\ifx\csname pdfescapestring\endcsname\relax
14080 \let\Hy@escapestring\@firstofone
14081 \def\Hy@escapeform#1{%
14082   \ifHy@pdfescapeform
14083     \def\Hy@escapestring##1{%
14084       \noexpand\Hy@escapestring{\noexpand##1}%
14085     }%
14086   \edef\Hy@temp{#1}%
14087   \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14088   \def\Hy@escapestring##1{%
14089     \@ifundefined{Hy@esc@\string##1}{%
14090       ##1%
14091       \ThisShouldNotHappen
14092     }{%
14093       \csname Hy@esc@\string##1\endcsname
14094     }%
14095   }%
14096   \else
14097     \let\Hy@escapestring\@firstofone
14098   \fi
14099 }%
14100 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
14101   \ifx\#3\%
14102   \else
14103     \expandafter
14104     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14105     \ltx@ReturnAfterFi{%
14106       \Hy@@@escapeform#3\@nil
14107     }%
14108   \fi
14109 }%
14110 \else
14111   \def\Hy@escapeform#1{%
14112     \ifHy@pdfescapeform
14113       \let\Hy@escapestring\pdfescapestring
14114     \else
14115       \let\Hy@escapestring\@firstofone
14116     \fi
14117   }%
14118   \Hy@escapeform{}%
14119 \fi
```

$\backslash PDFForm@Name$

```
14120 \def\PDFForm@Name{%
14121   \PDFForm@@Name\Fld@name
14122   \ifx\Fld@altname\relax
14123   \else
14124     \PDFForm@@Name\Fld@altname
14125   \fi
14126   \ifx\Fld@mappingname\relax
14127   \else
14128     \PDFForm@@Name\Fld@mappingname
```

```

14129 \fi
14130 }

```

\PDFForm@@Name

```

14131 \def\PDFForm@@Name#1{%
14132 \begingroup
14133 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14134 \ifHy@unicode
14135 \Hy@unicodetrue
14136 \fi
14137 \fi
14138 \HyPsd@XeTeXBigCharstrue
14139 \pdfstringdef\Hy@gtemp#1%
14140 \endgroup
14141 \let#1\Hy@gtemp
14142 }

```

\Fld@additionalactions

```

14143 \def\Fld@@additionalactions{%
K input (keystroke) format
14144 \ifx\Fld@keystroke@code\@empty
14145 \else
14146 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14147 \fi
F display format
14148 \ifx\Fld@format@code\@empty
14149 \else
14150 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14151 \fi
V validation
14152 \ifx\Fld@validate@code\@empty
14153 \else
14154 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14155 \fi
C calculation
14156 \ifx\Fld@calculate@code\@empty
14157 \else
14158 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14159 \fi
Fo receiving the input focus
14160 \ifx\Fld@onfocus@code\@empty
14161 \else
14162 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14163 \fi
Bl loosing the input focus (blurred)
14164 \ifx\Fld@onblur@code\@empty
14165 \else
14166 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14167 \fi
D pressing the mouse button (down)
14168 \ifx\Fld@onmousedown@code\@empty
14169 \else
14170 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14171 \fi

```

U releasing the mouse button (up)

```
14172 \ifx\Fld@onmouseup@code\@empty
14173 \else
14174 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14175 \fi
```

E cursor enters the annotation's active area.

```
14176 \ifx\Fld@onenter@code\@empty
14177 \else
14178 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14179 \fi
```

X cursor exits the annotation's active area.

```
14180 \ifx\Fld@onexit@code\@empty
14181 \else
14182 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14183 \fi
14184 }
14185 \def\Fld@additionalactions{%
14186 \if-\Fld@@additionalactions-%
14187 \else
14188 \ifHy@pdfa
14189 \else
14190 /AA<<\Fld@@additionalactions>>%
14191 \fi
14192 \fi
14193 }
```

\Fld@annotnames

```
14194 \def\Fld@annotnames{%
14195 /T(\Fld@name)%
14196 \ifx\Fld@altname\relax
14197 \else
14198 /TU(\Fld@altname)%
14199 \fi
14200 \ifx\Fld@mappingname\relax
14201 \else
14202 /TM(\Fld@mappingname)%
14203 \fi
14204 }
```

\PDFForm@Check

```
14205 \def\PDFForm@Check{%
14206 /Subtype/Widget%
14207 \Fld@annotflags
14208 \Fld@annotnames
14209 /FT/Btn%
14210 \Fld@flags
14211 /Q \Fld@align
14212 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14213 /MK<<%
14214 \ifnum\Fld@rotation=z@
14215 \else
14216 /R \Fld@rotation
14217 \fi
14218 \ifx\Fld@bordercolor\relax
14219 \else
14220 /BC[\Fld@bordercolor]%

```

```

14221 \fi
14222 \ifx\Fld@bcolor\relax
14223 \else
14224 /BG[\Fld@bcolor]%
14225 \fi
14226 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14227 >>%
14228 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14229 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14230 /H/P%
14231 \ifFld@checked /V/Yes\else /V/Off\fi
14232 \Fld@additionalactions
14233 }

```

\PDFForm@Push

```

14234 \ifHy@pdfa
14235 \else
14236 \def\PDFForm@Push{%
14237 /Subtype/Widget%
14238 \Fld@annotflags
14239 \Fld@annotnames
14240 /FT/Btn%
14241 \Fld@flags
14242 /H/P%
14243 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14244 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14245 \ifx\Fld@bordercolor\relax\else 1\fi
14246 \space
14247 \else
14248 /MK<<%
14249 \ifnum\Fld@rotation=\z@
14250 \else
14251 /R \Fld@rotation
14252 \fi
14253 \ifx\Fld@bordercolor\relax
14254 \else
14255 /BC[\Fld@bordercolor]%
14256 \fi
14257 >>%
14258 \fi
14259 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14260 \Fld@additionalactions
14261 }%
14262 \fi

```

\PDFForm@List

```

14263 \def\PDFForm@List{%
14264 /Subtype/Widget%
14265 \Fld@annotflags
14266 \Fld@annotnames
14267 /FT/Ch%
14268 \Fld@flags
14269 /Q \Fld@align
14270 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14271 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14272 \ifx\Fld@bordercolor\relax\else 1\fi
14273 \ifx\Fld@bcolor\relax \else 1\fi

```



```

14274         \space
14275     \else
14276         /MK<<%
14277         \ifnum\Fld@rotation=\z@
14278         \else
14279             /R \Fld@rotation
14280         \fi
14281         \ifx\Fld@bordercolor\relax
14282         \else
14283             /BC[\Fld@bordercolor]%
14284         \fi
14285         \ifx\Fld@bcolor\relax
14286         \else
14287             /BG[\Fld@bcolor]%
14288         \fi
14289     >>%
14290 \fi
14291 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14292     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14293 \Fld@choices
14294 \Fld@additionalactions
14295 }

```

\PDFForm@Radio

```

14296 \def\PDFForm@Radio{%
14297     /Subtype/Widget%
14298     \Fld@annotflags
14299     \Fld@annotnames
14300     /FT/Btn%
14301     \Fld@flags
14302     /H/P%
14303     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14304     /MK<<%
14305     \ifnum\Fld@rotation=\z@
14306     \else
14307         /R \Fld@rotation
14308     \fi
14309     \ifx\Fld@bordercolor\relax
14310     \else
14311         /BC[\Fld@bordercolor]%
14312     \fi
14313     \ifx\Fld@bcolor\relax
14314     \else
14315         /BG[\Fld@bcolor]%
14316     \fi
14317     /CA(\Fld@radiosymbol)%
14318     >>%
14319     /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14320         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14321     \ifx\@currValue\Fld@default
14322         /V/\Fld@default
14323         /DV/\Fld@default
14324     \else
14325         /V/Off%
14326         /DV/Off%
14327     \fi
14328     \Fld@additionalactions
14329 }

```

\PDFForm@Text

```
14330 \def\PDFForm@Text{%
14331   /Subtype/Widget%
14332   \Fld@annotflags
14333   \Fld@annotnames
14334   /FT/Tx%
14335   \Fld@flags
14336   /Q \Fld@align
14337   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14338   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14339     \ifx\Fld@bordercolor\relax\else 1\fi
14340     \ifx\Fld@bcolor\relax \else 1\fi
14341     \space
14342   \else
14343     /MK<<%
14344       \ifnum\Fld@rotation=\z@
14345       \else
14346         /R \Fld@rotation
14347       \fi
14348       \ifx\Fld@bordercolor\relax
14349       \else
14350         /BC[\Fld@bordercolor]%
14351       \fi
14352       \ifx\Fld@bcolor\relax
14353       \else
14354         /BG[\Fld@bcolor]%
14355       \fi
14356     >>%
14357   \fi
14358   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14359     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14360   /DV(\Hy@escapestring{\Fld@default})%
14361   /V(\Hy@escapestring{\Fld@value})%
14362   \Fld@additionalactions
14363   \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14364 }
```

\PDFForm@Submit

```
14365 \def\PDFForm@Submit{%
14366   /Subtype/Widget%
14367   \Fld@annotflags
14368   \Fld@annotnames
14369   /FT/Btn%
14370   \Fld@flags
14371   /H/P%
14372   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14373   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14374     \ifx\Fld@bordercolor\relax\else 1\fi
14375     \space
14376   \else
14377     /MK<<%
14378       \ifnum\Fld@rotation=\z@
14379       \else
14380         /R \Fld@rotation
14381       \fi
14382       \ifx\Fld@bordercolor\relax
14383       \else
```

```

14384      /BC[\Fld@bordercolor]%
14385      \fi
14386      >>%
14387      \fi
14388      /A<<%
14389      /S/SubmitForm%
14390      /F<<%
14391      /FS/URL%
14392      /F(\Hy@escapestring{\Form@action})%
14393      >>%
14394      \Fld@submitflags
14395      >>%
14396      \Fld@additionalactions
14397      }

\PDFForm@Reset

14398 \ifHy@pdfa
14399 \else
14400 \def\PDFForm@Reset{%
14401   /Subtype/Widget%
14402   \Fld@annotflags
14403   \Fld@annotnames
14404   /FT/Btn%
14405   \Fld@flags
14406   /H/P%
14407   /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14408   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14409     \ifx\Fld@bordercolor\relax\else 1\fi
14410     \space
14411   \else
14412     /MK<<%
14413     \ifnum\Fld@rotation=\z@
14414     \else
14415       /R \Fld@rotation
14416     \fi
14417     \ifx\Fld@bordercolor\relax
14418     \else
14419       /BC[\Fld@bordercolor]%
14420     \fi
14421   %   /CA (Clear)
14422   %   /AC (Done)
14423   >>%
14424   \fi
14425   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14426   /A<</S/ResetForm>>%
14427   \Fld@additionalactions
14428   }%
14429 \fi

14430 </pdfform>
14431 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in L^AT_EX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

14432 \def\phantomsection{%
14433   \Hy@MakeCurrentHrefAuto{section*}%
14434   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14435 }
14436 \end{package}

```

49.1 Bookmarks

```
14437 \begin{outlines}
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -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.

```

14438 \def\Hy@writebookmark#1#2#3#4#5{%
14439   % section number, text, label, level, file
14440   \ifx\WriteBookmarks\relax%
14441     \else
14442       \ifnum#4>\Hy@bookmarksdepth\relax
14443       \else
14444         \@writetorep{#1}{#2}{#3}{#4}{#5}%
14445       \fi
14446     \fi
14447 }
14448 \def\Hy@currentbookmarklevel{0}
14449 \def\Hy@numberline#1{#1 }
14450 \def\@writetorep#1#2#3#4#5{%
14451   \begin{group}
14452     \edef\Hy@tempa{#5}%
14453     \ifx\Hy@tempa\Hy@bookmarkstype
14454       \edef\Hy@level{#4}%
14455       \ifx\Hy@levelcheck Y%
14456         \@tempcnta\Hy@level\relax
14457         \advance\@tempcnta by -1 %
14458         \ifnum\Hy@currentbookmarklevel<\@tempcnta
14459           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14460           \advance\@tempcnta by 1 %
14461         \Hy@Warning{%
14462           Difference (\the\@tempcnta) between bookmark levels is %

```

```

14463         greater \MessageBreak than one, level fixed%
14464     }%
14465     \@tempcnta\Hy@currentbookmarklevel
14466     \advance\@tempcnta by 1 %
14467     \edef\Hy@level{\the\@tempcnta}%
14468     \fi
14469     \else
14470     \global\let\Hy@levelcheck Y%
14471     \fi
14472     \global\let\Hy@currentbookmarklevel\Hy@level
14473     \@tempcnta\Hy@level\relax
14474     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14475     \advance\@tempcnta by -1 %
14476     \edef\Hy@tempa{#3}%
14477     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14478     \ifx\Hy@tempa\Hy@tempb
14479     \Hy@Warning{%
14480         The anchor of a bookmark and its parent's must not%
14481         \MessageBreak be the same. Added a new anchor%
14482     }%
14483     \phantomsection
14484     \fi
14485     \ifHy@bookmarksnumbered
14486     \let\numberline\Hy@numberline
14487     \let\booknumberline\Hy@numberline
14488     \let\partnumberline\Hy@numberline
14489     \let\chapternumberline\Hy@numberline
14490     \else
14491     \let\numberline\@gobble
14492     \let\booknumberline\@gobble
14493     \let\partnumberline\@gobble
14494     \let\chapternumberline\@gobble
14495     \fi
14496     \HyPsd@XeTeXBigCharstrue
14497     \pdfstringdef\Hy@tempa{#2}%
14498     \HyPsd@SanitizeForOutFile\Hy@tempa
14499     \if@filesw
14500     \stepcounter{bookmark@seq@number}%
14501     \@ifundefined{@outlinefile}{%
14502     }{%
14503     \protected@write\@outlinefile{}{%
14504     \protect\BOOKMARK
14505     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14506     {\Hy@tempa}{\Hy@tempb}%
14507     \@percentchar\space\thebookmark@seq@number
14508     }%
14509     }%
14510     \fi
14511     \fi
14512 \endgroup
14513 }
14514 \newcounter{bookmark@seq@number}

14515 \begingroup
14516 \lccode'('= '{%
14517 \lccode'='='}%
14518 \lccode'1=\z@
14519 \lccode'2=\z@

```

```

14520 \lccode'3=\z@
14521 \lccode'5=\z@
14522 \lccode'7=\z@
14523 \lccode'\#=\z@
14524 \lccode'\'=\z@
14525 \lccode'\{=\z@
14526 \lccode'\}=\z@
14527 \lowercase{%
14528 \endgroup
14529 \def\HyPsd@SanitizeForOutFile#1{%
14530 \@onelevel@sanitize\Hy@tempa
14531 \escapechar'\%
14532 \edef\Hy@tempa{%
14533 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
14534 }%
14535 \edef\Hy@tempa{%
14536 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
14537 }%
14538 }%
14539 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14540 #1%
14541 \ifx\#2\%
14542 \expandafter\ltx@gobble
14543 \else
14544 \expandafter\ltx@firstofone
14545 \fi
14546 {%
14547 \string\173%
14548 \HyPsd@SanitizeOut@BraceLeft#2\@nil
14549 }%
14550 }%
14551 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14552 #1%
14553 \ifx\#2\%
14554 \expandafter\ltx@gobble
14555 \else
14556 \expandafter\ltx@firstofone
14557 \fi
14558 {%
14559 \string\175%
14560 \HyPsd@SanitizeOut@BraceRight#2\@nil
14561 }%
14562 }%
14563 }

```

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

```

14564 \newcommand{\currentpdfbookmark}{%
14565 \pdfbookmark[\Hy@currentbookmarklevel]%
14566 }
14567 \newcommand{\subpdfbookmark}{%
14568 \@tempcnta\Hy@currentbookmarklevel
14569 \Hy@StepCount\@tempcnta
14570 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14571 }
14572 \newcommand{\belowpdfbookmark}[2]{%
14573 \@tempcnta\Hy@currentbookmarklevel
14574 \Hy@StepCount\@tempcnta

```

```

14575 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14576 \advance\@tempcnta by -1 %
14577 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14578 }

```

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.

```

14579 \renewcommand\pdfbookmark[3][0]{%
14580 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
14581 \hyper@anchorstart{#3.#1}\hyper@anchorend
14582 }
14583 \def\BOOKMARK{%
14584 \ifnextchar{\@BOOKMARK}{\@BOOKMARK[1][-]}%
14585 }
14586 \def\@BOOKMARK[#1]{%
14587 \ifnextchar{\@BOOKMARK[{#1}]}{\@BOOKMARK[{#1}][-]}%
14588 }

```

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

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14589 \RequirePackage{rerunfilecheck}[2009/12/10]
14590 \def\Hy@OutlineRerunCheck{%
14591 \RerunFileCheck{\jobname.out}{%
14592 \immediate\closeout\@outlinefile
14593 }{%
14594 Rerun to get outlines right\MessageBreak
14595 or use package 'bookmark'%
14596 }%
14597 }

```

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.

```

14598 <*vtx>
14599 \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.

```

14600 \begingroup
14601 \catcode'\=12 %
14602 \ifnum\Hy@VTeXversion<650 %
14603 \catcode'\=12 %
14604 \gdef\hv@pdf@char#1#2#3{%
14605 \char
14606 \ifcase'#1#2#3 %
14607 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14608 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14609 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%

```

```

14610 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14611 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14612 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14613 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14614 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14615 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14616 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14617 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14618 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14619 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14620 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14621 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14622 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14623 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14624 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14625 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14626 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14627 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14628 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14629 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14630 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14631 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14632 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14633 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14634 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14635 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14636 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14637 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14638 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14639 \fi
14640 }%
14641 \else
14642 \gdef\hv@pdf@char{\char'}%
14643 \fi
14644 \endgroup

```

\@@BOOKMARK

```

14645 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14646 \expandafter\edef\csname @count@#3\endcsname{%
14647 \the\@serial@counter
14648 }%
14649 \edef\@mycount{\the\@serial@counter}%
14650 \Hy@StepCount\@serial@counter
14651 \edef\@parcount{%
14652 \expandafter\ifx\csname @count@#5\endcsname\relax
14653 0%
14654 \else
14655 \csname @count@#5\endcsname
14656 \fi
14657 }%
14658 \immediate\special{%
14659 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14660 s=\ifx#2-c\else o\fi,t=#4%
14661 }%
14662 }%

```

\ReadBookmarks


```

14663 \def\ReadBookmarks{%
14664   \begingroup
14665   \def\0{\hv@pdf@char 0}%
14666   \def\1{\hv@pdf@char 1}%
14667   \def\2{\hv@pdf@char 2}%
14668   \def\3{\hv@pdf@char 3}%
14669   \def\({}%
14670   \def\)}%
14671   \def\do##1{%
14672     \ifnum\catcode'##1=\active
14673       \@makeother##1%
14674     \else
14675       \ifnum\catcode'##1=6 %
14676         \@makeother##1%
14677       \fi
14678     \fi
14679   }%
14680   \dospecials
14681   \Hy@safe@activetrue
14682   \InputIfFileExists{\jobname.out}{\}{}%
14683 \endgroup
14684 \ifx\WriteBookmarks\relax
14685 \else
14686   \if@filesw
14687     \newwrite\@outlinefile
14688     \Hy@OutlineRerunCheck
14689     \immediate\openout\@outlinefile=\jobname.out\relax
14690     \ifHy@typexml
14691       \immediate\write\@outlinefile{<relaxxml>\relax}%
14692     \fi
14693   \fi
14694 \fi
14695 }

14696 \</vtex>
14697 (*!vtex)
14698 \def\ReadBookmarks{%
14699   \pdf@ifdraftmode{\}{%
14700     \begingroup
14701     \def\do##1{%
14702       \ifnum\catcode'##1=\active
14703         \@makeother##1%
14704       \else
14705         \ifnum\catcode'##1=6 %
14706           \@makeother##1%
14707         \fi
14708       \fi
14709     }%
14710     \dospecials
14711     \Hy@safe@activetrue
14712     \escapechar='\'%
14713     \def\@@BOOKMARK[##1][##2]##3##4##5{%
14714       \calc@bm@number{##5}%
14715     }%
14716     \InputIfFileExists{\jobname.out}{\}{}%
14717     \ifx\WriteBookmarks\relax
14718       \global\let\WriteBookmarks\relax
14719     \fi

```

```

14720 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14721 \def\Hy@temp{##4}%
14722 (*pdfTex)
14723 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14724 \Hy@OutlineName{}\Hy@pstringName{%
14725 ##2\check@bm@number{##3}%
14726 }{%
14727 \expandafter\strip@prefix\meaning\Hy@temp
14728 }%
14729 \pdfTex)
14730 (*pdfmark)
14731 \pdfmark{%
14732 pdfmark=/OUT,%
14733 Count={##2\check@bm@number{##3}},%
14734 Dest={##3},%
14735 Title=\expandafter\strip@prefix\meaning\Hy@temp
14736 }%
14737 \pdfmark)
14738 (*dvipdfm|xetex)
14739 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14740 \@pdfm@mark{%
14741 outline \ifHy@DvipdfmxOutlineOpen
14742 [%
14743 \ifnum##21>\z@
14744 \else
14745 -%
14746 \fi
14747 ] %
14748 \fi
14749 ##1<<%
14750 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14751 /A<<%
14752 /S/GoTo%
14753 /D(\Hy@pstringName)%
14754 >>%
14755 >>%
14756 }%
14757 \dvipdfm|xetex)
14758 }%
14759 \begingroup
14760 \def\WriteBookmarks{0}%
14761 \InputIfFileExists{jobname.out}{-}{-}%
14762 \endgroup
14763 %{\escapechar\m@ne\InputIfFileExists{jobname.out}{-}{-}}%
14764 \endgroup
14765 }%
14766 \ifx\WriteBookmarks\relax
14767 \else
14768 \if@files
14769 \newwrite\@outlinefile
14770 \Hy@OutlineRerunCheck
14771 \immediate\openout\@outlinefile=jobname.out\relax
14772 \ifHy@typexml
14773 \immediate\write\@outlinefile{<relaxxml>\relax}%
14774 \fi
14775 \fi
14776 \fi

```

```

14777 }
14778 \<*pdfTeX>
14779 \def\Hy@OutlineName#1#2#3#4{%
14780   \pdfoutline goto name{#2}count#3{#4}%
14781 }
14782 \</pdfTeX>
14783 \def\check@bm@number#1{%
14784   \expandafter\ifx\csname B_#1\endcsname\relax
14785     0%
14786   \else
14787     \csname B_#1\endcsname
14788   \fi
14789 }
14790 \def\calc@bm@number#1{%
14791   \@tempcnta=\check@bm@number{#1}\relax
14792   \advance\@tempcnta by 1 %
14793   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14794 }
14795 \</!vTeX>

14796 \ifHy@implicit
14797 \else
14798   \expandafter\endinput
14799 \fi

14800 \</outlines>
14801 \<*outlines | hypertex>

14802 \newlength\Hy@SectionHShift
14803 \def\Hy@SectionAnchorHref#1{%
14804   \ifx\protect\@typeset@protect
14805     \Hy@@SectionAnchor{#1}%
14806   \fi
14807 }
14808 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
14809   \leavevmode
14810   \hbox to 0pt{%
14811     \kern-\Hy@SectionHShift
14812     \Hy@raisedlink{%
14813       \hyper@anchorstart{#1}\hyper@anchorend
14814     }%
14815     \hss
14816   }%
14817 }
14818 \let\H@old@ssect\@ssect
14819 \def\@ssect#1#2#3#4#5{%
14820   \Hy@MakeCurrentHrefAuto{section*}%
14821   \setlength{\Hy@SectionHShift}{#1}%
14822   \begingroup
14823     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14824     \toks\tw@\expandafter{%
14825       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14826       #5%
14827     }%
14828   \edef\x{\endgroup
14829     \the\toks@\the\toks\tw@}%
14830   }\x
14831 }
14832 \let\H@old@schapter\@schapter

```

```

14833 \def\@schapter#1{%
14834   \begingroup
14835     \let\@mkboth\@gobbletwo
14836     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14837     \Hy@raisedlink{%
14838       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14839     }%
14840   \endgroup
14841   \H@old@chapter{#1}%
14842 }

```

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:

```

14843 \ltx@ifundefined{@chapter}{-}{%
14844   \let\Hy@org@chapter\@chapter
14845   \def\@chapter{%
14846     \def\Hy@next{%
14847       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14848       \Hy@raisedlink{%
14849         \hyper@anchorstart{\@currentHref}\hyper@anchorend
14850       }%
14851     }%
14852     \ifnum\c@secnumdepth>\m@ne
14853       \ltx@ifundefined{if@mainmatter}%
14854       \iftrue{\csname if@mainmatter\endcsname}%
14855       \let\Hy@next\relax
14856     \fi
14857     \fi
14858     \Hy@next
14859     \Hy@org@chapter
14860   }%
14861 }

14862 \let\H@old@part\@part
14863 \begingroup\expandafter\expandafter\expandafter\endgroup
14864 \expandafter\ifx\csname chapter\endcsname\relax
14865   \let\Hy@secnum@part\z@
14866 \else
14867   \let\Hy@secnum@part\m@ne
14868 \fi
14869 \def\@part{%
14870   \ifnum\Hy@secnum@part>\c@secnumdepth
14871     \phantomsection
14872     \fi
14873   \H@old@part
14874 }

14875 \let\H@old@spart\@spart
14876 \def\@spart#1{%
14877   \Hy@MakeCurrentHrefAuto{part*}%
14878   \Hy@raisedlink{%
14879     \hyper@anchorstart{\@currentHref}\hyper@anchorend
14880   }%
14881   \H@old@spart{#1}%
14882 }

14883 \let\H@old@sect\@sect
14884 \def\@sect#1#2#3#4#5#6[#7]#8{%
14885   \ifnum #2>\c@secnumdepth

```

```

14886 \expandafter\@firsttwo
14887 \else
14888 \expandafter\@secondtwo
14889 \fi
14890 {%
14891 \Hy@MakeCurrentHrefAuto{section*}%
14892 \setlength{\Hy@SectionHShift}{#3}%
14893 \begingroup
14894 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14895 \toks\tw@\expandafter{%
14896 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14897 #8%
14898 }%
14899 \edef\x{\endgroup
14900 \the\toks@\the\toks\tw@}%
14901 }\x
14902 }{%
14903 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14904 }%
14905 }

14906 </outlines | hypertex>
14907 <*outlines>

14908 \expandafter\def\csname Parent-4\endcsname{}
14909 \expandafter\def\csname Parent-3\endcsname{}
14910 \expandafter\def\csname Parent-2\endcsname{}
14911 \expandafter\def\csname Parent-1\endcsname{}
14912 \expandafter\def\csname Parent0\endcsname{}
14913 \expandafter\def\csname Parent1\endcsname{}
14914 \expandafter\def\csname Parent2\endcsname{}
14915 \expandafter\def\csname Parent3\endcsname{}
14916 \expandafter\def\csname Parent4\endcsname{}
14917 </outlines>

```

50 Compatibility with koma-script classes

```

14918 <*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.

```

14919 \def\Hy@tempa{%
14920 \def\@addchap[##1]##2{%
14921 \typeout{##2}%
14922 \if@twoside
14923 \@mkboth{##1}{}%
14924 \else
14925 \@mkboth{}{##1}%
14926 \fi
14927 \addtocontents{lof}{\protect\addvspace{10\p@}}%
14928 \addtocontents{lot}{\protect\addvspace{10\p@}}%
14929 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14930 \Hy@raisedlink{%
14931 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14932 }%
14933 \if@twocolumn

```

```

14934 \topnewpage[\@makeschapterhead{##2}]%
14935 \else
14936 \@makeschapterhead{##2}%
14937 \@afterheading
14938 \fi
14939 \addcontentsline{toc}{chapter}{##1}%
14940 }%
14941 }
14942 \@ifclassloaded{scrbook}{%
14943 \@ifclasslater{scrbook}{2001/01/01}{%
14944 \let\Hy@tempa\@empty
14945 }{}%
14946 }{%
14947 \@ifclassloaded{scrreprt}{%
14948 \@ifclasslater{scrreprt}{2001/01/01}{%
14949 \let\Hy@tempa\@empty
14950 }{}%
14951 }{%
14952 \let\Hy@tempa\@empty
14953 }%
14954 }%
14955 \Hy@tempa
14956 </outlines | hypertext>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

14957 <*pd1enc>
14958 \DeclareFontEncoding{PD1}{}{}

Accents
14959 \DeclareTextAccent{'}{PD1}{\textasciigrave}
14960 \DeclareTextAccent{'}{PD1}{\textacute}
14961 \DeclareTextAccent{^}{PD1}{\textasciicircum}
14962 \DeclareTextAccent{~}{PD1}{\texttilde}
14963 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
14964 \DeclareTextAccent{r}{PD1}{\textstring}
14965 \DeclareTextAccent{v}{PD1}{\textasciicaron}
14966 \DeclareTextAccent{.}{PD1}{\textdotaccent}
14967 \DeclareTextAccent{c}{PD1}{\textcedilla}
14968 \DeclareTextAccent{=}{PD1}{\textasciimacron}
14969 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
14970 \DeclareTextAccent{d}{PD1}{\textdotbelow}
14971 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
14972 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
14973 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
14974 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
14975 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
14976 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textstring}
14977 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
14978 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
14979 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
14980 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}

```

```

14981 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14982 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14983 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
14984 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textacute}
14985 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
14986 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14987 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14988 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14989 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14990 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14991 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14992 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
14993 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14994 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14995 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14996 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14997 \DeclareTextCommand{\newtie}{PD1}[1]{%
14998 \TextSymbolUnavailable{\newtie{#1}}#1%
14999 }

```

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

```

15000 % U+0009 (CHARACTER TABULATION)
15001 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15002 % U+000A (LINE FEED)
15003 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15004 % U+000D (CARRIAGE RETURN)
15005 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15006 % U+02D8 BREVE; breve
15007 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15008 % U+02C7 CARON; caron
15009 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15010 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15011 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15012 % U+02D9 DOT ABOVE; dotaccent
15013 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15014 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15015 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15016 % U+02DB OGONEK; ogonek
15017 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15018 % U+02DA RING ABOVE; ring
15019 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15020 % U+02DC SMALL TILDE; ilde, *tilde
15021 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

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

\041: U+0021 EXCLAMATION MARK; exclam

```

15022 % U+0022 QUOTATION MARK; quotedbl
15023 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
15024 % U+0023 NUMBER SIGN; numbersign
15025 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
15026 % U+0024 DOLLAR SIGN; dollar
15027 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
15028 % U+0025 PERCENT SIGN; percent
15029 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
15030 % U+0026 AMPERSAND; ampersand
15031 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

 15032 % U+0028 LEFT PARENTHESIS; parenleft
 15033 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 15034 % U+0029 RIGHT PARENTHESIS; parenright
 15035 \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
 15036 % U+002E FULL STOP; period
 15037 \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
 15038 % U+003C LESS-THAN SIGN; less
 15039 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

 \075: U+003D EQUALS SIGN; equal
 15040 % U+003E GREATER-THAN SIGN; greater
 15041 \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
 15042 % U+005C REVERSE SOLIDUS; backslash
 15043 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15044 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15045 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}

 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15046 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15047 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15048 % U+005F LOW LINE; underscore
 15049 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15050 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15051 % U+0060 GRAVE ACCENT; grave
 15052 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060

 \141: U+0061 LATIN SMALL LETTER A; a

 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15053 % U+0069 LATIN SMALL LETTER I; i
 15054 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

 \152: U+006A LATIN SMALL LETTER J; j

 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15055 % U+007B LEFT CURLY BRACKET; braceleft
 15056 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15057 % U+007C VERTICAL LINE; *bar, verticalbar

15058 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
15059 % U+007D RIGHT CURLY BRACKET; braceright
15060 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
15061 % U+007E TILDE; asciitilde
15062 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
15063 % U+2022 BULLET; bullet
15064 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
15065 % U+2020 DAGGER; dagger
15066 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
15067 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
15068 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
15069 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
15070 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
15071 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
15072 % U+2014 EM DASH; emdash
15073 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
15074 % U+2013 EN DASH; endash
15075 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
15076 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
15077 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
15078 % U+2044 FRACTION SLASH; fraction
15079 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
15080 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
15081 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
15082 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
15083 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
15084 % U+2212 MINUS SIGN; minus
15085 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
15086 % U+2030 PER MILLE SIGN; perthousand
15087 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
15088 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15089 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
15090 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
15091 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
15092 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15093 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
15094 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15095 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
15096 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
15097 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
15098 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
15099 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
15100 % U+2122 TRADE MARK SIGN; trademark
15101 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
15102 % U+FB01 LATIN SMALL LIGATURE FI; fi
15103 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
15104 % U+FB02 LATIN SMALL LIGATURE FL; fl
15105 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
15106 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15107 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
15108 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15109 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
15110 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15111 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160

15112 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15113 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
15114 \DeclareTextCommand{\IJ}{PD1}{\230}
15115 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15116 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
15117 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15118 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
15119 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15120 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
15121 % U+0153 LATIN SMALL LIGATURE OE; oe
15122 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
15123 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15124 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
15125 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15126 \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.

15127 % U+20AC EURO SIGN; *Euro, euro
15128 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
15129 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15130 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
15131 % U+00A2 CENT SIGN; cent
15132 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
15133 % U+00A3 POUND SIGN; sterling
15134 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
15135 % U+00A4 CURRENCY SIGN; currency
15136 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
15137 % U+00A5 YEN SIGN; yen
15138 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
15139 % U+00A6 BROKEN BAR; brokenbar
15140 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
15141 % U+00A7 SECTION SIGN; section
15142 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
15143 % U+00A8 DIAERESIS; dieresis
15144 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
15145 % U+00A9 COPYRIGHT SIGN; copyright
15146 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
15147 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15148 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
15149 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
15150 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
15151 % U+00AC NOT SIGN; logicalnot
15152 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
15153 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

15154 % U+00AE REGISTERED SIGN; registered
15155 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
15156 % U+00AF MACRON; *macron, overscore
15157 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15158 % U+00B0 DEGREE SIGN; degree
15159 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15160 % U+00B1 PLUS-MINUS SIGN; plusminus
15161 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15162 % U+00B2 SUPERSCRIPT TWO; twosuperior
15163 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15164 % U+00B3 SUPERSCRIPT THREE; threesuperior

15165 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15166 % U+00B4 ACUTE ACCENT; acute
15167 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15168 % U+00B5 MICRO SIGN; mu, mul
15169 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15170 % U+00B6 PILCROW SIGN; paragraph
15171 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15172 % U+00B7 MIDDLE DOT; middot, *periodcentered
15173 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15174 % U+00B8 CEDILLA; cedilla
15175 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15176 % U+00B9 SUPERSCRIPT ONE; onesuperior
15177 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15178 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15179 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15180 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15181 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15182 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15183 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15184 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15185 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15186 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15187 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15188 % U+00BF INVERTED QUESTION MARK; questiondown
15189 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15190 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15191 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15192 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15193 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15194 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15195 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15196 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15197 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15198 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15199 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
15200 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15201 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15202 % U+00C6 LATIN CAPITAL LETTER AE; AE
15203 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15204 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15205 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15206 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15207 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15208 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15209 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15210 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15211 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15212 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15213 \DeclareTextCompositeCommand{\\"}{PD1}{E}{\313}% U+00CB
15214 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15215 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15216 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15217 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15218 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15219 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15220 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis

15221 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
15222 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15223 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15224 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15225 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15226 \DeclareTextCompositeCommand{~}{PD1}{N}{\321}% U+00D1
15227 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15228 \DeclareTextCompositeCommand{'}{PD1}{O}{\322}% U+00D2
15229 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15230 \DeclareTextCompositeCommand{'}{PD1}{O}{\323}% U+00D3
15231 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15232 \DeclareTextCompositeCommand{^}{PD1}{O}{\324}% U+00D4
15233 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15234 \DeclareTextCompositeCommand{~}{PD1}{O}{\325}% U+00D5
15235 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15236 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
15237 % U+00D7 MULTIPLICATION SIGN; multiply
15238 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15239 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15240 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15241 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15242 \DeclareTextCompositeCommand{'}{PD1}{U}{\331}% U+00D9
15243 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15244 \DeclareTextCompositeCommand{'}{PD1}{U}{\332}% U+00DA
15245 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15246 \DeclareTextCompositeCommand{^}{PD1}{U}{\333}% U+00DB
15247 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15248 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
15249 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15250 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
15251 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15252 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15253 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15254 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15255 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15256 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15257 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
15258 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15259 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
15260 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15261 \DeclareTextCompositeCommand{^}{PD1}{a}{\342}% U+00E2
15262 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15263 \DeclareTextCompositeCommand{~}{PD1}{a}{\343}% U+00E3
15264 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15265 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
15266 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15267 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15268 % U+00E6 LATIN SMALL LETTER AE; ae
15269 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15270 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15271 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15272 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15273 \DeclareTextCompositeCommand{'}{PD1}{e}{\350}% U+00E8
15274 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15275 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
15276 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15277 \DeclareTextCompositeCommand{^}{PD1}{e}{\352}% U+00EA

15278 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
 15279 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
 15280 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
 15281 \DeclareTextCompositeCommand{"}{PD1}{i}{\354}% U+00EC
 15282 \DeclareTextCompositeCommand{"}{PD1}{i}{\354}% U+00EC
 15283 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
 15284 \DeclareTextCompositeCommand{"}{PD1}{i}{\355}% U+00ED
 15285 \DeclareTextCompositeCommand{"}{PD1}{i}{\355}% U+00ED
 15286 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
 15287 \DeclareTextCompositeCommand{"}{PD1}{i}{\356}% U+00EE
 15288 \DeclareTextCompositeCommand{"}{PD1}{i}{\356}% U+00EE
 15289 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 15290 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
 15291 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
 15292 % U+00F0 LATIN SMALL LETTER ETH; eth
 15293 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
 15294 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 15295 \DeclareTextCompositeCommand{"}{PD1}{n}{\361}% U+00F1
 15296 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 15297 \DeclareTextCompositeCommand{"}{PD1}{o}{\362}% U+00F2
 15298 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 15299 \DeclareTextCompositeCommand{"}{PD1}{o}{\363}% U+00F3
 15300 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 15301 \DeclareTextCompositeCommand{"}{PD1}{o}{\364}% U+00F4
 15302 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otile
 15303 \DeclareTextCompositeCommand{"}{PD1}{o}{\365}% U+00F5
 15304 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 15305 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
 15306 % U+00F7 DIVISION SIGN; divide
 15307 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 15308 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 15309 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 15310 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 15311 \DeclareTextCompositeCommand{"}{PD1}{u}{\371}% U+00F9
 15312 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 15313 \DeclareTextCompositeCommand{"}{PD1}{u}{\372}% U+00FA
 15314 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 15315 \DeclareTextCompositeCommand{"}{PD1}{u}{\373}% U+00FB
 15316 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 15317 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
 15318 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 15319 \DeclareTextCompositeCommand{"}{PD1}{y}{\375}% U+00FD
 15320 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
 15321 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 15322 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
 15323 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 15324 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
 15325 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

15326 \DeclareTextCommand{\SS}{PD1}{SS}%
 15327 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)

15328 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
 15329 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
 15330 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
 15331 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
 15332 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%

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15333 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15334 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15335 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%
Aliases (math names)
15336 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15337 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15338 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15339 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15340 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15341 \DeclareTextCommand{\textbeta}{PD1}{\ss}%

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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).

```

15342 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15343 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15344 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15345 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15346 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15347 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15348 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15349 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15350 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15351 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15352 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15353 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15354 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15355 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15356 \pdlenc

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51.2 PU encoding

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15357 \*puenc
15358 \DeclareFontEncoding{PU}{-}{-}

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51.2.1 NFSS2 accents

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15359 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15360 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15361 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15362 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15363 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15364 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15365 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15366 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15367 % U+0304 COMBINING MACRON; macroncmb
15368 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15369 % U+0306 COMBINING BREVE; brevecmb
15370 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15371 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15372 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15373 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15374 % U+0308 COMBINING DIAERESIS; dieresiscmb
15375 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15376 % U+030A COMBINING RING ABOVE; ringcmb
15377 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15378 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15379 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15380 % U+030C COMBINING CARON; caroncmb

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15381 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 15382 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 15383 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 15384 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 15385 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 15386 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
 15387 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 15388 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 15389 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
 laut (tipa)
 15390 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
 15391 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
 15392 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
 15393 % U+0327 COMBINING CEDILLA; cedillacmb
 15394 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 15395 % U+0328 COMBINING OGONEK; ogonekcmb
 15396 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 15397 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
 15398 % \textsubcircum (tipa)
 15399 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
 15400 % U+032E COMBINING BREVE BELOW; brevebelowcmb
 15401 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
 15402 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
 15403 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
 15404 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 15405 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 15406 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 15407 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 15408 % U+20DD COMBINING ENCLOSING CIRCLE
 15409 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

15410 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
 15411 \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.

15412 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}%
 15413 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textacute}%
 15414 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
 15415 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
 15416 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
 15417 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
 15418 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
 15419 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
 15420 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
 15421 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
 15422 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
 15423 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
 15424 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
 15425 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
 15426 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}% U+0311
 15427 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\83\044}% U+0324
 15428 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
 15429 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
 low}%
 15430 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\83\056}% U+032E
 15431 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%

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15432 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15433 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15434 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15435 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15436 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15437 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
15438 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
15439 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}%
15440 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textacute}%
15441 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
15442 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15443 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15444 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15445 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15446 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15447 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15448 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15449 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15450 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15451 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15452 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15453 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
15454 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
15455 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\texttriglow}%
15456 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15457 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
15458 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
15459 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15460 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15461 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15462 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15463 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15464 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
15465 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

15466 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15467 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15468 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15469 \DeclareTextCommand{\capitalacute}{PU}[1]{\`{#1}}%
15470 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15471 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15472 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"}{#1}}%
15473 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15474 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15475 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15476 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15477 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15478 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
15479 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15480 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

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

Special white space escape characters.

```

15481 % U+0009 (CHARACTER TABULATION)
15482 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
15483 % U+000A (LINE FEED)

```


15484 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
 15485 % U+000D (CARRIAGE RETURN)
 15486 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
 \80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 15487 % U+0022 QUOTATION MARK; quotedbl
 15488 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
 15489 % U+0023 NUMBER SIGN; numbersign
 15490 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 15491 % U+0024 DOLLAR SIGN; dollar
 15492 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 15493 %* \textdollar -> \mathdollar
 15494 %* \textdollar -> \EyesDollar (marvosym)
 15495 % U+0025 PERCENT SIGN; percent
 15496 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 15497 % U+0026 AMPERSAND; ampersand
 15498 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 15499 %* \textampersand -> \binampersand (stmaryrd)
 15500 %* \textampersand -> \with (cml)
 15501 % U+0027 APOSTROPHE; quotesingle
 15502 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 15503 % U+0028 LEFT PARENTHESIS; parenleft
 15504 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 15505 % U+0029 RIGHT PARENTHESIS; parenright
 15506 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 15507 % U+002A ASTERISK; asterisk; (?)
 15508 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
 15509 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
 15510 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
 15511 % U+002C COMMA; comma; \MVComma (marvosym)
 15512 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
 15513 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
 15514 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
 15515 % U+002E FULL STOP; period; \MVPeriod (marvosym)
 15516 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
 15517 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
 15518 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
 15519 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
 15520 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
 15521 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
 15522 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 15523 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 15524 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 15525 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 15526 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 15527 % U+0034 DIGIT FOUR; four; \MVFfour (marvosym)
 15528 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
 15529 % U+0035 DIGIT FIVE; five; \MVFfive (marvosym)
 15530 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
 15531 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 15532 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 15533 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 15534 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 15535 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 15536 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 15537 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 15538 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

$\backslash 80\backslash 072$: U+003A COLON; colon
 $\backslash 80\backslash 073$: U+003B SEMICOLON; semicolon
15539 % U+003C LESS-THAN SIGN; less
15540 $\backslash \text{DeclareTextCommand}\{\backslash \text{textless}\}\{\text{PU}\}\{<\}\%$ $\backslash 80\backslash 074$ U+003C
 $\backslash 80\backslash 075$: U+003D EQUALS SIGN; equal
15541 % U+003E GREATER-THAN SIGN; greater
15542 $\backslash \text{DeclareTextCommand}\{\backslash \text{textgreater}\}\{\text{PU}\}\{>\}\%$ $\backslash 80\backslash 076$ U+003E
 $\backslash 80\backslash 077$: U+003F QUESTION MARK; question
15543 % U+0040 COMMERCIAL AT; at; $\backslash \text{MVAt}$ (marvosym)
15544 $\backslash \text{DeclareTextCommand}\{\backslash \text{textMVAt}\}\{\text{PU}\}\{\backslash 80\backslash 100\}\%$ U+0040
 $\backslash 80\backslash 101$: U+0041 LATIN CAPITAL LETTER A; A
...
 $\backslash 80\backslash 132$: U+005A LATIN CAPITAL LETTER Z; Z
 $\backslash 80\backslash 133$: U+005B LEFT SQUARE BRACKET; bracketleft
15545 % U+005C REVERSE SOLIDUS; backslash
15546 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbackslash}\}\{\text{PU}\}\{\backslash 80\backslash 134\}\%$ U+005C
 $\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
15547 % U+005E CIRCUMFLEX ACCENT; asciicircum
15548 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciicircum}\}\{\text{PU}\}\{\backslash 80\backslash 136\}\%$ U+005E
15549 % U+005F LOW LINE; underscore
15550 $\backslash \text{DeclareTextCommand}\{\backslash \text{textunderscore}\}\{\text{PU}\}\{\backslash 80\backslash 137\}\%$ U+005F
15551 %* $\backslash \text{textunderscore} \rightarrow \backslash \text{mathunderscore}$ (LaTeX)
15552 % U+0060 GRAVE ACCENT; grave
15553 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciigrave}\}\{\text{PU}\}\{\backslash 80\backslash 140\}\%$ U+0060
 $\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
15554 % U+0069 LATIN SMALL LETTER I; i
15555 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
15556 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
15557 % U+007B LEFT CURLY BRACKET; braceleft
15558 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173\}\%$ U+007B
15559 % U+007C VERTICAL LINE; *bar, verticalbar
15560 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\text{|}\}\%$ $\backslash 80\backslash 174$ U+007C
15561 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvertline}$ (tipa)
15562 % U+007D RIGHT CURLY BRACKET; braceright
15563 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175\}\%$ U+007D
15564 % U+007E TILDE; asciitilde
15565 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176\}\%$ U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15566 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15567 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241\}\%$ U+00A1
15568 % U+00A2 CENT SIGN; cent
15569 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}\{\text{PU}\}\{\backslash 80\backslash 242\}\%$ U+00A2
15570 % U+00A3 POUND SIGN; sterling
15571 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}\{\text{PU}\}\{\backslash 80\backslash 243\}\%$ U+00A3
15572 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)

15573 %* \textsterling -> \pounds (LaTeX)
 15574 % U+00A4 CURRENCY SIGN; currency
 15575 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 15576 % U+00A5 YEN SIGN; yen
 15577 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 15578 % U+00A6 BROKEN BAR; brokenbar
 15579 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 15580 %* \textbrokenbar -> \brokenvert (wasysym)
 15581 % U+00A7 SECTION SIGN; section
 15582 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 15583 %* \textsection -> \mathsection (LaTeX)
 15584 %* \textsection -> \S (LaTeX)
 15585 % U+00A8 DIAERESIS; dieresis
 15586 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 15587 % U+00A9 COPYRIGHT SIGN; copyright
 15588 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 15589 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15590 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 15591 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 15592 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 15593 % U+00AC NOT SIGN; logicalnot
 15594 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 15595 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sftthyphen, softthyphen
 15596 % U+00AE REGISTERED SIGN; registered
 15597 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 15598 % U+00AF MACRON; *macron, overscore
 15599 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 15600 % U+00B0 DEGREE SIGN; degree
 15601 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 15602 % U+00B1 PLUS-MINUS SIGN; plusminus
 15603 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 15604 % U+00B2 SUPERScript TWO; twosuperior
 15605 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
 15606 % U+00B3 SUPERScript THREE; threesuperior
 15607 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
 15608 % U+00B4 ACUTE ACCENT; acute
 15609 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 15610 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 15611 % U+00B5 MICRO SIGN; mu, mu1
 15612 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 15613 % U+00B6 PILCROW SIGN; paragraph
 15614 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 15615 %* \textparagraph -> \mathparagraph (LaTeX)
 15616 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15617 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 15618 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 15619 %* \textperiodcentered -> \Squaredot (marvosym)
 15620 % U+00B8 CEDILLA; cedilla
 15621 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 15622 % U+00B9 SUPERScript ONE; onesuperior
 15623 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
 15624 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 15625 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 15626 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright

15627 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15628 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15629 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15630 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15631 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15632 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15633 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15634 % U+00BF INVERTED QUESTION MARK; questiondown
15635 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15636 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15637 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15638 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15639 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15640 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15641 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15642 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15643 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15644 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15645 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15646 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15647 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15648 % U+00C6 LATIN CAPITAL LETTER AE; AE
15649 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15650 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15651 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15652 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15653 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15654 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15655 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15656 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15657 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15658 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15659 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15660 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15661 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15662 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15663 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15664 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15665 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15666 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15667 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15668 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15669 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15670 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15671 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15672 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15673 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15674 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15675 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15676 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15677 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15678 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15679 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15680 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15681 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15682 % U+00D7 MULTIPLICATION SIGN; multiply
15683 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7

15684 %* \textmultiply -> \vartimes (stmaryrd)
15685 %* \textmultiply -> \MVMultiplication (marvosym)
15686 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15687 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15688 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15689 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
15690 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15691 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15692 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15693 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15694 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15695 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15696 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15697 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15698 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15699 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15700 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15701 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15702 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15703 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15704 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
15705 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15706 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15707 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15708 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15709 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15710 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15711 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15712 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15713 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15714 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15715 % U+00E6 LATIN SMALL LETTER AE; ae
15716 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15717 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15718 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15719 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15720 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
15721 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15722 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15723 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15724 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15725 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15726 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15727 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15728 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
15729 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
15730 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15731 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15732 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15733 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15734 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15735 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15736 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15737 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15738 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15739 % U+00F0 LATIN SMALL LETTER ETH; eth
15740 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0

15741 %* \dh -> \eth (wsuipa, phonetic)
 15742 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 15743 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 15744 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 15745 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 15746 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 15747 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 15748 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 15749 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 15750 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 15751 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 15752 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 15753 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 15754 % U+00F7 DIVISION SIGN; divide
 15755 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 15756 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 15757 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 15758 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 15759 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 15760 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 15761 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 15762 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 15763 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 15764 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 15765 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 15766 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 15767 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 15768 % U+00FE LATIN SMALL LETTER THORN; thorn;
 15769 % \th, \thorn (wasysym), \textthorn (tipa)
 15770 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 15771 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 15772 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 15773 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

15774 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 15775 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 15776 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 15777 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 15778 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 15779 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 15780 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 15781 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 15782 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 15783 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 15784 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 15785 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 15786 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 15787 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 15788 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 15789 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 15790 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 15791 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 15792 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 15793 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109

15794 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
15795 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15796 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15797 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15798 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15799 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15800 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15801 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15802 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15803 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15804 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15805 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15806 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15807 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15808 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15809 % \textcrd (tipa)
15810 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15811 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15812 %* \textcrd -> \crossd (wsuipa)
15813 % An alternate glyph with the stroke through the bowl:
15814 %* \textcrd -> \textbard (tipa)
15815 %* \textcrd -> \bard (wsuipa)
15816 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15817 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15818 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15819 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15820 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15821 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15822 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15823 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15824 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15825 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15826 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15827 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15828 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15829 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15830 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15831 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15832 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15833 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15834 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15835 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15836 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15837 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15838 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15839 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15840 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15841 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15842 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15843 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15844 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
15845 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15846 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15847 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121

15848 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
15849 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15850 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15851 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15852 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15853 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15854 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15855 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15856 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15857 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15858 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
15859 \DeclareTextCommand{\textthbar}{PU}{\81\047}%* U+0127
15860 %* \textthbar -> \textcrh (tipa)
15861 %* \textthbar -> \crossh (wsuipa)
15862 %* \textthbar -> \planck (phonetic)
15863 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15864 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15865 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15866 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15867 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
15868 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15869 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15870 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15871 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15872 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
15873 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15874 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15875 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15876 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15877 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
15878 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15879 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15880 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15881 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15882 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
15883 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15884 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15885 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15886 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15887 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15888 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15889 % U+0133 LATIN SMALL LIGATURE IJ; ij
15890 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15891 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15892 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15893 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15894 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15895 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
15896 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
15897 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
15898 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
15899 \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`.

15900 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
15901 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
15902 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
15903 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
15904 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
15905 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
15906 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
15907 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
15908 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
15909 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
15910 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
15911 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
15912 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
15913 \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.
15914 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
15915 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
15916 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
15917 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
15918 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15919 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
15920 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15921 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
15922 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
15923 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
15924 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
15925 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
15926 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
15927 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15928 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15929 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15930 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15931 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15932 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15933 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15934 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
15935 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15936 % U+014A LATIN CAPITAL LETTER ENG; Eng
15937 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15938 % U+014B LATIN SMALL LETTER ENG; eng
15939 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15940 %* \ng -> \eng (wsuipa)
15941 %* \ng -> \engma (phonetic)
15942 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15943 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
15944 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15945 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
15946 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15947 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15948 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15949 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F

15950 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 15951 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 15952 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 15953 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 15954 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15955 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 15956 % U+0153 LATIN SMALL LIGATURE OE; oe
 15957 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 15958 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 15959 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 15960 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 15961 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 15962 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 15963 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 15964 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 15965 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 15966 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 15967 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 15968 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 15969 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 15970 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 15971 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 15972 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 15973 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 15974 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 15975 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 15976 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 15977 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 15978 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 15979 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 15980 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 15981 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 15982 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15983 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 15984 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15985 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 15986 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 15987 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 15988 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 15989 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 15990 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 15991 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 15992 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 15993 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 15994 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 15995 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 15996 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 15997 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 15998 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 15999 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 16000 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 16001 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 16002 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron

16003 \DeclareTextCompositeCommand{=} {PU}{U}{\81\152}% U+016A
 16004 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 16005 \DeclareTextCompositeCommand{=} {PU}{u}{\81\153}% U+016B
 16006 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 16007 \DeclareTextCompositeCommand{\u} {PU}{U}{\81\154}% U+016C
 16008 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16009 \DeclareTextCompositeCommand{\u} {PU}{u}{\81\155}% U+016D
 16010 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16011 \DeclareTextCompositeCommand{\r} {PU}{U}{\81\156}% U+016E
 16012 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16013 \DeclareTextCompositeCommand{\r} {PU}{u}{\81\157}% U+016F
 16014 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 16015 \DeclareTextCompositeCommand{\H} {PU}{U}{\81\160}% U+0170
 16016 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 16017 \DeclareTextCompositeCommand{\H} {PU}{u}{\81\161}% U+0171
 16018 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16019 \DeclareTextCompositeCommand{\k} {PU}{U}{\81\162}% U+0172
 16020 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16021 \DeclareTextCompositeCommand{\k} {PU}{u}{\81\163}% U+0173
 16022 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16023 \DeclareTextCompositeCommand{^} {PU}{W}{\81\164}% U+0174
 16024 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16025 \DeclareTextCompositeCommand{^} {PU}{w}{\81\165}% U+0175
 16026 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16027 \DeclareTextCompositeCommand{^} {PU}{Y}{\81\166}% U+0176
 16028 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16029 \DeclareTextCompositeCommand{^} {PU}{y}{\81\167}% U+0177
 16030 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16031 \DeclareTextCompositeCommand{"} {PU}{Y}{\81\170}% U+0178
 16032 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16033 \DeclareTextCompositeCommand{' } {PU}{Z}{\81\171}% U+0179
 16034 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16035 \DeclareTextCompositeCommand{' } {PU}{z}{\81\172}% U+017A
 16036 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16037 \DeclareTextCompositeCommand{.} {PU}{Z}{\81\173}% U+017B
 16038 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16039 \DeclareTextCompositeCommand{.} {PU}{z}{\81\174}% U+017C
 16040 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16041 \DeclareTextCompositeCommand{\v} {PU}{Z}{\81\175}% U+017D
 16042 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16043 \DeclareTextCompositeCommand{\v} {PU}{z}{\81\176}% U+017E
 16044 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16045 \DeclareTextCommand{\textlongS} {PU}{\81\177}% U+017F

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

16046 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16047 \DeclareTextCommand{\textcrb} {PU}{\81\200}% U+0180
 16048 %* \textcrb -> \crossb (wsuipa)
 16049 % An alternate glyph with the stroke through the bowl:
 16050 %* \textcrb -> \textbarb (tipa)
 16051 %* \textcrb -> \barb (wsuipa)
 16052 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
 16053 \DeclareTextCommand{\texthausab} {PU}{\81\201}%* U+0181
 16054 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)

16055 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16056 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
netic)
16057 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16058 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
16059 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
16060 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16061 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16062 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16063 %* \textflorin -> \Florin (marvosym)
16064 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16065 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16066 %* \texthvlig -> \hv (wsuipa)
16067 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
netic)
16068 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16069 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16070 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16071 %* \texthtk -> \hausak (phonetic)
16072 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16073 % \textbarl (tipa), \barl (wsuipa)
16074 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16075 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16076 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16077 % \textcrlambda (tipa)
16078 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16079 %* \textcrlambda -> \crossnilambda (wsuipa)
16080 %* \textcrlambda -> \barlambda (phonetic)
16081 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16082 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
16083 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
long;
16084 % \textnrleg (tipx)
16085 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16086 %* \textPUnrleg -> \textnrleg (tipx)
16087 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16088 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16089 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16090 % \textlhookt (tipa)
16091 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16092 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16093 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16094 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16095 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16096 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16097 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16098 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16099 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16100 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16101 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16102 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16103 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16104 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16105 % \textpipe (tipa)
16106 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16107 %* \textpipe -> \textpipevar (tipx)

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16108 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16109 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16110 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16111 %* \textdoublepipe -> \textdoublepipevar (tipx)
16112 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
    BLE BAR;
16113 % clickalveolar; \textdoublebarpipe (tipa)
16114 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16115 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16116 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16117 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16118 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
16119 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16120 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16121 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16122 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
16123 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16124 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16125 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16126 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16127 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
16128 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16129 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16130 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16131 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
16132 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16133 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16134 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16135 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16136 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16137 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16138 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16139 %* \textgslash -> \textcrg (tipa)
16140 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16141 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16142 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16143 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16144 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16145 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16146 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
16147 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16148 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16149 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16150 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16151 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16152 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16153 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16154 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16155 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16156 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16157 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16158 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16159 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16160 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16161 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16162 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16163 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute

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16164 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16165 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16166 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16167 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16168 % *Oslashacute, Ostrokeacut
16169 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16170 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16171 % *oslashacute, ostrokeacute
16172 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16173 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16174 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16175 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16176 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16177 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16178 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16179 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16180 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16181 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16182 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16183 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einverted-
breve
16184 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16185 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16186 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16187 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16188 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16189 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16190 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16191 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16192 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16193 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16194 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16195 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16196 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16197 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16198 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16199 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16200 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16201 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16202 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16203 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16204 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16205 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16206 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16207 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16208 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16209 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16210 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16211 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16212 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216

16213 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-breve
 16214 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16215 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16216 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16217 % U+021F LATIN SMALL LETTER H WITH CARON
 16218 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16219 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16220 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16221 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16222 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16223 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16224 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16225 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16226 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16227 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16228 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16229 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16230 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16231 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16232 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16233 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16234 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16235 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16236 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16237 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16238 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16239 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16240 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16241 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16242 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16243 % U+0237 LATIN SMALL LETTER DOTLESS J
 16244 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16245 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16246 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16247 %* \textPUdblig -> \textdblig (tipx)
 16248 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16249 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16250 %* \textPUqplig -> \textqplig (tipx)
 16251 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16252 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16253 %* \textslashc -> \textcentoldstyle (textcomp)
 16254 % With bar instead of stroke:
 16255 %* \textslashc -> \textbarc (tipa)

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

16256 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16257 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16258 %* \textturna -> \inva (wasysym)
 16259 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16260 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16261 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16262 %* \textscripta -> \vara (phonetic)
 16263 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16264 % \textturnscripta (tipa)
 16265 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16266 %* \textturnscripta -> \invscripta (wsuipa)

16267 %* \textturnscripta -> \rotvara (phonetic)
 16268 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16269 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16270 %* \texthtb -> \hookb (wsuipa)
 16271 %* \texthtb -> \hausab (phonetic)
 16272 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16273 % \textopeno (tipa), \openo (wasysym)
 16274 \DeclareTextCommand{\textopeno}{PU}{\82\124}% U+0254
 16275 %* \textopeno -> \varopeno (phonetic)
 16276 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16277 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16278 %* \textctc -> \curlyc (wsuipa)
 16279 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16280 \DeclareTextCommand{\textrtaild}{PU}{\82\126}% U+0256
 16281 %* \textrtaild -> \taild (wsuipa)
 16282 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16283 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16284 %* \texthtd -> \hookd (wsuipa)
 16285 %* \texthtd -> \hausad (phonetic)
 16286 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16287 % \textreve (tipa), \reve (wsuipa)
 16288 \DeclareTextCommand{\textreve}{PU}{\82\130}% U+0258
 16289 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16290 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16291 \DeclareTextCommand{\textschwa}{PU}{\82\131}% U+0259
 16292 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16293 % \textrhookschwa (tipa)
 16294 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16295 %* \textrhookschwa -> \er (wsuipa)
 16296 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16297 % \niepsilon (wsuipa)
 16298 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}% U+025B
 16299 %* \textniepsilon -> \epsi (phonetic)
 16300 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16301 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16302 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}% U+025C
 16303 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16304 % \textrhookrevepsilon (tipa)
 16305 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}% U+025D
 16306 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
 16307 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16308 % \textcloserevepsilon (tipa)
 16309 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16310 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16311 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16312 % \textbardotlessj (tipa)
 16313 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16314 %* \textbardotlessj -> \barj (phonetic)
 16315 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16316 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16317 %* \texthtg -> \hookg (wsuipa)
 16318 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16319 % \textscriptg (tipa), \scriptg (wsuipa)

16320 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16321 %* \textscriptg -> \varg (phonetic)
16322 % U+0262 LATIN SMALL LETTER CAPITAL G; \textscg (tipa), \scg (wsuipa)
16323 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16324 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
16325 % \ipagamma (wsuipa), \vod (phonetic)
16326 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16327 %* \textipagamma -> \vod (phonetic)
16328 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16329 % \babygamma (wsuipa)
16330 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16331 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16332 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16333 %* \textturnh -> \invh (wsuipa)
16334 %* \textturnh -> \udesc (phonetic)
16335 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16336 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16337 %* \texthth -> \hookh (wsuipa)
16338 %* \texthth -> \voicedh (phonetic)
16339 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16340 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16341 %* \texththeng -> \hookheng (wsuipa)
16342 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16343 % \textbari (tipa), \bari (wsuipa)
16344 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16345 %* \textbari -> \ibar (phonetic)
16346 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16347 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16348 %* \textniiota -> \vari (phonetic)
16349 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16350 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16351 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16352 % \textltilde (tipa)
16353 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16354 %* \textltilde -> \tildel (wsuipa)
16355 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16356 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16357 %* \textbeltl -> \latfric (wsuipa)
16358 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16359 % lhookretroflex; \textrtaill (tipa)
16360 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16361 %* \textrtaill -> \taill (wsuipa)
16362 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16363 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16364 %* \textlyoghlig -> \lz (wsuipa)
16365 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16366 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16367 %* \textturnm -> \invm (wsuipa)
16368 %* \textturnm -> \rotm (phonetic)
16369 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16370 % \textturnmrleg (tipa)
16371 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16372 %* \textturnmrleg -> \legm (wsuipa)
16373 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16374 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271

16375 %* \textltailm -> \labdentalnas (wsuipa)
16376 %* \textltailm -> \emgma (phonetic)
16377 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textltailn (tipa)
16378 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16379 %* \textltailn -> \nj (wsuipa)
16380 %* \textltailn -> \nya (phonetic)
16381 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16382 % nhookretroflex; \textrtailn (tipa)
16383 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16384 %* \textrtailn -> \tailn (wsuipa)
16385 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16386 \DeclareTextCommand{\textscn}{PU}{\82\164}% U+0274
16387 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16388 % LATIN CAPITAL LETTER BARRED O; obarred;
16389 % \textbaro (tipa), \baro (wsuipa)
16390 % But \baro from stmaryrd is different!
16391 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16392 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16393 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16394 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatininclosed;
16395 % \textcloseomega (tipa)
16396 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16397 %* \textcloseomega -> \closedniomega (wsuipa)
16398 %* \textcloseomega -> \varomega (phonetic)
16399 % U+0278 LATIN SMALL LETTER PHI; philatin; \nippi (wsuipa)
16400 \DeclareTextCommand{\textnippi}{PU}{\82\170}% U+0278
16401 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16402 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16403 %* \textturnr -> \invr (wsuipa)
16404 %* \textturnr -> \rotr (phonetic)
16405 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16406 % rlonglegturned; \textturnlongleg (tipa)
16407 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
16408 %* \textturnlongleg -> \invleg (wsuipa)
16409 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhoookturned;
16410 % \textturnrrtail (tipa)
16411 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16412 %* \textturnrrtail -> \tailinvr (wsuipa)
16413 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
16414 \DeclareTextCommand{\textlongleg}{PU}{\82\174}% U+027C
16415 %* \textlongleg -> \leg (wsuipa)
16416 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoook; \textrtailr (tipa)
16417 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16418 %* \textrtailr -> \tailr (wsuipa)
16419 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16420 % \textfishhookr (tipa)
16421 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
16422 %* \textfishhookr -> \flapr (wsuipa)
16423 %* \textfishhookr -> \flap (phonetic)
16424 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
16425 % \textlhtlongi (tipa)
16426 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16427 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
16428 \DeclareTextCommand{\textscr}{PU}{\82\200}% U+0280

16429 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16430 % \textinvscr (tipa), \invscr (wsuipa)
16431 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16432 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \texttrails (tipa)
16433 \DeclareTextCommand{\texttrails}{PU}{\82\202}% U+0282
16434 %* \texttrails -> \tails (wsuipa)
16435 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16436 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16437 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16438 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16439 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16440 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatre-
versed;
16441 % \textvibyi (tipa)
16442 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16443 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16444 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16445 %* \textctesh -> \curlyesh (wsuipa)
16446 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16447 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16448 %* \textturnt -> \clickt (wsuipa)
16449 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
16450 % \texttrtailt (tipa)
16451 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
16452 %* \texttrtailt -> \tailt (wsuipa)
16453 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16454 % \textbaru (tipa), \baru (wsuipa)
16455 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16456 %* \textbaru -> \ubar (phonetic)
16457 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16458 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16459 %* \textniupsilon -> \rotOmega (phonetic)
16460 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
16461 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16462 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16463 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16464 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16465 %* \textturnv -> \invv (wsuipa)
16466 %* \textturnv -> \pwedge (phonetic)
16467 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16468 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16469 %* \textturnw -> \invw (wsuipa)
16470 %* \textturnw -> \rotw (phonetic)
16471 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16472 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16473 %* \textturny -> \invy (wsuipa)
16474 %* \textturny -> \roty (phonetic)
16475 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16476 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16477 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-
hook;
16478 % \texttrtailz (tipa)
16479 \DeclareTextCommand{\texttrtailz}{PU}{\82\220}% U+0290
16480 %* \texttrtailz -> \tailz (wsuipa)
16481 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)

16482 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16483 %* \textctz -> \curlyz (wsuipa)
16484 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16485 % \textyogh (tipa), \yogh (wsuipa)
16486 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16487 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16488 % ezhcurl; \textctyogh (tipa)
16489 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16490 %* \textctyogh -> \curlyyogh (wsuipa)
16491 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16492 % \textglotstop (tipa), \glotstop (wsuipa)
16493 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16494 %* \textglotstop -> \ejective (wsuipa)
16495 %* \textglotstop -> \glottal (phonetic)
16496 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16497 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16498 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16499 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16500 %* \textrevglotstop -> \reveject (wsuipa)
16501 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16502 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16503 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16504 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16505 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16506 %* \textstretchc -> \clickc (wsuipa)
16507 %* \textstretchc -> \textstretchcvar (tipx)
16508 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16509 % \textbullseye (tipa)
16510 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16511 %* \textbullseye -> \clickb (wsuipa)
16512 %* \textbullseye -> \textObullseye (tipx)
16513 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16514 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16515 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16516 % \textclosepsilon (tipa)
16517 \DeclareTextCommand{\textclosepsilon}{PU}{\82\232}% U+029A
16518 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16519 % \texthtscg (tipa)
16520 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16521 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16522 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16523 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail; \textcdj (tipa)
16524 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16525 %* \textctj -> \textctjvar (tipx)
16526 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16527 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16528 %* \textturnk -> \textturnsck (tipx)
16529 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
16530 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
16531 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16532 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16533 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-stroke;
16534 % \textbarglotstop (tipa)
16535 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1

16536 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 16537 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 16538 % \textbarrevglotstop (tipa)
 16539 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 16540 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 16541 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 16542 %* \textdzlig -> \dz (wsupipa)
 16543 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 16544 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16545 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16546 % \textdctzlig (tipa)
 16547 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16548 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16549 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16550 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 16551 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 16552 %* \textteshlig -> \tesh (wsuipa)
 16553 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16554 % \texttctclig (tipa)
 16555 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16556 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16557 % \textlhtlongy (tipa)
 16558 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16559 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16560 % \textvibyy (tipa)
 16561 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

16562 % U+02BD MODIFIER LETTER REVERSED COMMA;
 16563 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 16564 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 16565 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 16566 % \textraiseglotstop (tipa)
 16567 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 16568 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 16569 % \textlptr (tipa)
 16570 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 16571 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 16572 % \textrptr (tipa)
 16573 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 16574 % U+02C7 CARON; caron
 16575 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 16576 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 16577 % \textprimstress (tipa)
 16578 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 16579 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 16580 % \textsecstress (tipa)
 16581 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 16582 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 16583 % \textlengthmark (tipa)
 16584 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 16585 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
 larhalfmod;
 16586 % \texthalflength (tipa)
 16587 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1

16588 % U+02D8 BREVE; breve
 16589 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 16590 % U+02D9 DOT ABOVE; dotaccent
 16591 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 16592 % U+02DA RING ABOVE; ring
 16593 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 16594 % U+02DB OGONEK; ogonek
 16595 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 16596 % U+02DC SMALL TILDE; ilde, *tilde
 16597 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 16598 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 16599 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 16600 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 16601 % U+02F3 MODIFIER LETTER LOW RING
 16602 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 16603 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 16604 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 16605 % U+02F7 MODIFIER LETTER LOW TILDE
 16606 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 16607 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 16608 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 16609 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 16610 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

16611 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 16612 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 16613 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 16614 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 16615 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 16616 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 16617 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16618 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 16619 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 16620 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

16621 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 16622 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 16623 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 16624 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 16625 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 16626 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 16627 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 16628 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 16629 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 16630 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 16631 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 16632 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 16633 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 16634 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 16635 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 16636 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 16637 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 16638 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F

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16639 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
16640 %   \iotadieresis
16641 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
16642 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
16643 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
16644 % U+0392 GREEK CAPITAL LETTER BETA; Beta
16645 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
16646 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
16647 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
16648 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
16649 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
16650 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
16651 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
16652 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
16653 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
16654 % U+0397 GREEK CAPITAL LETTER ETA; Eta
16655 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
16656 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
16657 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
16658 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
16659 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
16660 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
16661 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
16662 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
16663 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
16664 % U+039C GREEK CAPITAL LETTER MU; Mu
16665 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
16666 % U+039D GREEK CAPITAL LETTER NU; Nu
16667 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
16668 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
16669 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
16670 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
16671 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
16672 % U+03A0 GREEK CAPITAL LETTER PI; Pi
16673 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
16674 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
16675 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
16676 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
16677 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
16678 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
16679 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
16680 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
16681 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
16682 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
16683 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
16684 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
16685 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
16686 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
16687 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
16688 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
16689 %   \Omega (LaTeX)
16690 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
16691 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
16692 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
16693 \DeclareTextCompositeCommand{\"}{PU}{\textIota}{\83\252}% U+03AA

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16694 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-silondieresis
 16695 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
 16696 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
 16697 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
 16698 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
 16699 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
 16700 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etan
 16701 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
 16702 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotan
 16703 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
 16704 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
 16705 % AND TONOS; upsilondieresis
 16706 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
 16707 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
 16708 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
 16709 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
 16710 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
 16711 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
 16712 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
 16713 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
 16714 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
 16715 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
 16716 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
 16717 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
 16718 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
 16719 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
 16720 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
 16721 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
 16722 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
 16723 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
 16724 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
 16725 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
 16726 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
 16727 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
 16728 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
 16729 % U+03BC GREEK SMALL LETTER MU; mugreek; \mu (LaTeX)
 16730 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
 16731 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
 16732 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
 16733 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
 16734 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
 16735 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 16736 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 16737 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
 16738 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
 16739 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
 16740 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
 16741 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; \sigmaf, \sigmafinal
 16742 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
 16743 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
 16744 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
 16745 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
 16746 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
 16747 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
 16748 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
 16749 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)


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16750 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
16751 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
16752 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
16753 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
16754 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
16755 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
16756 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
16757 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
16758 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
16759 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
    silondieresis
16760 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
16761 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
16762 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
16763 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
16764 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
16765 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
16766 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
16767 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
16768 % U+03DA GREEK LETTER STIGMA; Stigmagreek
16769 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
16770 % U+03DB GREEK SMALL LETTER STIGMA
16771 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
16772 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
16773 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
16774 % U+03DD GREEK SMALL LETTER DIGAMMA
16775 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
16776 %* \textdigammagreek -> \digamma (AmS)
16777 % U+03DE GREEK LETTER KOPPA; Koppagreek
16778 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
16779 % U+03DF GREEK SMALL LETTER KOPPA
16780 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
16781 % U+03E0 GREEK LETTER SAMPI; Sampigreek
16782 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
16783 % U+03E1 GREEK SMALL LETTER SAMPI
16784 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
16785 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
16786 % \backepsilon (AmS)
16787 \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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16788 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16789 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
16790 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afi10023
16791 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16792 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
16793 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afi10051
16794 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16795 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afi10052
16796 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
16797 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afi10053
16798 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16799 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afi10054
16800 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16801 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;

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16802 % Icyrillic, *afii10055
 16803 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 16804 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 16805 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 16806 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
 16807 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 16808 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 16809 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 16810 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 16811 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 16812 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 16813 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 16814 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 16815 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 16816 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
 16817 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 16818 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
 16819 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 16820 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 16821 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
 16822 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
 16823 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
 16824 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
 16825 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
 16826 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
 16827 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
 16828 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
 16829 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
 16830 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
 16831 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
 16832 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
 16833 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
 16834 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
 16835 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
 16836 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
 16837 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
 16838 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
 16839 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
 16840 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
 16841 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
 16842 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
 16843 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
 16844 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
 16845 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
 16846 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
 16847 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
 16848 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
 16849 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
 16850 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
 16851 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
 16852 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
 16853 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
 16854 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
 16855 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
 16856 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
 16857 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
 16858 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420

16859 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
16860 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
16861 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
16862 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
16863 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
16864 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
16865 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
16866 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
16867 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
16868 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
16869 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
16870 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
16871 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
16872 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
16873 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
16874 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
16875 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
16876 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
16877 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
16878 % Hardsigncyrillic, *afii10044
16879 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
16880 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
16881 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
16882 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
16883 % Softsigncyrillic, *afii10046
16884 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
16885 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
16886 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
16887 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
16888 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
16889 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
16890 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
16891 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
16892 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
16893 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
16894 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
16895 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
16896 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
16897 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
16898 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
16899 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
16900 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
16901 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
16902 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
16903 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
16904 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
16905 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
16906 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
16907 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
16908 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
16909 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
16910 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
16911 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
16912 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
16913 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
16914 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
16915 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B

16916 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
 16917 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
 16918 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
 16919 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
 16920 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
 16921 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
 16922 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
 16923 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
 16924 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
 16925 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
 16926 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
 16927 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
 16928 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
 16929 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
 16930 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
 16931 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
 16932 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
 16933 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
 16934 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
 16935 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
 16936 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
 16937 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
 16938 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
 16939 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
 16940 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
 16941 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
 16942 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
 16943 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
 16944 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
 16945 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
 16946 %* \cyrhrdsn -> \hardsign (tipa)
 16947 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
 16948 \DeclareTextCommand{\cyrrery}{PU}{\84\113}% U+044B
 16949 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
 16950 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
 16951 %* \cyrsoftsn -> \softsign (tipa)
 16952 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
 16953 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
 16954 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
 16955 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
 16956 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 16957 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
 16958 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 16959 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
 16960 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 16961 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 16962 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 16963 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
 16964 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
 16965 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
 16966 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
 16967 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
 16968 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
 16969 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 16970 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
 16971 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;

16972 % *afii10103, icyrillic
 16973 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 16974 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 16975 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
 16976 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
 16977 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
 16978 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
 16979 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
 16980 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
 16981 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
 16982 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
 16983 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
 16984 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
 16985 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
 16986 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
 16987 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
 16988 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
 16989 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 16990 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 16991 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
 16992 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 16993 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
 16994 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 16995 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 16996 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
 16997 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 16998 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 16999 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 17000 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 17001 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
 17002 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 17003 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 17004 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 17005 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 17006 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
 17007 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 17008 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
 17009 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 17010 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 17011 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 17012 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleioti-
 fiedcyrillic
 17013 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 17014 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 17015 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 17016 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 17017 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 17018 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 17019 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 17020 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 17021 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17022 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17023 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17024 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic

17025 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17026 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17027 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17028 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
17029 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
17030 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
17031 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17032 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
17033 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
17034 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
17035 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
17036 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
17037 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
17038 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
17039 % GRAVE ACCENT; Izhitsadblgravecyrillic
17040 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
17041 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
17042 % GRAVE ACCENT; izhitsadblgravecyrillic
17043 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
17044 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
17045 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
17046 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
17047 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
17048 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
17049 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
17050 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
17051 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
17052 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
17053 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
17054 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
17055 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
17056 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
17057 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
17058 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
17059 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
17060 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
17061 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
17062 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
17063 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
17064 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
17065 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
\84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE
\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
\84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
17066 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
17067 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A

17068 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
17069 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
17070 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
17071 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
17072 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
17073 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
17074 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
17075 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
17076 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
17077 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
17078 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
17079 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
17080 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
17081 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
17082 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
17083 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
17084 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
17085 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
17086 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
17087 % Ghemiddlehookcyrillic
17088 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
17089 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
17090 % ghemiddlehookcyrillic
17091 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
17092 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
17093 % Zhedescendercyrillic
17094 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
17095 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
17096 % zhedescendercyrillic
17097 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
17098 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
17099 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
17100 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
17101 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
17102 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
17103 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
17104 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
17105 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
17106 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesendercyrillic
17107 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
17108 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
17109 % Kavertikalstrokecyrillic
17110 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
17111 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
17112 % kavertikalstrokecyrillic
17113 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
17114 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
17115 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
17116 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
17117 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F

17118 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
17119 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
17120 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
17121 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
17122 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
17123 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
17124 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescen-
dercyrillic
17125 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
17126 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
17127 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
17128 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
17129 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
17130 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
17131 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
17132 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
17133 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
17134 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
lic
17135 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
17136 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
17137 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
17138 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
dercyrillic
17139 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
17140 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
17141 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescen-
dercyrillic
17142 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
17143 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
17144 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
dercyrillic
17145 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
17146 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
dercyrillic
17147 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
17148 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17149 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17150 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17151 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17152 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
traightstrokecyrillic
17153 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17154 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
traightstrokecyrillic
17155 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
17156 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
dercyrillic
17157 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17158 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
dercyrillic
17159 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
17160 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17161 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4

17162 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17163 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 17164 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17165 % Chedescendercyrillic
 17166 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 17167 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 17168 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 17169 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 17170 % Cheverticalstrokecyrillic
 17171 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 17172 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 17173 % cheverticalstrokecyrillic
 17174 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 17175 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 17176 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 17177 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 17178 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 17179 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 17180 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 17181 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 17182 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 17183 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 17184 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 17185 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 17186 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 17187 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 17188 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 17189 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 17190 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 17191 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 17192 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 17193 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 17194 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 17195 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17196 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17197 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17198 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17199 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17200 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17201 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17202 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 17203 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17204 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17205 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17206 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17207 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17208 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17209 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17210 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17211 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL

17212 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17213 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17214 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17215 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17216 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17217 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17218 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17219 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 17220 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
 17221 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17222 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
 17223 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17224 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17225 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17226 \DeclareTextCommand{\\cyrae}{PU}{\84\325}% U+04D5
 17227 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevocyrillic
 17228 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17229 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevocyrillic
 17230 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17231 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17232 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17233 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17234 \DeclareTextCommand{\\cyrschwa}{PU}{\84\331}% U+04D9
 17235 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17236 % Schwadieresiscyrillic
 17237 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17238 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17239 % schwadieresiscyrillic
 17240 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
 17241 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 17242 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
 17243 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
 cyrillic
 17244 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\335}% U+04DD
 17245 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
 cyrillic
 17246 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
 17247 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyril-
 lic
 17248 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
 17249 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
 cyrillic
 17250 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17251 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyril-
 lic
 17252 \DeclareTextCommand{\\cyrabhdze}{PU}{\84\341}% U+04E1
 17253 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 17254 \DeclareTextCompositeCommand{\=} {PU}{\CYRI}{\84\342}% U+04E2
 17255 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 17256 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3
 17257 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 17258 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
 17259 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 17260 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5

17261 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 17262 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 17263 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 17264 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 17265 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 17266 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 17267 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 17268 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 17269 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 17270 % Obarreddieresiscyrillic
 17271 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 17272 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 17273 % obarreddieresiscyrillic
 17274 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 17275 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 17276 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 17277 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 17278 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 17279 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 17280 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
 17281 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 17282 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
 17283 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 17284 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 17285 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 17286 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 17287 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 17288 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 17289 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 17290 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 17291 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 17292 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 17293 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 17294 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 17295 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 17296 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 17297 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 17298 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 17299 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 17300 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 17301 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 17302 \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
 17303 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 17304 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 17305 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK

17306 \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.

17307 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
 17308 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
 17309 % U+05D0 HEBREW LETTER ALEF
 17310 \DeclareTextCommand{\hebalet}{PU}{\85\320}% U+05D0
 17311 % U+05D1 HEBREW LETTER BET
 17312 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
 17313 % U+05D2 HEBREW LETTER GIMEL
 17314 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
 17315 % U+05D3 HEBREW LETTER DALET
 17316 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
 17317 % U+05D4 HEBREW LETTER HE
 17318 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
 17319 % U+05D5 HEBREW LETTER VAV
 17320 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
 17321 % U+05D6 HEBREW LETTER ZAYIN
 17322 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
 17323 % U+05D7 HEBREW LETTER HET
 17324 \DeclareTextCommand{\hebbet}{PU}{\85\327}% U+05D7
 17325 % U+05D8 HEBREW LETTER TET
 17326 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
 17327 % U+05D9 HEBREW LETTER YOD
 17328 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
 17329 % U+05DA HEBREW LETTER FINAL KAF
 17330 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
 17331 % U+05DB HEBREW LETTER KAF
 17332 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
 17333 % U+05DC HEBREW LETTER LAMED
 17334 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17335 % U+05DD HEBREW LETTER FINAL MEM
 17336 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17337 % U+05DE HEBREW LETTER MEM
 17338 \DeclareTextCommand{\hebmeme}{PU}{\85\336}% U+05DE
 17339 % U+05DF HEBREW LETTER FINAL NUN
 17340 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17341 % U+05E0 HEBREW LETTER NUN
 17342 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17343 % U+05E1 HEBREW LETTER SAMEKH
 17344 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17345 % U+05E2 HEBREW LETTER AYIN
 17346 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17347 % U+05E3 HEBREW LETTER FINAL PE
 17348 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17349 % U+05E4 HEBREW LETTER PE
 17350 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17351 % U+05E5 HEBREW LETTER FINAL TSADI
 17352 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17353 % U+05E6 HEBREW LETTER TSADI
 17354 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17355 % U+05E7 HEBREW LETTER QOF
 17356 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7

17357 % U+05E8 HEBREW LETTER RESH
 17358 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17359 % U+05E9 HEBREW LETTER SHIN
 17360 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17361 %* \hebshin -> \hebsin (he8)
 17362 % U+05EA HEBREW LETTER TAV
 17363 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17364 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17365 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17366 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17367 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17368 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17369 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17370 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17371 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17372 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 17373 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 17374 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scD (wsuipa)
 17375 \DeclareTextCommand{\textscD}{PU}{\9035\005}% U+1D05
 17376 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 17377 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 17378 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 17379 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 17380 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 17381 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 17382 %* \textPUscK -> \textscK (tipx)
 17383 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
 17384 \DeclareTextCommand{\textPUscM}{PU}{\9035\015}% U+1D0D
 17385 %* \textPUscM -> \textscM (tipx)
 17386 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 17387 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 17388 %* \textPUscP -> \textscP (tipx)
 17389 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17390 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17391 %* \textPUrevscr -> \textrevscr (tipx)
 17392 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scU (wsuipa)
 17393 \DeclareTextCommand{\textscU}{PU}{\9035\034}% U+1D1C
 17394 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17395 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}% U+1D62
 17396 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17397 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}% U+1D63
 17398 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17399 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}% U+1D64
 17400 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17401 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}% U+1D65
 17402 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17403 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}% U+1D66
 17404 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17405 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}% U+1D67
 17406 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17407 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}% U+1D68
 17408 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI

17409 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 17410 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17411 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 17412 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 17413 % \barsci (wsuipa)
 17414 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 17415 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 17416 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 17417 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 17418 % \barscu (wsuipa)
 17419 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17420 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 17421 \DeclareTextCommand{\textPUrhooka}{PU}{\9035\217}% U+1D8F
 17422 %* \textPUrhooka -> \textrhooka (tipx)
 17423 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 17424 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 17425 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 17426 \DeclareTextCommand{\textPUrhooke}{PU}{\9035\222}% U+1D92
 17427 %* \textPUrhooke -> \textrhooke (tipx)
 17428 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 17429 % \textrhookepsilon (tipx)
 17430 \DeclareTextCommand{\textPUrhookepsilon}{PU}{\9035\223}% U+1D93
 17431 %* \textPUrhookepsilon -> \textrhookepsilon (tipx)
 17432 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 17433 % \textrhookopeno (tipx)
 17434 \DeclareTextCommand{\textPUrhookopeno}{PU}{\9035\227}% U+1D97
 17435 %* \textPUrhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

17436 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 17437 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 17438 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 17439 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 17440 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 17441 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 17442 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 17443 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 17444 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 17445 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 17446 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 17447 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 17448 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 17449 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 17450 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 17451 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 17452 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 17453 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 17454 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 17455 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 17456 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 17457 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 17458 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow

17459 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
17460 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
17461 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
17462 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
17463 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
17464 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
17465 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
17466 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
17467 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
17468 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
17469 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
17470 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
17471 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
17472 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
17473 % E macrongrave
17474 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17475 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17476 % e macrongrave
17477 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17478 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17479 % E macronacute
17480 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17481 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17482 % e macronacute
17483 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17484 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17485 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17486 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17487 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17488 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17489 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17490 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17491 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17492 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17493 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17494 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17495 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17496 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17497 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
17498 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17499 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
17500 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17501 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17502 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17503 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17504 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17505 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17506 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17507 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17508 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17509 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
17510 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17511 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27

17512 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17513 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17514 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17515 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17516 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17517 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17518 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17519 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17520 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17521 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17522 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17523 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17524 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17525 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
17526 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17527 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
17528 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17529 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17530 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17531 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
17532 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17533 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
17534 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17535 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
17536 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17537 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
17538 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17539 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
17540 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17541 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
17542 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17543 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
17544 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
17545 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
17546 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
17547 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
17548 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17549 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
17550 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
17551 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17552 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17553 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17554 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17555 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17556 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17557 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17558 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17559 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17560 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17561 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17562 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17563 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17564 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17565 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17566 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow

17567 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17568 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17569 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17570 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17571 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17572 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
17573 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17574 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
17575 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17576 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17577 % Omacrongrave
17578 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17579 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17580 % omacrongrave
17581 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17582 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17583 % Omacronacute
17584 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17585 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17586 % omacronacute
17587 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17588 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17589 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17590 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17591 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17592 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17593 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17594 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17595 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17596 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17597 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17598 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17599 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17600 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17601 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17602 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
17603 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17604 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17605 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17606 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17607 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17608 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17609 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17610 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17611 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17612 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17613 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17614 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17615 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17616 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17617 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17618 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17619 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17620 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17621 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C

17622 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17623 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17624 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17625 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17626 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17627 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17628 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
17629 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17630 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
cumflexbelow
17631 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17632 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17633 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17634 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
17635 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17636 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17637 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17638 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17639 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17640 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
17641 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17642 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
17643 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17644 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17645 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17646 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17647 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17648 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17649 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17650 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17651 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17652 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17653 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17654 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17655 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17656 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17657 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17658 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17659 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17660 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17661 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17662 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17663 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17664 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17665 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17666 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17667 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17668 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17669 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17670 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17671 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17672 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent

17673 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17674 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17675 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17676 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17677 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17678 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17679 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
17680 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17681 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17682 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17683 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17684 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17685 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
17686 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17687 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
17688 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17689 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17690 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17691 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17692 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17693 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17694 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17695 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17696 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17697 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17698 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17699 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
17700 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17701 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17702 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17703 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17704 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
17705 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
17706 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17707 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17708 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17709 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17710 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17711 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17712 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17713 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17714 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17715 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
17716 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17717 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
17718 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
17719 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
17720 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
17721 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
17722 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
17723 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
17724 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
17725 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
17726 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
17727 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
17728 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow

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17729 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
17730 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
17731 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
17732 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
17733 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
17734 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
17735 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
17736 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
17737 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
17738 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
17739 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
17740 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
17741 \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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17742 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
17743 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
17744 % U+2013 EN DASH; endash
17745 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
17746 % U+2014 EM DASH; emdash
17747 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
17748 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
17749 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
17750 %* \textbardbl -> \textdoublevertline (tipa)
17751 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
17752 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
17753 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
17754 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
17755 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
17756 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
17757 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
17758 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
17759 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
17760 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
17761 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
17762 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
17763 % U+2020 DAGGER; dagger
17764 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
17765 %* \textdagger -> \dag (LaTeX)
17766 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
17767 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
17768 %* \textdaggerdbl -> \ddagger (LaTeX)
17769 %* \textdaggerdbl -> \ddag (LaTeX)
17770 % U+2022 BULLET; bullet
17771 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
17772 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
17773 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
17774 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
17775 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
17776 %* \textellipsis -> \mathellipsis
17777 % U+2030 PER MILLE SIGN; perthousand
17778 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
17779 % U+2031 PER TEN THOUSAND SIGN
17780 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
17781 % U+2032 PRIME; minute; \prime (MnSymbol)
17782 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
17783 % U+2033 DOUBLE PRIME; \second (mathabx)

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17784 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 17785 % U+2034 TRIPLE PRIME; \third (mathabx)
 17786 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 17787 % U+2035 REVERSED PRIME; \backprime (AmS)
 17788 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 17789 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 17790 \DeclareTextCommand{\guilingleft}{PU}{\9040\071}% U+2039
 17791 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 17792 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 17793 % U+203B REFERENCE MARK; referencemark
 17794 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 17795 % U+203D INTERROBANG
 17796 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 17797 % U+2044 FRACTION SLASH; fraction
 17798 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 17799 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 17800 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 17801 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 17802 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 17803 % U+2052 COMMERCIAL MINUS SIGN
 17804 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 17805 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 17806 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 17807 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 17808 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 17809 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 17810 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

17811 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 17812 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 17813 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 17814 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 17815 % U+2074 SUPERSCRIPT FOUR; foursuperior
 17816 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 17817 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 17818 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 17819 % U+2076 SUPERSCRIPT SIX; sixsuperior
 17820 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 17821 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 17822 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 17823 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 17824 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 17825 % U+2079 SUPERSCRIPT NINE; ninesuperior
 17826 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 17827 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 17828 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 17829 % U+207B SUPERSCRIPT MINUS
 17830 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 17831 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 17832 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 17833 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 17834 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 17835 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 17836 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E

17837 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
17838 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
17839 % U+2080 SUBSCRIPT ZERO; zeroinferior
17840 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
17841 % U+2081 SUBSCRIPT ONE; oneinferior
17842 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
17843 % U+2082 SUBSCRIPT TWO; twoinferior
17844 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
17845 % U+2083 SUBSCRIPT THREE; threeinferior
17846 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}%* U+2083
17847 % U+2084 SUBSCRIPT FOUR; fourinferior
17848 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
17849 % U+2085 SUBSCRIPT FIVE; fiveinferior
17850 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
17851 % U+2086 SUBSCRIPT SIX; sixinferior
17852 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
17853 % U+2087 SUBSCRIPT SEVEN; seveninferior
17854 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
17855 % U+2088 SUBSCRIPT EIGHT; eightinferior
17856 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
17857 % U+2089 SUBSCRIPT NINE; nineinferior
17858 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
17859 % U+208A SUBSCRIPT PLUS SIGN
17860 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
17861 % U+208B SUBSCRIPT MINUS
17862 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
17863 % U+208C SUBSCRIPT EQUALS SIGN
17864 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
17865 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
17866 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
17867 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
17868 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
17869 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
17870 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
17871 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
17872 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
17873 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
17874 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
17875 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
17876 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
17877 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
17878 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
17879 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
17880 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
17881 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
17882 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
17883 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
17884 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
17885 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
17886 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
17887 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
17888 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
17889 % U+209A LATIN SUBSCRIPT SMALL LETTER P
17890 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
17891 % U+209B LATIN SUBSCRIPT SMALL LETTER S
17892 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
17893 % U+209C LATIN SUBSCRIPT SMALL LETTER T

17894 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

17895 % U+20A1 COLON SIGN; *colonmonetary, colonsign
17896 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
17897 % U+20A4 LIRA SIGN; afii08941, *lira
17898 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
17899 % U+20A6 NAIRA SIGN
17900 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
17901 % U+20A7 PESETA SIGN; peseta
17902 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
17903 % U+20A9 WON SIGN; won
17904 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
17905 % U+20AB DONG SIGN; dong
17906 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
17907 % U+20AC EURO SIGN; *Euro, euro
17908 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
17909 %* \texteuro -> \EurDig (marvosym)
17910 %* \texteuro -> \EURdig (marvosym)
17911 %* \texteuro -> \EurHv (marvosym)
17912 %* \texteuro -> \EURhv (marvosym)
17913 %* \texteuro -> \EurCr (marvosym)
17914 %* \texteuro -> \EURcr (marvosym)
17915 %* \texteuro -> \EurTm (marvosym)
17916 %* \texteuro -> \EURtm (marvosym)
17917 %* \texteuro -> \Eur (marvosym)
17918 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
17919 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
17920 %* \textDeleatur -> \Denarius (marvosym)
17921 % U+20B1 PESO SIGN
17922 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
17923 % U+20B2 GUARANI SIGN
17924 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

17925 % U+2103 DEGREE CELSIUS; centigrade
17926 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
17927 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
17928 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
17929 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
17930 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
17931 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
17932 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
17933 % U+2116 NUMERO SIGN; *afii61352, numero
17934 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
17935 % U+2117 SOUND RECORDING COPYRIGHT
17936 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
17937 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
17938 % weierstrass; \wp (LaTeX)
17939 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
17940 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
17941 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
17942 % U+211E PRESCRIPTION TAKE; prescription
17943 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
17944 % U+2120 SERVICE MARK
17945 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120

17946 % U+2122 TRADE MARK SIGN; trademark
 17947 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 17948 % U+2126 OHM SIGN; Ohm, Omega
 17949 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 17950 % U+2127 INVERTED OHM SIGN
 17951 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 17952 %* \textmho -> \agemO (wasysym)
 17953 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 17954 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 17955 % U+212B ANGSTROM SIGN; angstrom
 17956 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 17957 % U+212E ESTIMATED SYMBOL; estimated
 17958 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 17959 %* \textestimated -> \EstimatedSign (marvosym)
 17960 %* \textestimated -> \Ecommerce (marvosym)
 17961 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 17962 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 17963 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 17964 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 17965 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 17966 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 17967 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 17968 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 17969 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 17970 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 17971 % U+213B FACSIMILE SIGN; \fax (marvosym)
 17972 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 17973 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 17974 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 17975 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 17976 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 17977 %* \textinvamp -> \bindnasrepma (stmaryrd)
 17978 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

17979 % U+2150 VULGAR FRACTION ONE SEVENTH
 17980 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 17981 % U+2151 VULGAR FRACTION ONE NINTH
 17982 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 17983 % U+2152 VULGAR FRACTION ONE TENTH
 17984 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 17985 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 17986 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 17987 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 17988 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 17989 % U+2155 VULGAR FRACTION ONE FIFTH
 17990 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 17991 % U+2156 VULGAR FRACTION TWO FIFTHS
 17992 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 17993 % U+2157 VULGAR FRACTION THREE FIFTHS
 17994 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 17995 % U+2158 VULGAR FRACTION FOUR FIFTHS
 17996 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 17997 % U+2159 VULGAR FRACTION ONE SIXTH
 17998 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 17999 % U+215A VULGAR FRACTION FIVE SIXTHS
 18000 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A

18001 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18002 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18003 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18004 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18005 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18006 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18007 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18008 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18009 % U+2184 LATIN SMALL LETTER REVERSED C
 18010 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18011 % U+2189 VULGAR FRACTION ZERO THIRDS
 18012 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18013 % U+2190 LEFTWARDS ARROW; arrowleft
 18014 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18015 % U+2191 UPWARDS ARROW; arrowup
 18016 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18017 % U+2192 RIGHTWARDS ARROW; arrowright
 18018 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18019 %* \textrightarrow -> \MVRightArrow (marvosym)
 18020 %* \textrightarrow -> \MVRightarrow (marvosym)
 18021 % U+2193 DOWNWARDS ARROW; arrowdown
 18022 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18023 %* \textdownarrow -> \MVARrowDown (marvosym)
 18024 %* \textdownarrow -> \Force (marvosym)
 18025 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18026 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18027 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18028 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18029 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18030 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18031 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18032 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18033 %* \textnearrow -> \textglobrise (tipa)
 18034 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18035 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 18036 %* \textsearrow -> \textglobfall (tipa)
 18037 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 18038 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 18039 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
 18040 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
 18041 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
 18042 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
 18043 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
 18044 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
 18045 % \ntwoheadleftarrow (txfonts/pxfonts)
 18046 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
 18047 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
 18048 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
 18049 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
 18050 % \twoheadrightarrow (AmS)
 18051 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
 18052 % \ntwoheadrightarrow (txfonts/pxfonts)
 18053 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
 18054 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
 Symbol)

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18055 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18056 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18057 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18058 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18059 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18060 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18061 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18062 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18063 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18064 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18065 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18066 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18067 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18068 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18069 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18070 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharpoonup (AmS)
18071 \DeclareTextCommand{\textleftrightharpoonup}{PU}{\9041\256}%* U+21AE
18072 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18073 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18074 %* \textlightning -> \Lightning (marvosym)
18075 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18076 % \dsh (mathabx)
18077 \DeclareTextCommand{\textdsh}{PU}{\9041\265}%* U+21B5
18078 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18079 % \curvearrowleft (AmS)
18080 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18081 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18082 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18083 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
    barbut;
18084 % \leftharpoonup (LaTeX)
18085 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18086 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18087 % \leftharpoondown (LaTeX)
18088 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18089 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18090 % \upharpoonright (AmS)
18091 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18092 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18093 % \upharpoonleft (AmS)
18094 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18095 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
    barbut
18096 % \rightharpoonup (LaTeX)
18097 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18098 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18099 % \rightharpoondown (LaTeX)
18100 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18101 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18102 % \downharpoonright (AmS)
18103 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18104 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18105 % \downharpoonleft (AmS)
18106 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18107 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18108 % \rightarrowoverleft; \rightleftarrows (MnSymbol)
18109 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4

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18110 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
18111 % \updownarrows (MnSymbol)
18112 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18113 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overright;
18114 % \leftrightarrows (AmS)
18115 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18116 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18117 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18118 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18119 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18120 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18121 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18122 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18123 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18124 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18125 % \leftrightharpoons (AmS);
18126 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18127 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18128 % \rightleftharpoons (LaTeX, AmS)
18129 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18130 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
blstroke;
18131 % \nLeftarrow (AmS)
18132 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18133 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow
(AmS)
18134 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18135 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
blstroke;
18136 % \nRightarrow (AmS)
18137 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18138 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18139 % \Leftarrow (LaTeX)
18140 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18141 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18142 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18143 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18144 % \Rightarrow (LaTeX)
18145 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18146 %* \textRightarrow -> \Conclusion (marvosym)
18147 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
TeX)
18148 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18149 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18150 % \Leftrightarrow (LaTeX)
18151 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18152 %* \textLeftrightarrow -> \Equivalence (marvosym)
18153 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18154 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18155 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18156 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18157 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18158 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18159 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18160 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8

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18161 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18162 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18163 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18164 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18165 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18166 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18167 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18168 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18169 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18170 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18171 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18172 % \dashleftarrow (AmS)
18173 \DeclareTextCommand{\texdashleftarrow}{PU}{\9041\340}%* U+21E0
18174 %* \texdashleftarrow -> \dashedleftarrow (MnSymbol)
18175 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18176 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
18177 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightar-
row (AmS)
18178 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
18179 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
18180 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
18181 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
18182 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18183 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18184 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18185 % \downuparrows (MnSymbol)
18186 \DeclareTextCommand{\texdownuparrows}{PU}{\9041\365}%* U+21F5
18187 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18188 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18189 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18190 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18191 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtrian-
gle (stmaryrd)
18192 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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51.2.22 Mathematical Operators: U+2200 to U+22FF

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18193 % U+2200 FOR ALL; forall; \forall (LaTeX)
18194 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18195 % U+2201 COMPLEMENT; \complement (AmS)
18196 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18197 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18198 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18199 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18200 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18201 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18202 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18203 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18204 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18205 %* \textemptyset -> \varnothing (AmS)
18206 % U+2206 INCREMENT; increment, Deta; \triangle (LaTeX)
18207 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18208 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18209 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18210 % U+2208 ELEMENT OF; element; \in (LaTeX)
18211 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208

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18212 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18213 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18214 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18215 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18216 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18217 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18218 %* \textni -> \owns (mathabx)
18219 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18220 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18221 %* \textnotowner -> \notni (txfonts/pxfonts)
18222 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18223 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18224 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18225 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18226 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18227 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18228 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18229 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18230 % U+2212 MINUS SIGN; minus
18231 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18232 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18233 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18234 % U+2214 DOT PLUS; \dotplus (AmS)
18235 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18236 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18237 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18238 % \DividesNot (marvosym)
18239 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18240 % U+2216 SET MINUS; \setminus (LaTeX)
18241 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18242 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18243 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18244 % U+2218 RING OPERATOR; \circ (LaTeX)
18245 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18246 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18247 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18248 % U+221A SQUARE ROOT; radical
18249 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18250 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18251 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18252 %* \textpropto -> \varprop (wasysym)
18253 % U+221E INFINITY; infinity; \infty (LaTeX)
18254 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18255 % U+2220 ANGLE; angle; \angle (LaTeX)
18256 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18257 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18258 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18259 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18260 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18261 %* \textsphericalangle -> \varangle (wasysym)
18262 %* \textsphericalangle -> \Anglesign (marvosym)
18263 %* \textsphericalangle -> \AngleSign (marvosym)
18264 % U+2223 DIVIDES; divides; \mid (LaTeX)
18265 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18266 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18267 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18268 %* \textnmid -> \notdivides (mathabx)

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18269 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18270 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18271 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18272 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18273 %* \textnparallel -> nUpdownline (MnSymbol)
18274 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18275 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18276 % \owedge (stmaryrd)
18277 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18278 %* \textowedge -> \varowedge (stmaryrd)
18279 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18280 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18281 % \ovee (stmaryrd)
18282 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18283 %* \textovee -> \varovee (stmaryrd)
18284 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18285 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18286 % U+222A UNION; union; \cup (LaTeX)
18287 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18288 % U+222B INTEGRAL; integral; \int (LaTeX)
18289 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18290 %* \textint -> \varint (wasysym)
18291 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18292 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18293 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18294 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18295 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18296 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18297 %* \textoint -> \varoint (wasysym)
18298 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18299 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18300 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18301 % \ointclockwise (txfonts/pxfonts)
18302 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18303 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrackwise (tx-
      fonts/pxfonts)
18304 \DeclareTextCommand{\textointctrackwise}{PU}{\9042\063}%* U+2233
18305 % U+2234 THEREFORE; therefore; \therefore (AmS)
18306 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18307 %* \texttherefore -> uptherefore (MnSymbol)
18308 % U+2235 BECAUSE; because; \because (AmS)
18309 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18310 %* \textbecause -> \downtherefore (MnSymbol)
18311 % U+2236 RATIO; \vdotdot (MnSymbol)
18312 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18313 % U+2237 PROPORTION; \squaredots (MnSymbol)
18314 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18315 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18316 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18317 %* \textdotminus -> \textdotdiv (mathabx)
18318 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18319 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18320 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18321 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18322 %* \textsim -> \AC (wasysym)
18323 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18324 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D

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18325 % \nbacksim (txfonts/pxfonts)
18326 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18327 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18328 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18329 %* \textwr -> \wreath (MnSymbol)
18330 % U+2241 NOT TILDE; \nsim (AmS)
18331 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18332 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18333 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18334 % \neqsim (MnSymbol)
18335 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18336 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18337 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18338 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18339 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18340 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18341 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18342 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18343 % \ncong (AmS)
18344 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18345 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18346 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18347 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18348 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18349 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18350 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18351 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18352 % \napproxeq (txfonts/pxfonts)
18353 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18354 % U+224B TRIPLE TILDE; \triple sim (MnSymbol)
18355 \DeclareTextCommand{\texttriple sim}{PU}{\9042\113}%* U+224B
18356 %* \texttriple sim -> \VHF (wasysym)
18357 % \ntriple sim (MnSymbol)
18358 \DeclareTextCommand{\textntriple sim}{PU}{\9042\113\83\070}%* U+224B U+0338
18359 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18360 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18361 % \nbackcong (MnSymbol)
18362 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18363 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18364 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18365 % \nasymp (txfonts/pxfonts)
18366 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18367 %* \textnasymp -> \notasym (mathabx)
18368 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18369 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18370 % \nBumpeq (txfonts/pxfonts)
18371 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18372 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18373 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18374 % \nbumpeq (txfonts/pxfonts)
18375 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18376 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18377 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18378 % \ndoteq (MnSymbol)
18379 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18380 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;

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18381 % \doteqdot (AmS)
18382 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18383 %* \textdoteqdot -> \Doteq (MnSymbol)
18384 % \nDoteq (MnSymbol)
18385 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18386 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;
18387 % \fallingdotseq (AmS)
18388 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
18389 % \nfallingdotseq (MnSymbol)
18390 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18391 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapprox-
matelyequal;
18392 % \risingdotseq (AmS)
18393 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
18394 % \nrisingdotseq (MnSymbol)
18395 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18396 % U+2254 COLON EQUALS; \colonequals (colonequals)
18397 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18398 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18399 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18400 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18401 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18402 % \neqcirc (MnSymbol)
18403 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
18404 % U+2257 RING EQUAL TO; \circeq (AmS)
18405 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
18406 % \ncirceq (MnSymbol)
18407 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
18408 % U+2259 ESTIMATES; \hateq (MnSymbol)
18409 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18410 %* \texthateq -> \corresponds (mathabx)
18411 %* \texthateq -> \Corresponds (marvosym)
18412 % \nhateq (MnSymbol)
18413 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
18414 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
18415 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
18416 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
18417 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
18418 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
18419 %* \textneq -> \nequal (MnSymbol)
18420 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
18421 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
18422 %* \textequiv -> \Congruent (marvosym)
18423 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
18424 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
18425 %* \textnequiv -> \NotCongruent (marvosym)
18426 %* \textnequiv -> \notequiv (mathabx)
18427 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
18428 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
18429 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
18430 %* \textleq -> \LessOrEqual (marvosym)
18431 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
18432 % \ge (LaTeX), \geq (LaTeX)
18433 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
18434 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
18435 %* \textgeq -> \LargerOrEqual (marvosym)

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18436 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
18437 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
18438 % \leqq (txfonts/pxfonts)
18439 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
18440 % U+2267 GREATER-THAN OVER EQUAL TO; greaterorequal; \geqq (AmS)
18441 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
18442 % \ngeqq (txfonts/pxfonts)
18443 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
18444 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
18445 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
18446 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
18447 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
18448 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
18449 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
18450 % \ll (txfonts/pxfonts)
18451 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
18452 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
18453 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
18454 % \ngg (txfonts/pxfonts)
18455 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
18456 % U+226C BETWEEN; \between (AmS)
18457 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
18458 % U+226E NOT LESS-THAN; notless; \nless (AmS)
18459 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
18460 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
18461 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
18462 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18463 % \nleq (AmS)
18464 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18465 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal; \ngeq (AmS)
18466 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18467 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18468 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18469 %* \textlessim -> \apprle (wasysym)
18470 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
18471 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18472 %* \textgtrsim -> \apprge (wasysym)
18473 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
18474 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18475 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
18476 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18477 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18478 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18479 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18480 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18481 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (txfonts/pxfonts)
18482 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18483 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (txfonts/pxfonts)
18484 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18485 % U+227A PRECEDES; precedes; \prec (LaTeX)
18486 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A

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18487 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18488 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18489 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18490 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18491 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18492 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18493 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18494 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18495 % \nprecsim (txfonts/pxfonts)
18496 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18497 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18498 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18499 % \nsuccsim (txfonts/pxfonts)
18500 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18501 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18502 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18503 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
18504 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18505 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18506 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18507 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18508 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18509 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18510 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18511 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18512 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18513 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18514 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18515 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18516 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18517 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18518 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18519 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18520 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18521 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
    neq (AmS)
18522 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18523 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
    neq (AmS)
18524 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18525 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18526 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18527 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18528 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18529 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18530 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18531 % \nsqsubset (txfonts/pxfonts)
18532 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18533 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18534 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18535 % \nsqsupset (txfonts/pxfonts)
18536 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18537 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
18538 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
18539 % \nsqsubseq (txfonts/pxfonts)
18540 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18541 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)

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18542 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18543 % \nsqsupseteq (txfonts/pxfonts)
18544 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18545 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18546 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18547 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18548 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18549 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18550 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18551 %* \textoplus -> \varoplus (stmaryrd)
18552 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18553 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18554 %* \textominus -> \varominus (stmaryrd)
18555 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18556 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18557 %* \textotimes -> \varotimes (stmaryrd)
18558 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18559 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18560 %* \textoslash -> \varoslash (stmaryrd)
18561 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18562 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18563 %* \textodot -> \varodot (stmaryrd)
18564 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18565 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18566 %* \textcircledcirc -> \ocirc (mathabx)
18567 %* \textcircledcirc -> \varocircle (stmaryrd)
18568 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18569 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18570 %* \textcircledast -> \varoast (stmaryrd)
18571 %* \textcircledast -> \oasterisk (mathabx)
18572 % U+229D CIRCLED DASH; \circleddash (AmS)
18573 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18574 % U+229E SQUARED PLUS; \boxplus (AmS)
18575 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18576 % U+229F SQUARED MINUS; \boxminus (AmS)
18577 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18578 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18579 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18580 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18581 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18582 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18583 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18584 %* \textvdash -> \rightvdash (MnSymbol)
18585 % U+22A3 LEFT TACK; \dashv (LaTeX)
18586 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18587 %* \textdashv -> \leftvdash (MnSymbol)
18588 %* \ndashv (mathabx)
18589 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18590 %* \textndashv -> \nleftvdash (MnSymbol)
18591 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
18592 \DeclareTextCommand{\textttop}{PU}{\9042\244}%* U+22A4
18593 %* \textttop -> \downvdash (MnSymbol)
18594 % \ndownvdash (MnSymbol)
18595 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18596 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18597 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18598 %* \textbot -> \upvdash (MnSymbol)

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18599 % \nupvdash (MnSymbol)
18600 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18601 %* \textnupvdash -> \nperp (MnSymbol)
18602 % U+22A8 TRUE; \vDash (AmS)
18603 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18604 %* \textvDash -> \models (LaTeX)
18605 %* \textvDash -> \rightmodels (MnSymbol)
18606 % U+22A9 FORCES; \Vdash (AmS)
18607 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18608 %* \textVdash -> \rightVdash (MnSymbol)
18609 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18610 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18611 % \nVdash (mathabx)
18612 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18613 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18614 % \VDash (mathabx)
18615 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18616 %* \textVDash -> \rightModels (MnSymbol)
18617 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18618 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18619 %* \textnvdash -> \nrighvdash (MnSymbol)
18620 % U+22AD NOT TRUE; \nVDash (AmS)
18621 \DeclareTextCommand{\textnVDash}{PU}{\9042\255}%* U+22AD
18622 %* \textnVDash -> \nrighmodels (MnSymbol)
18623 %* \textnVDash -> \nmodels (MnSymbol)
18624 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18625 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18626 %* \textnVdash -> \nrighVdash (MnSymbol)
18627 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18628 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18629 %* \textnVDash -> \nrighModels (MnSymbol)
18630 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18631 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18632 %* \textlhd -> \lessclosed (MnSymbol)
18633 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18634 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18635 %* \textrhd -> \gtrclosed (MnSymbol)
18636 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18637 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18638 %* \textunlhd -> \leqclosed (MnSymbol)
18639 %* \textunlhd -> \trianglelefteq (MnSymbol)
18640 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18641 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18642 %* \textunrhd -> \geqclosed (MnSymbol)
18643 %* \textunrhd -> \trianglerighteq (MnSymbol)
18644 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18645 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18646 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18647 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18648 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18649 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18650 % U+22BB XOR; \veebar (AmS)
18651 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18652 % U+22BC NAND; \barwedge (mathabx)
18653 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC

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18654 % U+22C6 STAR OPERATOR; \star (LaTeX)
18655 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18656 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18657 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18658 % U+22C8 BOWTIE; \bowtie (LaTeX)
18659 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18660 %* \textbowtie -> \Bowtie (wasysym)
18661 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18662 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18663 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18664 % \rtimes (AmS)
18665 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18666 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18667 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18668 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18669 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18670 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18671 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18672 % \nbacksimeq (txfonts/pxfonts)
18673 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18674 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18675 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18676 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18677 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18678 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18679 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18680 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18681 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18682 % \nSubset (txfonts/pxfonts)
18683 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18684 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18685 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18686 % \nSupset (txfonts/pxfonts)
18687 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18688 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18689 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18690 %* \textCap -> \doublecap (mathabx)
18691 % U+22D3 DOUBLE UNION; \Cup (AmS)
18692 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18693 %* \textCup -> \doublecup (mathabx)
18694 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18695 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18696 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18697 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18698 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18699 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18700 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18701 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18702 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18703 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18704 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18705 % \lesseqgtr (AmS)
18706 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18707 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterqualorless;
18708 % \gtreqless (AmS)
18709 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18710 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)

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18711 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18712 % \ncurlyeqprec (mathabx)
18713 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18714 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18715 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18716 % \ncurlyeqsucc (mathabx)
18717 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18718 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18719 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18720 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18721 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18722 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
font/pxfonts)
18723 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
18724 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
font/pxfonts)
18725 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
18726 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
18727 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
18728 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
18729 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
abx)
18730 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
18731 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
18732 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18733 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18734 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18735 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18736 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precsim (AmS)
18737 \DeclareTextCommand{\textprecsim}{PU}{\9042\350}%* U+22E8
18738 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
18739 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
18740 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
18741 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
18742 %* \textntriangleleft -> \nlessclosed (MnSymbol)
18743 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright
leright (AmS)
18744 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
18745 %* \textntriangleright -> \ngtrclosed (MnSymbol)
18746 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
18747 % \ntrianglelefteq (AmS)
18748 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
18749 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
18750 % \ntrianglerighteq (AmS)
18751 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
18752 %* \textntrianglerighteq -> \textngeqclosed
18753 % U+22EE VERTICAL ELLIPSIS; \vdots (LaTeX)
18754 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
18755 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
18756 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
18757 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
18758 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
18759 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
18760 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
18761 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
18762 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

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18763 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
18764 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
18765 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
18766 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
18767 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
18768 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
18769 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
18770 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
18771 % U+231A WATCH; \clock (wasysym)
18772 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
18773 %* \textclock -> \Clocklogo (marvosym)
18774 %* \textclock -> \ClockLogo (marvosym)
18775 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
18776 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
18777 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
18778 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
18779 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
18780 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
18781 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
18782 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
18783 % U+2322 FROWN; \frown (LaTeX)
18784 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
18785 % U+2323 SMILE; \smile (LaTeX)
18786 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
18787 % U+2328 KEYBOARD; \Keyboard (marvosym)
18788 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
18789 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \angle (LaTeX)
18790 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
18791 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
18792 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
18793 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
18794 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
18795 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
18796 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
18797 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
18798 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
18799 %* \textstmaryrdbaro -> \baro (stmaryrd)
18800 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
18801 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
18802 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
18803 % \notbackslash (wasysym)
18804 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
18805 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
18806 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
18807 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
18808 % \APLleftarrowbox (wasysym)
18809 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
18810 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
18811 % \APLrightarrowbox (wasysym)
18812 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
18813 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
18814 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
18815 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;

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18816 % \APLdownarrowbox (wasysym)
 18817 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 18818 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 18819 % \APLinput (wasysym)
 18820 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 18821 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 18822 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 18823 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 18824 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 18825 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 18826 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 18827 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 18828 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 18829 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18830 % \ForwardToIndex (marvosym)
 18831 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 18832 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18833 % \RewindToIndex (marvosym)
 18834 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

18835 % U+2422 BLANK SYMBOL
 18836 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 18837 % U+2423 OPEN BOX; blank
 18838 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

18839 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 18840 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 18841 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18842 % U+2460 CIRCLED DIGIT ONE; onecircle
 18843 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 18844 % U+2461 CIRCLED DIGIT TWO; twocircle
 18845 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 18846 % U+2462 CIRCLED DIGIT THREE; threecircle
 18847 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 18848 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 18849 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 18850 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 18851 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 18852 % U+2465 CIRCLED DIGIT SIX; sixcircle
 18853 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 18854 % U+2466 CIRCLED DIGIT SEVEN; sevendcircle
 18855 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 18856 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 18857 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 18858 % U+2468 CIRCLED DIGIT NINE; ninecircle
 18859 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 18860 % U+2469 CIRCLED NUMBER TEN; tencircle
 18861 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 18862 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 18863 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 18864 % U+246B CIRCLED NUMBER TWELVE; twelvecircle

18865 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
18866 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
18867 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
18868 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
18869 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
18870 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
18871 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
18872 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
18873 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
18874 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
18875 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
18876 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
18877 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
18878 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
18879 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
18880 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
18881 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
18882 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
18883 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
18884 % \CircledA (marvosym)
18885 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18886 %* \textCircledA -> \CleaningA
18887 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18888 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18889 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18890 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18891 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18892 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18893 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18894 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18895 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18896 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18897 % \CleaningF (marvosym)
18898 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18899 % \CleaningFF (marvosym)
18900 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18901 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18902 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
18903 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
18904 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
18905 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
18906 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
18907 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
18908 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
18909 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
18910 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
18911 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
18912 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
18913 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
18914 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
18915 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
18916 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
18917 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
18918 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
18919 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
18920 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
18921 % \CleaningP (marvosym)

18922 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
18923 % \CleaningPP (marvosym)
18924 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
18925 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
18926 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
18927 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
18928 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
18929 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
18930 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
18931 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
18932 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
18933 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
18934 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
18935 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
18936 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
18937 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
18938 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
18939 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
18940 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
18941 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
18942 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
18943 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
18944 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
18945 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
18946 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
18947 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
18948 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
18949 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
18950 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
18951 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
18952 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
18953 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
18954 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
18955 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
18956 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
18957 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
18958 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
18959 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
18960 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
18961 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
18962 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
18963 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
18964 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
18965 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
18966 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
18967 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
18968 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
18969 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
18970 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
18971 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
18972 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
18973 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
18974 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
18975 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
18976 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
18977 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
18978 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0

18979 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 18980 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 18981 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 18982 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 18983 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 18984 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 18985 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 18986 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 18987 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 18988 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 18989 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 18990 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 18991 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 18992 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 18993 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 18994 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 18995 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 18996 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 18997 % U+24EA CIRCLED DIGIT ZERO
 18998 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

18999 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19000 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19001 %* \textCuttingLine -> \Kutline (marvosym)
 19002 %* \textCuttingLine -> \CutLine (marvosym)
 19003 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19004 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19005 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19006 %* \textUParrow -> \MoveUp (marvosym)
 19007 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19008 % \bigtriangleup (LaTeX)
 19009 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19010 %* \textbigtriangleup -> \APLup (wasysym)
 19011 %* \textbigtriangleup -> \Bleech (marvosym)
 19012 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19013 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19014 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19015 % whiterightpointingtriangle; \triangleright (LaTeX)
 19016 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19017 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19018 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19019 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19020 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19021 %* \textDOWNarrow -> \MoveDown (marvosym)
 19022 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
 angle;
 19023 % \bigtriangledown (LaTeX)
 19024 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
 19025 %* \textbigtriangledown -> \APLdown (wasysym)
 19026 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
 19027 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0

19028 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain restriction);
 19029 % whiteleftpointingtriangle; \triangleleft (LaTeX)
 19030 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
 19031 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
 19032 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
 19033 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
 19034 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
 19035 %* \textdiamond -> \Diamond (wasysym)
 19036 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
 19037 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
 19038 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
 19039 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
 19040 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
 19041 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
 19042 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 19043 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
 19044 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
 19045 % \boxbar (stmaryrd)
 19046 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
 19047 % U+25EF LARGE CIRCLE; largecircle
 19048 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
 19049 %* \textbigcircle -> \varbigcirc (stmaryrd)
 19050 %

51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

19051 % U+2601 CLOUD; \Cloud (ifsym)
 19052 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
 19053 % U+2605 BLACK STAR; \FiveStar (bding)
 19054 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
 19055 % U+2606 WHITE STAR; \FiveStarOpen (bding)
 19056 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
 19057 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
 19058 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
 19059 %* \textPhone -> \Telefon (marvosym)
 19060 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
 19061 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
 19062 %* \textboxempty -> \Box (wasysym)
 19063 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
 19064 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
 19065 %* \textCheckedbox -> \CheckedBox (marvosym)
 19066 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
 19067 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
 19068 %* \textCrossedbox -> \XBox (wasysym)
 19069 %* \textCrossedbox -> \CrossedBox (marvosym)
 19070 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
 19071 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
 19072 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
 19073 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 19074 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
 19075 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 19076 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
 19077 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 19078 %* \textHandLeft -> \rightpointleft (fourier)
 19079 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
 19080 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19081 %* \textHandRight -> \leftpointright (fourier)

19082 %* \textHandRight -> \PointingHand (marvosym)
19083 %* \textHandRight -> \Pointinghand (marvosym)
19084 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19085 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19086 %* \textRadioactivity -> \Radiation (ifsym)
19087 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19088 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19089 % U+2625 ANKH; \Ankh (marvosym)
19090 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19091 % U+262F YIN YANG; \YinYang (marvosym)
19092 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19093 %* \textYinYang -> \Yinyang (marvosym)
19094 %* \textYinYang -> \YingYang (marvosym)
19095 %* \textYinYang -> \Yingyang (marvosym)
19096 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19097 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19098 %* \textfrownie -> \Frowny (marvosym)
19099 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19100 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19101 %* \textsmiley -> \Smiley (marvosym)
19102 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19103 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19104 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19105 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19106 %* \textsun -> \Sun (marvosym)
19107 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19108 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19109 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19110 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19111 % U+263F MERCURY; \mercury (wasysym)
19112 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19113 %* \textmercury -> \Mercury (marvosym)
19114 % U+2640 FEMALE SIGN; female; \female (wasysym)
19115 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19116 %* \textPUfemale -> \textfemale (tipx)
19117 %* \textPUfemale -> \female (wasysym)
19118 %* \textPUfemale -> \venus (wasysym)
19119 %* \textPUfemale -> \Venus (marvosym)
19120 %* \textPUfemale -> \Female (marvosym)
19121 % U+2641 EARTH; \earth (wasysym)
19122 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19123 %* \textearth -> \Earth (marvosym)
19124 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19125 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19126 %* \textmale -> \mars (wasysym)
19127 %* \textmale -> \Mars (marvosym)
19128 %* \textmale -> \Male (marvosym)
19129 % U+2643 JUPITER; \jupiter (wasysym)
19130 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19131 %* \textjupiter -> \Jupiter (marvosym)
19132 % U+2644 SATURN; \saturn (wasysym)
19133 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19134 %* \textsaturn -> \Saturn (marvosym)
19135 % U+2645 URANUS; \uranus (wasysym)
19136 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19137 %* \texturanus -> \Uranus (marvosym)
19138 % U+2646 NEPTUNE; \neptune (wasysym)

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19139 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19140 %* \textneptune -> \Neptune (marvosym)
19141 % U+2647 PLUTO; \pluto (wasysym)
19142 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19143 %* \textpluto -> \Pluto (marvosym)
19144 % U+2648 ARIES; \aries (wasysym)
19145 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19146 %* \textaries -> \Aries (marvosym)
19147 % U+2649 TAURUS; \taurus (wasysym)
19148 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19149 %* \texttaurus -> \Taurus (marvosym)
19150 % U+264A GEMINI; \gemini (wasysym)
19151 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19152 %* \textgemini -> \Gemini (marvosym)
19153 % U+264B CANCER; \cancer (wasysym)
19154 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19155 %* \textcancer -> \Cancer (marvosym)
19156 % U+264C LEO; \leo (wasysym)
19157 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19158 %* \textleo -> \Leo (marvosym)
19159 % U+264D VIRGO; \virgo (wasysym)
19160 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19161 %* \textvirgo -> \Virgo (marvosym)
19162 % U+264E LIBRA; \libra (wasysym)
19163 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19164 %* \textlibra -> \Libra (marvosym)
19165 % U+264F SCORPIO; \scorpio (wasysym)
19166 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19167 %* \textscorpio -> \Scorpio (marvosym)
19168 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19169 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19170 %* \textsagittarius -> \Sagittarius (marvosym)
19171 % U+2651 CAPRICORN; \capricorn (wasysym)
19172 \DeclareTextCommand{\textcapricorn}{PU}{\9046\121}%* U+2651
19173 %* \textcapricorn -> \Capricorn (marvosym)
19174 % U+2652 AQUARIUS; \aquarius (wasysym)
19175 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19176 %* \textaquarius -> \Aquarius (marvosym)
19177 % U+2653 PISCES; \pisces (wasysym)
19178 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19179 %* \textpisces -> \Pisces (marvosym)
19180 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19181 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19182 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19183 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19184 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19185 %* \textheartsuitwhite -> \Heart (marvosym)
19186 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19187 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19188 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19189 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19190 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19191 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19192 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19193 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19194 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19195 % U+2665 BLACK HEART SUIT; heartsuitblack, heart

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19196 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19197 % U+2666 BLACK DIAMOND SUIT; diamond
19198 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19199 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19200 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19201 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19202 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19203 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19204 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19205 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19206 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19207 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19208 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19209 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19210 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19211 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19212 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19213 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19214 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19215 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19216 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19217 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19218 %* \textrecycle -> \Recycling (marvosym)
19219 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19220 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19221 % U+2691 BLACK FLAG; \Flag (ifsym)
19222 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19223 %* \textFlag -> \VarFlag (ifsym)
19224 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19225 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19226 % U+2694 CROSSED SWORDS; \ds military (dictsym)
19227 \DeclareTextCommand{\textds military}{PU}{\9046\224}%* U+2694
19228 %* \textds military -> \textxswup (fourier)
19229 % U+2695 STAFF OF AESCULAPIUS; \ds medical (dictsym)
19230 \DeclareTextCommand{\textds medical}{PU}{\9046\225}%* U+2695
19231 % U+2696 SCALES; \ds juridical (dictsym)
19232 \DeclareTextCommand{\textds juridical}{PU}{\9046\226}%* U+2696
19233 % U+2697 ALEMBIC; \ds chemical (dictsym)
19234 \DeclareTextCommand{\textds chemical}{PU}{\9046\227}%* U+2697
19235 % U+2698 FLOWER; \ds biological (dictsym)
19236 \DeclareTextCommand{\textds biological}{PU}{\9046\230}%* U+2698
19237 % U+269A STAFF OF HERMES; \ds commercial (dictsym)
19238 \DeclareTextCommand{\textds commercial}{PU}{\9046\232}%* U+269A
19239 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19240 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
19241 % U+26A0 WARNING SIGN; \danger (fourier)
19242 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
19243 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19244 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
19245 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
19246 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
19247 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
vosym)
19248 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
19249 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
19250 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5

19251 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19252 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19253 % U+26AD MARRIAGE SYMBOL
 19254 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19255 % U+26AE DIVORCE SYMBOL
 19256 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19257 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19258 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19259 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19260 % U+26B9 SEXTILE; \hexstar (wasysym)
 19261 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19262 % U+26BD SOCCER BALL; \Football (marvosym)
 19263 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19264 %* \textSoccerBall -> \Football (marvosym)
 19265 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19266 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19267 % U+26C6 RAIN; \Rain (ifsym)
 19268 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19269 % U+26D4 NO ENTRY; \noway (fourier)
 19270 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19271 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19272 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19273 % U+26FA TENT; \Tent (ifsym)
 19274 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19275 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)
 19276 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19277 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19278 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19279 % U+2702 BLACK SCISSORS; \ScissorRight (bbding)
 19280 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19281 %* \textScissorRight -> \RightScissors (marvosym)
 19282 %* \textScissorRight -> \Leftscissors (marvosym)
 19283 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbding)
 19284 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19285 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbding)
 19286 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19287 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbding)
 19288 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19289 % U+2707 TAPE DRIVE; \Tape (bbding)
 19290 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19291 % U+2708 AIRPLANE; \Plane (bbding)
 19292 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19293 % U+2709 ENVELOPE; \Envelope (bbding),
 19294 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19295 %* \textEnvelope -> \Letter (marvosym)
 19296 % U+270C VICTORY HAND; \Peace (bbding)
 19297 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19298 % U+270D WRITING HAND; \WritingHand (marvosym)
 19299 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19300 %* \textWritingHand -> \Writinghand (marvosym)
 19301 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbding)
 19302 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19303 % U+270F PENCIL; \PencilRight (bbding)
 19304 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19305 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bbding)

19306 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19307 % U+2711 WHITE NIB; \NibRight (bbling)
 19308 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19309 % U+2712 BLACK NIB; \NibSolidRight (bbling)
 19310 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19311 % U+2713 CHECK MARK; checkmark; \Checkmark (bbling)
 19312 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19313 %* \textCheckmark -> \checkmark (MnSymbol)
 19314 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bbling)
 19315 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19316 % U+2715 MULTIPLICATION X; \XSolid (bbling)
 19317 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19318 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bbling)
 19319 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19320 % U+2717 BALLOT X; \XSolidBrush (bbling)
 19321 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19322 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bbling)
 19323 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19324 % U+271A HEAVY GREEK CROSS; \Plus (bbling)
 19325 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19326 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bbling)
 19327 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19328 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bbling)
 19329 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19330 % U+271D LATIN CROSS; \Cross (bbling)
 19331 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19332 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bbling)
 19333 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19334 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bbling)
 19335 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19336 % U+2720 MALTESE CROSS; \CrossMaltese (bbling)
 19337 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19338 % U+2721 STAR OF DAVID; \DavidStar (bbling)
 19339 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19340 %* \textDavidStar -> \davidstar (wasysym)
 19341 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bbling)
 19342 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19343 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bbling)
 19344 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19345 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bbling)
 19346 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19347 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bbling)
 19348 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19349 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bbling)
 19350 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19351 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bbling)
 19352 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19353 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bbling)
 19354 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19355 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bbling)
 19356 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19357 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bbling)
 19358 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19359 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bbling)
 19360 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19361 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bbling)

19362 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19363 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19364 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19365 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19366 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19367 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19368 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19369 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19370 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19371 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19372 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19373 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19374 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19375 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19376 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19377 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19378 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19379 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19380 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19381 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19382 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19383 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19384 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19385 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19386 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19387 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19388 % \SixFlowerOpenCenter (bding)
 19389 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19390 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19391 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19392 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19393 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19394 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19395 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19396 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19397 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19398 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19399 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19400 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19401 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19402 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19403 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19404 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19405 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19406 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19407 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19408 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19409 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19410 % U+2747 SPARKLE; \Sparkle (bding)
 19411 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747

19412 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19413 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19414 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19415 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19416 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19417 % \EightFlowerPetalRemoved (bding)
 19418 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19419 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19420 % \EightAsterisk (bding)
 19421 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 19422 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 19423 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 19424 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 19425 % \SquareShadowBottomRight (bding)
 19426 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 19427 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 19428 % \SquareShadowTopRight (bding)
 19429 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 19430 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 19431 % \SquareCastShadowBottomRight (bding)
 19432 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 19433 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 19434 % \SquareCastShadowTopRight (bding)
 19435 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 19436 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 19437 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 19438 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 19439 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 19440 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 19441 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 19442 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 19443 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

19444 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 19445 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 19446 % \notperp (mathabx)
 19447 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 19448 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 19449 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 19450 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 19451 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 19452 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 19453 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 19454 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 19455 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 19456 %* \textlbrackdbl -> \lbracket (stmaryrd)
 19457 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 19458 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 19459 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

19460 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 19461 % \circlearrowleft (AmS)
 19462 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 19463 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)

19464 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 19465 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 19466 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 19467 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 19468 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 19469 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
 19470 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 19471 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 19472 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 19473 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 19474 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 19475 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 19476 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 19477 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 19478 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 19479 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 19480 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 19481 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 19482 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

19483 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 19484 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 19485 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 19486 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 19487 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 19488 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 19489 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 19490 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 19491 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
 19492 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 19493 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 19494 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 19495 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 19496 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 19497 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 19498 % \rcurvearrowne (MnSymbol)
 19499 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 19500 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 19501 % \lcurvearrowse (MnSymbol)
 19502 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 19503 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 19504 % \lcurvearrowsw (MnSymbol)
 19505 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 19506 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 19507 % \rcurvearrowse (MnSymbol)
 19508 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 19509 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 19510 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938

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19511 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19512 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19513 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19514 % \rcurvearrowdown (MnSymbol)
19515 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
19516 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
19517 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
19518 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSymbol)
19519 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
19520 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19521 % \rcurvearrowright (MnSymbol)
19522 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
19523 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
19524 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19525 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
19526 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19527 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19528 % \updownharpoonrightleft (MnSymbol)
19529 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19530 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19531 % \updownharpoonleftright (MnSymbol)
19532 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19533 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19534 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19535 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19536 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19537 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19538 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19539 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON
19540 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19541 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19542 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
19543 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19544 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
19545 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
19546 % \leftbarharpoon (mathabx)
19547 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
19548 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
19549 % LONG DASH; \barleftharpoon (mathabx)
19550 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
19551 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
19552 % LONG DASH; \rightbarharpoon (mathabx)
19553 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
19554 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
19555 % LONG DASH; \barrightharpoon (mathabx)
19556 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
19557 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
19558 % WITH BARB RIGHT; \updownharpoons (mathabx)
19559 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
19560 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON

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19561 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19562 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19563 % U+297F DOWN FISH TAIL
 19564 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19565 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19566 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 19567 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19568 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19569 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19570 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19571 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19572 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19573 %* \textobar -> \textvarobar (stmaryrd)
 19574 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19575 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19576 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19577 %* \textobslash -> \obackslash (mathabx)
 19578 %* \textobslash -> \varobslash (stmaryrd)
 19579 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19580 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19581 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19582 %* \textobot -> \odplus (ulsy)
 19583 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (marvosym)
 19584 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19585 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19586 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19587 %* \textolessthan -> \varolessthan (stmaryrd)
 19588 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19589 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19590 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19591 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19592 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19593 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 19594 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 19595 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19596 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19597 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19598 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19599 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19600 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19601 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19602 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19603 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19604 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19605 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19606 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19607 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19608 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19609 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19610 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19611 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19612 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08

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19613 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
19614 %   pxfonts, wasysym)
19615 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
19616 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
19617 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
19618 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
19619 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
19620 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
19621 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
19622 %* \textminusdot -> \divdot (mathabx)
19623 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (math-
19624 %   abx)
19624 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
19625 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
19626 %   \dtimes (mathdesign)
19627 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
19628 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
19629 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
19630 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
19631 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
19632 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
19633 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
19634 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
19635 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
19636 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
19637 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
19638 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19639 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19640 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19641 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19642 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19643 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19644 %* \textdoublevee -> \merge (stmaryrd)
19645 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19646 %   \doublebarwedge (AmS)
19647 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19648 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19649 %   \veedoublebar (mahtabx)
19650 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19651 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19652 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19653 % \neqdot (MnSymbol)
19654 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19655 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19656 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19657 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19658 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19659 % \nleqslant (txfonts/pxfonts)
19660 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19661 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19662 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19663 % \ngeqslant (txfonts/pxfonts)
19664 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19665 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19666 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19667 % \nlessapprox (txfonts/pxfonts)
19668 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338

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19669 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19670 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19671 % \ngtrapprox (txfonts/pxfonts)
19672 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19673 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19674 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19675 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19676 % \gneq (AmS)
19677 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19678 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
19679 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
19680 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
19681 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
19682 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN;
19683 % \lesseqgtr (AmS)
19684 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
19685 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN;
19686 % \gtreqless (AmS)
19687 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
19688 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
19689 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
19690 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
19691 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
19692 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
19693 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
19694 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
19695 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
19696 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
Symbol)
19697 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
19698 % \npreceq (txfonts/pxfonts)
19699 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
19700 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
Symbol)
19701 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
19702 % \nsucceq (txfonts/pxfonts)
19703 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
19704 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
neq (mathabx)
19705 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
19706 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
neq (mathabx)
19707 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
19708 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
19709 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
19710 % \npreceqq (txfonts/pxfonts)
19711 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
19712 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
19713 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
19714 % \nsucceqq (txfonts/pxfonts)
19715 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
19716 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
19717 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
19718 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
19719 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
19720 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
19721 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7

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19722 % \nprecapprox (txfonts/pxfonts)
19723 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
19724 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
19725 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
19726 % \nsuccapprox (txfonts/pxfonts)
19727 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19728 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
      prox (AmS)
19729 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19730 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
      prox (AmS)
19731 \DeclareTextCommand{\textsucnapprox}{PU}{\9052\272}%* U+2ABA
19732 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19733 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19734 % \nsubseteqq (txfonts/pxfonts, mathabx)
19735 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19736 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19737 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19738 % \nsupseteqq (mathabx)
19739 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19740 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19741 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19742 %* \textdashV -> \leftVdash (MnSymbol)
19743 % \ndashV (mathabx)
19744 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19745 %* \textndashV -> \nleftVdash (MnSymbol)
19746 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
19747 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
19748 %* \textDashv -> \leftmodels (MnSymbol)
19749 % \nDashv (mathabx)
19750 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
19751 %* \textnDashv -> \nleftmodels (MnSymbol)
19752 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
19753 % \DashV (mathabx)
19754 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
19755 %* \textDashV -> \leftModels (MnSymbol)
19756 % \nDashV (mathabx)
19757 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
19758 %* \textnDashV -> \nleftModels (MnSymbol)
19759 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
19760 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
19761 % \ndownmodels (MnSymbol)
19762 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
19763 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
19764 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
19765 % \nupmodels (MnSymbol)
19766 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
19767 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
19768 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
19769 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
19770 % \interleave (stmaryrd)
19771 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
19772 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
19773 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
19774 %* \textsslash -> \varparallel (txfonts/pxfonts)

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51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

19775 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19776 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19777 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19778 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

19779 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19780 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19781 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19782 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19783 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19784 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19785 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19786 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

19787 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19788 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19789 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19790 % \textdownstep (tipa)
 19791 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

19792 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 19793 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 19794 %* \textPUheng -> \textheng (tipx)
 19795 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 19796 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 19797 %* \textPULhookfour -> \textlhookfour (tipx)
 19798 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 19799 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 19800 %* \textPUscf -> \textscf (tipx)
 19801 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 19802 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 19803 %* \textPUaolig -> \textao lig (tipx)
 19804 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 19805 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 19806 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 19807 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

19808 % U+FB01 LATIN SMALL LIGATURE FI; fi
 19809 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 19810 % U+FB02 LATIN SMALL LIGATURE FL; fl
 19811 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

19812 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 19813 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 19814 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 19815 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 19816 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 19817 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 19818 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 19819 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E

19820 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 19821 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 19822 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 19823 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 19824 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 19825 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 19826 %* \textfullnote -> \Ganz (harmony)
 19827 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 19828 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 19829 %* \texthalfnote -> \Halb (harmony)
 19830 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 19831 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 19832 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 19833 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 19834 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 19835 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 19836 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 19837 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19838 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 19839 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 19840 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 19841 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 19842 % U+1F468 MAN; \ManFace (marvosym)
 19843 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 19844 % U+1F469 WOMAN; \WomanFace (marvosym)
 19845 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 19846 %* \textWomanFace -> \Womanface (marvosym)
 19847 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 19848 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 19849 %* \textFax -> \Faxmachine (marvosym)
 19850 % U+1F525 FIRE; \Fire (ifsym)
 19851 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

19852 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 19853 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 19854 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 19855 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 19856 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 19857 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

19858 \DeclareTextCommand{\SS}{PU}{SS}%
 19859 % \textcopyleft (textcomp)
 19860 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 19861 % \ccnc (ccllicenses)
 19862 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 19863 % \ccnd (ccllicenses)
 19864 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 19865 % \ccsa (ccllicenses)
 19866 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
 19867 % \Info (marvosym, china2e)
 19868 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
 19869 % \CESign (marvosym)
 19870 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045

19871 %* \textCESign -> \CESign (marvosym)

51.2.46 Aliases

Aliases (german.sty)

```
19872 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19873 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19874 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19875 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19876 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
19877 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
19878 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19879 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

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Aliases (math names)

```
19880 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
19881 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
19882 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
19883 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19884 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19885 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
19886 <*puvnenc>
19887 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19888 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19889 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
19890 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19891 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19892 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19893 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19894 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
19895 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
19896 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
19897 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
19898 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
19899 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
19900 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
19901 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
19902 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
19903 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
19904 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
19905 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
19906 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}% U+1EB1
19907 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
19908 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
19909 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
19910 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
19911 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}% U+1EA7
19912 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
19913 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
19914 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
19915 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
19916 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8

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19917 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 19918 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 19919 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 19920 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 19921 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 19922 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 19923 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 19924 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 19925 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 19926 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
 19927 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 19928 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 19929 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 19930 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 19931 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
 19932 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 19933 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 19934 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 19935 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 19936 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 19937 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 19938 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 19939 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 19940 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 19941 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}% U+1EDD
 19942 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 19943 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 19944 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 19945 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 19946 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 19947 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 19948 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 19949 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 19950 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 19951 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}% U+1EEB
 19952 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 19953 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 19954 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 19955 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 19956 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 19957 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 19958 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 19959 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 19960 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 19961 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}% U+00C0
 19962 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 19963 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 19964 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 19965 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 19966 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}% U+1EB0
 19967 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 19968 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 19969 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 19970 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 19971 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 19972 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 19973 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA

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19974 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
19975 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
19976 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}% U+00C8
19977 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
19978 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
19979 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
19980 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
19981 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
19982 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
19983 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
19984 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
19985 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
19986 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}% U+00CC
19987 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
19988 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
19989 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
19990 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
19991 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}% U+00D2
19992 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
19993 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
19994 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
19995 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
19996 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
19997 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
19998 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
19999 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
20000 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
20001 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}% U+1EDC
20002 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
20003 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
20004 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
20005 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20006 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
20007 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20008 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20009 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20010 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20011 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}% U+1EEA
20012 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20013 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20014 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20015 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20016 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
20017 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20018 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20019 </p>

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20020 <*puarenc>
20021 % U+0621;afii57409;ARABIC LETTER HAMZA
20022 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20023 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20024 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20025 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE

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20026 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
 20027 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
 20028 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
 20029 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
 20030 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
 20031 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
 20032 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
 20033 % U+0627;afii57415;ARABIC LETTER ALEF
 20034 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 20035 % U+0628;afii57416;ARABIC LETTER BEH
 20036 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 20037 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 20038 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 20039 % U+062A;afii57418;ARABIC LETTER TEH
 20040 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 20041 % U+062B;afii57419;ARABIC LETTER THEH
 20042 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 20043 % U+062C;afii57420;ARABIC LETTER JEEM
 20044 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 20045 % U+062D;afii57421;ARABIC LETTER HAH
 20046 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 20047 % U+062E;afii57422;ARABIC LETTER KHAH
 20048 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20049 % U+062F;afii57423;ARABIC LETTER DAL
 20050 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20051 % U+0630;afii57424;ARABIC LETTER THAL
 20052 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20053 % U+0631;afii57425;ARABIC LETTER REH
 20054 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20055 % U+0632;afii57426;ARABIC LETTER ZAIN
 20056 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20057 % U+0633;afii57427;ARABIC LETTER SEEN
 20058 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20059 % U+0634;afii57428;ARABIC LETTER SHEEN
 20060 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20061 % U+0635;afii57429;ARABIC LETTER SAD
 20062 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20063 % U+0636;afii57430;ARABIC LETTER DAD
 20064 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20065 % U+0637;afii57431;ARABIC LETTER TAH
 20066 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20067 % U+0638;afii57432;ARABIC LETTER ZAH
 20068 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20069 % U+0639;afii57433;ARABIC LETTER AIN
 20070 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20071 % U+063A;afii57434;ARABIC LETTER GHAIN
 20072 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20073 % U+0640;afii57440;ARABIC TATWEEL
 20074 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20075 % U+0641;afii57441;ARABIC LETTER FEH
 20076 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20077 % U+0642;afii57442;ARABIC LETTER QAF
 20078 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20079 % U+0643;afii57443;ARABIC LETTER KAF
 20080 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20081 % U+0644;afii57444;ARABIC LETTER LAM
 20082 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644

20083 % U+0645;afi57445;ARABIC LETTER MEEM
 20084 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20085 % U+0646;afi57446;ARABIC LETTER NOON
 20086 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20087 % U+0647;afi57470;ARABIC LETTER HEH
 20088 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20089 % U+0648;afi57448;ARABIC LETTER WAW
 20090 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20091 % U+0649;afi57449;ARABIC LETTER ALEF MAKSURA
 20092 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20093 % U+064A;afi57450;ARABIC LETTER YEH
 20094 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20095 % U+064B;afi57451;ARABIC FATHATAN
 20096 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20097 % U+064C;afi57452;ARABIC DAMMATAN
 20098 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20099 % U+064D;afi57453;ARABIC KASRATAN
 20100 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20101 % U+064E;afi57454;ARABIC FATHA
 20102 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20103 % U+064F;afi57455;ARABIC DAMMA
 20104 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20105 % U+0650;afi57456;ARABIC KASRA
 20106 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20107 % U+0651;afi57457;ARABIC SHADDA
 20108 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20109 % U+0652;afi57458;ARABIC SUKUN
 20110 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20111 % U+067E ARABIC LETTER PEH; afi57506
 20112 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20113 % U+0686 ARABIC LETTER TCHEH; afi57507
 20114 \DeclareTextCommand{\tch eh}{PU}{\86\206}% U+0686
 20115 % U+0698 ARABIC LETTER JEH; afi57508
 20116 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20117 % U+06A9 ARABIC LETTER KEHEH
 20118 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20119 % U+06AF ARABIC LETTER GAF; afi57509
 20120 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20121 % U+06CC ARABIC LETTER FARSI YEH
 20122 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20123 % U+200C ZERO WIDTH NON-JOINER; afi61664
 20124 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20125 % U+200D ZERO WIDTH JOINER; afi301
 20126 \DeclareTextCommand{\noboundary}{PU}{\9040\015}% U+200D
 20127 (/puarenc)
 20128 (*psdextra)
 20129 \Hy@VersionCheck{psdextra.def}
 20130 \newcommand*{\psdmapshortnames}{%
 20131 \let\MVPlus\textMVPlus
 20132 \let\MVComma\textMVComma
 20133 \let\MVMinus\textMVMinus
 20134 \let\MVPeriod\textMVPeriod
 20135 \let\MVDivision\textMVDivision
 20136 \let\MVZero\textMVZero

20137 \let\MVOne\textMVOne
 20138 \let\MVTwo\textMVTwo
 20139 \let\MVThree\textMVThree
 20140 \let\MVFour\textMVFfour
 20141 \let\MVFive\textMVFfive
 20142 \let\MVSix\textMVSix
 20143 \let\MVSeven\textMVSeven
 20144 \let\MVEight\textMVEight
 20145 \let\MVNine\textMVNine
 20146 \let\MVAt\textMVAt
 20147 \let\copyright\textcopyright
 20148 \let\twosuperior\texttwosuperior
 20149 \let\threesuperior\textthreesuperior
 20150 \let\onesuperior\textonesuperior
 20151 \let\Thorn\textThorn
 20152 \let\thorn\textthorn
 20153 \let\hbar\texthbar
 20154 \let\hausA\texthausA
 20155 \let\hausD\texthausD
 20156 \let\hausK\texthausK
 20157 \let\barl\textbarl
 20158 \let\inve\textinve
 20159 \let\slashc\textslashc
 20160 \let\scripta\textscripta
 20161 \let\openo\textopeno
 20162 \let\rtaild\textrtaild
 20163 \let\reve\textreve
 20164 \let\schwa\textschwa
 20165 \let\niepsilon\textniepsilon
 20166 \let\repsilon\textrepsilon
 20167 \let\rhookrepsilon\text\rhookrepsilon
 20168 \let\scriptg\textscriptg
 20169 \let\scg\textscg
 20170 \let\ipagamma\textipagamma
 20171 \let\babygamma\textbabygamma
 20172 \let\bari\textbari
 20173 \let\niota\textniota
 20174 \let\sci\textsci
 20175 \let\scn\textscn
 20176 \let\niphi\textniphi
 20177 \let\longleg\textlongleg
 20178 \let\scr\textscr
 20179 \let\invscr\textinvscr
 20180 \let\esh\textesh
 20181 \let\baru\textbaru
 20182 \let\niupsilon\textniupsilon
 20183 \let\scriptv\textscriptv
 20184 \let\turnv\textturnv
 20185 \let\turnw\textturnw
 20186 \let\turny\textturny
 20187 \let\scy\textscy
 20188 \let\yogh\textyogh
 20189 \let\glotstop\textglotstop
 20190 \let\revglotstop\textrevglotstop
 20191 \let\invglotstop\textinvglotstop
 20192 \let\Gamma\textGamma
 20193 \let\Delta\textDelta

20194 \let\Theta\textTheta
 20195 \let\Lambda\textLambda
 20196 \let\Xi\textXi
 20197 \let\Pi\textPi
 20198 \let\Sigma\textSigma
 20199 \let\Upsilon\textUpsilon
 20200 \let\Phi\textPhi
 20201 \let\Psi\textPsi
 20202 \let\Omega\textOmega
 20203 \let\alpha\textalpha
 20204 \let\beta\textbeta
 20205 \let\gamma\textgamma
 20206 \let\delta\textdelta
 20207 \let\epsilon\textepsilon
 20208 \let\zeta\textzeta
 20209 \let\eta\texteta
 20210 \let\theta\texttheta
 20211 \let\iota\textiota
 20212 \let\kappa\textkappa
 20213 \let\lambda\textlambda
 20214 \let\mugreek\textmugreek
 20215 \let\nu\textnu
 20216 \let\xi\textxi
 20217 \let\pi\textpi
 20218 \let\rho\textrho
 20219 \let\varsigma\textvarsigma
 20220 \let\sigma\textsigma
 20221 \let\tau\texttau
 20222 \let\upsilon\textupsilon
 20223 \let\phi\textphi
 20224 \let\chi\textchi
 20225 \let\psi\textpsi
 20226 \let\omega\textomega
 20227 \let\scd\textscd
 20228 \let\scu\textscu
 20229 \let\iinferior\textiinferior
 20230 \let\rinferior\textrinferior
 20231 \let\uiinferior\textuiinferior
 20232 \let\vinferior\textvinferior
 20233 \let\betainferior\textbetainferior
 20234 \let\gammainferior\textgammainferior
 20235 \let\rhoinferior\textrhoinferior
 20236 \let\phiinferior\textphiinferior
 20237 \let\chiinferior\textchiinferior
 20238 \let\barsci\textbarsci
 20239 \let\barp\textbarp
 20240 \let\barscu\textbarscu
 20241 \let\htrtaild\texthtrtaild
 20242 \let\dagger\textdagger
 20243 \let\bullet\textbullet
 20244 \let\hdotfor\texthdotfor
 20245 \let\prime\textprime
 20246 \let\second\textsecond
 20247 \let\third\textthird
 20248 \let\backprime\textbackprime
 20249 \let\lefttherefore\textlefttherefore
 20250 \let\fourth\textfourth

20251 \let\diamonddots\textdiamonddots
 20252 \let\zerosuperior\textzerosuperior
 20253 \let\isuperior\textisuperior
 20254 \let\foursuperior\textfoursuperior
 20255 \let\fivesuperior\textfivesuperior
 20256 \let\sixsuperior\textsixsuperior
 20257 \let\sevensuperior\textsevensuperior
 20258 \let\eightsuperior\texteightsuperior
 20259 \let\ninesuperior\textninesuperior
 20260 \let\plussuperior\textplussuperior
 20261 \let\minussuperior\textminussuperior
 20262 \let>equalsuperior\textequalsuperior
 20263 \let\parenleftsuperior\textparenleftsuperior
 20264 \let\parenrightsuperior\textparenrightsuperior
 20265 \let\nsuperior\textnsuperior
 20266 \let\zeroinferior\textzeroinferior
 20267 \let\oneinferior\textoneinferior
 20268 \let\twoinferior\texttwoinferior
 20269 \let\threeinferior\textthreeinferior
 20270 \let\fourinferior\textfourinferior
 20271 \let\fiveinferior\textfiveinferior
 20272 \let\sixinferior\textsixinferior
 20273 \let\seveninferior\textseveninferior
 20274 \let\eightinferior\texteightinferior
 20275 \let\nineinferior\textnineinferior
 20276 \let\plusinferior\textplusinferior
 20277 \let\minusinferior\textminusinferior
 20278 \let>equalsinferior\textequalsinferior
 20279 \let\parenleftinferior\textparenleftinferior
 20280 \let\parenrightinferior\textparenrightinferior
 20281 \let\ainferior\textainferior
 20282 \let\einferior\texteinferior
 20283 \let\oinferior\textoinferior
 20284 \let\xinferior\textxinferior
 20285 \let\schwainferior\textschwainferior
 20286 \let\hinferior\texthinferior
 20287 \let\kinferior\textkinferior
 20288 \let\linferior\textlinferior
 20289 \let\minferior\textminferior
 20290 \let\ninferior\textninferior
 20291 \let\pinferior\textpinferior
 20292 \let\sinferior\textsinferior
 20293 \let\tinferior\texttinferior
 20294 \let\Deleatur\textDeleatur
 20295 \let\hslash\texthslash
 20296 \let\Im\textIm
 20297 \let\ell\textell
 20298 \let\wp\textwp
 20299 \let\Re\textRe
 20300 \let\mho\textmho
 20301 \let\riota\textriota
 20302 \let\Finv\textFinv
 20303 \let\aleph\textaleph
 20304 \let\beth\textbeth
 20305 \let\gimel\textgimel
 20306 \let\daleth\textdaleth
 20307 \let\xfax\textfax

20308 \let\Game\textGame
 20309 \let\leftarrow\textleftarrow
 20310 \let\uparrow\textuparrow
 20311 \let\rightarrow\textrightarrow
 20312 \let\downarrow\textdownarrow
 20313 \let\leftrightarrow\textleftrightarrow
 20314 \let\updownarrow\textupdownarrow
 20315 \let\nwarrow\textnwarrow
 20316 \let\nearrow\textnearrow
 20317 \let\searrow\textsearrow
 20318 \let\swarrow\textswarrow
 20319 \let\nleftarrow\textnleftarrow
 20320 \let\nrightarrow\textnrightarrow
 20321 \let\twoheadleftarrow\texttwoheadleftarrow
 20322 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20323 \let\twoheaduparrow\texttwoheaduparrow
 20324 \let\twoheadrightarrow\texttwoheadrightarrow
 20325 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20326 \let\twoheaddownarrow\texttwoheaddownarrow
 20327 \let\leftarrowtail\textleftarrowtail
 20328 \let\rightarrowtail\textrightarrowtail
 20329 \let\mapsto\textmapsto
 20330 \let\hookleftarrow\texthookleftarrow
 20331 \let\hookrightarrow\texthookrightarrow
 20332 \let\looparrowleft\textlooparrowleft
 20333 \let\looparrowright\textlooparrowright
 20334 \let\leftrightharpoonup\textleftrightharpoonup
 20335 \let\lightning\textlightning
 20336 \let\dlsh\textdlsh
 20337 \let\curvearrowleft\textcurvearrowleft
 20338 \let\curvearrowright\textcurvearrowright
 20339 \let\leftharpoonup\textleftharpoonup
 20340 \let\leftharpoondown\textleftharpoondown
 20341 \let\upharpoonright\textupharpoonright
 20342 \let\upharpoonleft\textupharpoonleft
 20343 \let\rightarpoonup\textrightarpoonup
 20344 \let\rightarpoondown\textrightarpoondown
 20345 \let\downharpoonright\textdownharpoonright
 20346 \let\downharpoonleft\textdownharpoonleft
 20347 \let\rightleftarrows\textrightleftarrows
 20348 \let\updownarrows\textupdownarrows
 20349 \let\leftrightarrows\textleftrightarrows
 20350 \let\leftleftarrows\textleftleftarrows
 20351 \let\upuparrows\textupuparrows
 20352 \let\righttrightarrows\textrighttrightarrows
 20353 \let\downdownarrows\textdowndownarrows
 20354 \let\leftrightharpoons\textleftrightharpoons
 20355 \let\rightleftharpoons\textrightleftharpoons
 20356 \let\nLeftarrow\textnLeftarrow
 20357 \let\nLeftrightarrow\textnLeftrightarrow
 20358 \let\nRightarrow\textnRightarrow
 20359 \let\Leftarrow\textLeftarrow
 20360 \let\Uparrow\textUparrow
 20361 \let\Rightarrow\textRightarrow
 20362 \let\Downarrow\textDownarrow
 20363 \let\Leftrightarrow\textLeftrightarrow
 20364 \let\Updownarrow\textUpdownarrow

20365 $\backslash\text{let}\backslash\text{Narrow}\backslash\text{textNarrow}$
 20366 $\backslash\text{let}\backslash\text{Nearrow}\backslash\text{textNearrow}$
 20367 $\backslash\text{let}\backslash\text{Searrow}\backslash\text{textSearrow}$
 20368 $\backslash\text{let}\backslash\text{Swarrow}\backslash\text{textSwarrow}$
 20369 $\backslash\text{let}\backslash\text{Lleftarrow}\backslash\text{textLleftarrow}$
 20370 $\backslash\text{let}\backslash\text{Rrightarrow}\backslash\text{textRrightarrow}$
 20371 $\backslash\text{let}\backslash\text{leftsquigarrow}\backslash\text{textleftsquigarrow}$
 20372 $\backslash\text{let}\backslash\text{rightsquigarrow}\backslash\text{textrightsquigarrow}$
 20373 $\backslash\text{let}\backslash\text{dashleftarrow}\backslash\text{texdashleftarrow}$
 20374 $\backslash\text{let}\backslash\text{dasheduparrow}\backslash\text{texdasheduparrow}$
 20375 $\backslash\text{let}\backslash\text{dashrightarrow}\backslash\text{texdashrightarrow}$
 20376 $\backslash\text{let}\backslash\text{dasheddownarrow}\backslash\text{texdasheddownarrow}$
 20377 $\backslash\text{let}\backslash\text{pointer}\backslash\text{textpointer}$
 20378 $\backslash\text{let}\backslash\text{downuparrows}\backslash\text{texdownuparrows}$
 20379 $\backslash\text{let}\backslash\text{leftarrowtriangle}\backslash\text{textleftarrowtriangle}$
 20380 $\backslash\text{let}\backslash\text{rightarrowtriangle}\backslash\text{textrightarrowtriangle}$
 20381 $\backslash\text{let}\backslash\text{leftrightarrowtriangle}\backslash\text{textleftrightarrowtriangle}$
 20382 $\backslash\text{let}\backslash\text{forall}\backslash\text{textforall}$
 20383 $\backslash\text{let}\backslash\text{complement}\backslash\text{textcomplement}$
 20384 $\backslash\text{let}\backslash\text{partial}\backslash\text{textpartial}$
 20385 $\backslash\text{let}\backslash\text{exists}\backslash\text{textexists}$
 20386 $\backslash\text{let}\backslash\text{nexists}\backslash\text{textnexists}$
 20387 $\backslash\text{let}\backslash\text{emptyset}\backslash\text{textemptyset}$
 20388 $\backslash\text{let}\backslash\text{triangle}\backslash\text{texttriangle}$
 20389 $\backslash\text{let}\backslash\text{nabla}\backslash\text{textnabla}$
 20390 $\backslash\text{let}\backslash\text{in}\backslash\text{textin}$
 20391 $\backslash\text{let}\backslash\text{notin}\backslash\text{textnotin}$
 20392 $\backslash\text{let}\backslash\text{smallin}\backslash\text{textsmallin}$
 20393 $\backslash\text{let}\backslash\text{ni}\backslash\text{textni}$
 20394 $\backslash\text{let}\backslash\text{notowner}\backslash\text{textnotowner}$
 20395 $\backslash\text{let}\backslash\text{smallowns}\backslash\text{textsmallowns}$
 20396 $\backslash\text{let}\backslash\text{prod}\backslash\text{textprod}$
 20397 $\backslash\text{let}\backslash\text{amalg}\backslash\text{textamalg}$
 20398 $\backslash\text{let}\backslash\text{sum}\backslash\text{textsum}$
 20399 $\backslash\text{let}\backslash\text{mp}\backslash\text{textmp}$
 20400 $\backslash\text{let}\backslash\text{dotplus}\backslash\text{texdotplus}$
 20401 $\backslash\text{let}\backslash\text{Divides}\backslash\text{textDivides}$
 20402 $\backslash\text{let}\backslash\text{DividesNot}\backslash\text{textDividesNot}$
 20403 $\backslash\text{let}\backslash\text{setminus}\backslash\text{textsetminus}$
 20404 $\backslash\text{let}\backslash\text{ast}\backslash\text{textast}$
 20405 $\backslash\text{let}\backslash\text{circ}\backslash\text{textcirc}$
 20406 $\backslash\text{let}\backslash\text{surd}\backslash\text{textsurd}$
 20407 $\backslash\text{let}\backslash\text{propto}\backslash\text{textpropto}$
 20408 $\backslash\text{let}\backslash\text{infty}\backslash\text{textinfty}$
 20409 $\backslash\text{let}\backslash\text{angle}\backslash\text{textangle}$
 20410 $\backslash\text{let}\backslash\text{measuredangle}\backslash\text{textmeasuredangle}$
 20411 $\backslash\text{let}\backslash\text{sphericalangle}\backslash\text{textsphericalangle}$
 20412 $\backslash\text{let}\backslash\text{mid}\backslash\text{textmid}$
 20413 $\backslash\text{let}\backslash\text{nmid}\backslash\text{textnmid}$
 20414 $\backslash\text{let}\backslash\text{parallel}\backslash\text{textparallel}$
 20415 $\backslash\text{let}\backslash\text{nparallel}\backslash\text{textnparallel}$
 20416 $\backslash\text{let}\backslash\text{wedge}\backslash\text{textwedge}$
 20417 $\backslash\text{let}\backslash\text{owedge}\backslash\text{textowedge}$
 20418 $\backslash\text{let}\backslash\text{vee}\backslash\text{textvee}$
 20419 $\backslash\text{let}\backslash\text{ovee}\backslash\text{textovee}$
 20420 $\backslash\text{let}\backslash\text{cap}\backslash\text{textcap}$
 20421 $\backslash\text{let}\backslash\text{cup}\backslash\text{textcup}$

20422 `\let\int\textint`
 20423 `\let\iint\textiint`
 20424 `\let\iiint\textiiint`
 20425 `\let\oint\textoint`
 20426 `\let\oiint\textoiint`
 20427 `\let\ointclockwise\textointclockwise`
 20428 `\let\ointctrlockwise\textointctrlockwise`
 20429 `\let\therefore\texttherefore`
 20430 `\let\because\textbecause`
 20431 `\let\vdotdot\textvdotdot`
 20432 `\let\squaredots\textsquaredots`
 20433 `\let\dotminus\textdotminus`
 20434 `\let\eqcolon\texteqcolon`
 20435 `\let\sim\textsim`
 20436 `\let\backsim\textbacksim`
 20437 `\let\backsim\textnbacksim`
 20438 `\let\wr\textwr`
 20439 `\let\sim\textnsim`
 20440 `\let\eqsim\texteqsim`
 20441 `\let\neqsim\textneqsim`
 20442 `\let\simeq\textsimeq`
 20443 `\let\sim\textnsimeq`
 20444 `\let\cong\textcong`
 20445 `\let\cong\textncong`
 20446 `\let\approx\textapprox`
 20447 `\let\approx\textnapprox`
 20448 `\let\approx\textapprox`
 20449 `\let\approx\textnapprox`
 20450 `\let\triplesim\texttriplesim`
 20451 `\let\triplesim\textntriplesim`
 20452 `\let\backcong\textbackcong`
 20453 `\let\backcong\textnbackcong`
 20454 `\let\asympt\textasympt`
 20455 `\let\asympt\textnasympt`
 20456 `\let\Bumpeq\textBumpeq`
 20457 `\let\Bumpeq\textnBumpeq`
 20458 `\let\bumpeq\textbumpeq`
 20459 `\let\bumpeq\textnbumpeq`
 20460 `\let\doteq\textdoteq`
 20461 `\let\ndoteq\textndoteq`
 20462 `\let\doteqdot\textdoteqdot`
 20463 `\let\ndoteq\textndoteq`
 20464 `\let\fallingdoteq\textfallingdoteq`
 20465 `\let\fallingdoteq\textnfallingdoteq`
 20466 `\let\risingdoteq\textrisingdoteq`
 20467 `\let\risingdoteq\textnrisingdoteq`
 20468 `\let\colonequals\textcolonequals`
 20469 `\let\equalscolon\textequalscolon`
 20470 `\let\eqcirc\texteqcirc`
 20471 `\let\neqcirc\textneqcirc`
 20472 `\let\circeq\textcirceq`
 20473 `\let\ncirceq\textncirceq`
 20474 `\let\hateq\texthateq`
 20475 `\let\hateq\textnhateq`
 20476 `\let\triangleeq\texttriangleeq`
 20477 `\let\neq\textneq`
 20478 `\let\neq\textne`

20479 $\backslash\mathrm{let}\backslash\mathrm{equiv}\backslash\mathrm{textequiv}$
 20480 $\backslash\mathrm{let}\backslash\mathrm{nequiv}\backslash\mathrm{textnequiv}$
 20481 $\backslash\mathrm{let}\backslash\mathrm{leq}\backslash\mathrm{textleq}$
 20482 $\backslash\mathrm{let}\backslash\mathrm{le}\backslash\mathrm{textle}$
 20483 $\backslash\mathrm{let}\backslash\mathrm{geq}\backslash\mathrm{textgeq}$
 20484 $\backslash\mathrm{let}\backslash\mathrm{ge}\backslash\mathrm{textge}$
 20485 $\backslash\mathrm{let}\backslash\mathrm{leqq}\backslash\mathrm{textleqq}$
 20486 $\backslash\mathrm{let}\backslash\mathrm{nleqq}\backslash\mathrm{textnleqq}$
 20487 $\backslash\mathrm{let}\backslash\mathrm{geqq}\backslash\mathrm{textgeqq}$
 20488 $\backslash\mathrm{let}\backslash\mathrm{ngeqq}\backslash\mathrm{textngeqq}$
 20489 $\backslash\mathrm{let}\backslash\mathrm{lneqq}\backslash\mathrm{textlneqq}$
 20490 $\backslash\mathrm{let}\backslash\mathrm{gneqq}\backslash\mathrm{textgneqq}$
 20491 $\backslash\mathrm{let}\backslash\mathrm{ll}\backslash\mathrm{textll}$
 20492 $\backslash\mathrm{let}\backslash\mathrm{nll}\backslash\mathrm{textnll}$
 20493 $\backslash\mathrm{let}\backslash\mathrm{gg}\backslash\mathrm{textgg}$
 20494 $\backslash\mathrm{let}\backslash\mathrm{ngg}\backslash\mathrm{textngg}$
 20495 $\backslash\mathrm{let}\backslash\mathrm{between}\backslash\mathrm{textbetween}$
 20496 $\backslash\mathrm{let}\backslash\mathrm{nless}\backslash\mathrm{textnless}$
 20497 $\backslash\mathrm{let}\backslash\mathrm{ngtr}\backslash\mathrm{textngtr}$
 20498 $\backslash\mathrm{let}\backslash\mathrm{nleq}\backslash\mathrm{textnleq}$
 20499 $\backslash\mathrm{let}\backslash\mathrm{ngeq}\backslash\mathrm{textngeq}$
 20500 $\backslash\mathrm{let}\backslash\mathrm{lesssim}\backslash\mathrm{textlessim}$
 20501 $\backslash\mathrm{let}\backslash\mathrm{gtrsim}\backslash\mathrm{textgtrsim}$
 20502 $\backslash\mathrm{let}\backslash\mathrm{nlesssim}\backslash\mathrm{textnlessim}$
 20503 $\backslash\mathrm{let}\backslash\mathrm{ngtrsim}\backslash\mathrm{textngtrsim}$
 20504 $\backslash\mathrm{let}\backslash\mathrm{lessgtr}\backslash\mathrm{textlessgtr}$
 20505 $\backslash\mathrm{let}\backslash\mathrm{gtrless}\backslash\mathrm{textgtrless}$
 20506 $\backslash\mathrm{let}\backslash\mathrm{ngtrless}\backslash\mathrm{textngtrless}$
 20507 $\backslash\mathrm{let}\backslash\mathrm{nlessgtr}\backslash\mathrm{textnlessgtr}$
 20508 $\backslash\mathrm{let}\backslash\mathrm{prec}\backslash\mathrm{textprec}$
 20509 $\backslash\mathrm{let}\backslash\mathrm{succ}\backslash\mathrm{textsucc}$
 20510 $\backslash\mathrm{let}\backslash\mathrm{preccurlyeq}\backslash\mathrm{textpreccurlyeq}$
 20511 $\backslash\mathrm{let}\backslash\mathrm{succcurlyeq}\backslash\mathrm{textsucccurlyeq}$
 20512 $\backslash\mathrm{let}\backslash\mathrm{precsim}\backslash\mathrm{textprecsim}$
 20513 $\backslash\mathrm{let}\backslash\mathrm{nprecsim}\backslash\mathrm{textnprecsim}$
 20514 $\backslash\mathrm{let}\backslash\mathrm{succsim}\backslash\mathrm{textsuccsim}$
 20515 $\backslash\mathrm{let}\backslash\mathrm{nsuccsim}\backslash\mathrm{textnsuccsim}$
 20516 $\backslash\mathrm{let}\backslash\mathrm{nprec}\backslash\mathrm{textnprec}$
 20517 $\backslash\mathrm{let}\backslash\mathrm{nsucc}\backslash\mathrm{textnsucc}$
 20518 $\backslash\mathrm{let}\backslash\mathrm{subset}\backslash\mathrm{textsubset}$
 20519 $\backslash\mathrm{let}\backslash\mathrm{supset}\backslash\mathrm{textsupset}$
 20520 $\backslash\mathrm{let}\backslash\mathrm{nssubset}\backslash\mathrm{textnssubset}$
 20521 $\backslash\mathrm{let}\backslash\mathrm{nsupset}\backslash\mathrm{textnsupset}$
 20522 $\backslash\mathrm{let}\backslash\mathrm{subseteq}\backslash\mathrm{textsubseteq}$
 20523 $\backslash\mathrm{let}\backslash\mathrm{supseteq}\backslash\mathrm{textsupseteq}$
 20524 $\backslash\mathrm{let}\backslash\mathrm{nsubseteq}\backslash\mathrm{textnsubseteq}$
 20525 $\backslash\mathrm{let}\backslash\mathrm{nsupseteq}\backslash\mathrm{textnsupseteq}$
 20526 $\backslash\mathrm{let}\backslash\mathrm{subsetneq}\backslash\mathrm{textsubsetneq}$
 20527 $\backslash\mathrm{let}\backslash\mathrm{supsetneq}\backslash\mathrm{textsupsetneq}$
 20528 $\backslash\mathrm{let}\backslash\mathrm{cupdot}\backslash\mathrm{textcupdot}$
 20529 $\backslash\mathrm{let}\backslash\mathrm{cupplus}\backslash\mathrm{textcupplus}$
 20530 $\backslash\mathrm{let}\backslash\mathrm{sqsubset}\backslash\mathrm{textsqsubset}$
 20531 $\backslash\mathrm{let}\backslash\mathrm{nsqsubset}\backslash\mathrm{textnsqsubset}$
 20532 $\backslash\mathrm{let}\backslash\mathrm{sqsupset}\backslash\mathrm{textsqsupset}$
 20533 $\backslash\mathrm{let}\backslash\mathrm{nsqsupset}\backslash\mathrm{textnsqsupset}$
 20534 $\backslash\mathrm{let}\backslash\mathrm{sqsubseq}\backslash\mathrm{textsqsubseq}$
 20535 $\backslash\mathrm{let}\backslash\mathrm{nsqsubseq}\backslash\mathrm{textnsqsubseq}$

20536 $\backslash\mathrm{sqsupseteq}\text{textsqsupseteq}$
 20537 $\backslash\mathrm{nsqsupseteq}\text{textnsqsupseteq}$
 20538 $\backslash\mathrm{sqcap}\text{textsqcap}$
 20539 $\backslash\mathrm{sqcup}\text{textsqcup}$
 20540 $\backslash\mathrm{oplus}\text{textoplus}$
 20541 $\backslash\mathrm{ominus}\text{textominus}$
 20542 $\backslash\mathrm{otimes}\text{textotimes}$
 20543 $\backslash\mathrm{oslash}\text{textoslash}$
 20544 $\backslash\mathrm{odot}\text{textodot}$
 20545 $\backslash\mathrm{circledcirc}\text{textcircledcirc}$
 20546 $\backslash\mathrm{circledast}\text{textcircledast}$
 20547 $\backslash\mathrm{circleddash}\text{textcircleddash}$
 20548 $\backslash\mathrm{boxplus}\text{textboxplus}$
 20549 $\backslash\mathrm{boxminus}\text{textboxminus}$
 20550 $\backslash\mathrm{boxtimes}\text{textboxtimes}$
 20551 $\backslash\mathrm{boxdot}\text{textboxdot}$
 20552 $\backslash\mathrm{vdash}\text{textvdash}$
 20553 $\backslash\mathrm{dashv}\text{textdashv}$
 20554 $\backslash\mathrm{ndashv}\text{textndashv}$
 20555 $\backslash\mathrm{top}\text{texttop}$
 20556 $\backslash\mathrm{ndownvdash}\text{textndownvdash}$
 20557 $\backslash\mathrm{bot}\text{textbot}$
 20558 $\backslash\mathrm{nupvdash}\text{textnupvdash}$
 20559 $\backslash\mathrm{vDash}\text{textvDash}$
 20560 $\backslash\mathrm{VDash}\text{textVDash}$
 20561 $\backslash\mathrm{Vvdash}\text{textVvdash}$
 20562 $\backslash\mathrm{nVdash}\text{textnVdash}$
 20563 $\backslash\mathrm{VDash}\text{textVDash}$
 20564 $\backslash\mathrm{nvDash}\text{textnvDash}$
 20565 $\backslash\mathrm{nvDash}\text{textnvDash}$
 20566 $\backslash\mathrm{nVdash}\text{textnVdash}$
 20567 $\backslash\mathrm{nVDash}\text{textnVDash}$
 20568 $\backslash\mathrm{lhs}\text{textrhs}$
 20569 $\backslash\mathrm{rhd}\text{textrhd}$
 20570 $\backslash\mathrm{unlhd}\text{textunlhd}$
 20571 $\backslash\mathrm{unrhd}\text{textunrhd}$
 20572 $\backslash\mathrm{multimapdotbothA}\text{textmultimapdotbothA}$
 20573 $\backslash\mathrm{multimapdotbothB}\text{textmultimapdotbothB}$
 20574 $\backslash\mathrm{multimap}\text{textmultimap}$
 20575 $\backslash\mathrm{veebar}\text{textveebar}$
 20576 $\backslash\mathrm{barwedge}\text{textbarwedge}$
 20577 $\backslash\mathrm{star}\text{textstar}$
 20578 $\backslash\mathrm{divideontimes}\text{textdivideontimes}$
 20579 $\backslash\mathrm{bowtie}\text{textbowtie}$
 20580 $\backslash\mathrm{ltimes}\text{textltimes}$
 20581 $\backslash\mathrm{rtimes}\text{textrtimes}$
 20582 $\backslash\mathrm{leftthreetimes}\text{textleftthreetimes}$
 20583 $\backslash\mathrm{rightthreetimes}\text{textrightthreetimes}$
 20584 $\backslash\mathrm{backsimeq}\text{textbacksimeq}$
 20585 $\backslash\mathrm{nbacksimeq}\text{textnbacksimeq}$
 20586 $\backslash\mathrm{curlyvee}\text{textcurlyvee}$
 20587 $\backslash\mathrm{curlywedge}\text{textcurlywedge}$
 20588 $\backslash\mathrm{Subset}\text{textSubset}$
 20589 $\backslash\mathrm{nSubset}\text{textnSubset}$
 20590 $\backslash\mathrm{Supset}\text{textSupset}$
 20591 $\backslash\mathrm{nSupset}\text{textnSupset}$
 20592 $\backslash\mathrm{Cap}\text{textCap}$

20593 \let\Cup\textCup
 20594 \let\pitchfork\textpitchfork
 20595 \let\lessdot\textlessdot
 20596 \let\gtrdot\textgtrdot
 20597 \let\lll\textlll
 20598 \let\ggg\textggg
 20599 \let\lesseqgtr\textlesseqgtr
 20600 \let\gtreqless\textgtreqless
 20601 \let\curlyeqprec\textcurlyeqprec
 20602 \let\ncurlyeqprec\textncurlyeqprec
 20603 \let\curlyeqsucc\textcurlyeqsucc
 20604 \let\ncurlyeqsucc\textncurlyeqsucc
 20605 \let\preccurlyeq\textpreccurlyeq
 20606 \let\nsucccurlyeq\textnsucccurlyeq
 20607 \let\sqsubseteq\textsqsubseteq
 20608 \let\sqsupseteq\textsqsupseteq
 20609 \let\sqsubsetneq\textsqsubsetneq
 20610 \let\sqsupsetneq\textsqsupsetneq
 20611 \let\lnsim\textlnsim
 20612 \let\gnsim\textgnsim
 20613 \let\precnsim\textprecnsim
 20614 \let\succnsim\textsuccnsim
 20615 \let\triangleleft\texttriangleleft
 20616 \let\triangleright\texttriangleright
 20617 \let\trianglelefteq\texttrianglelefteq
 20618 \let\trianglerighteq\texttrianglerighteq
 20619 \let\vdots\textvdots
 20620 \let\cdots\textcdots
 20621 \let\udots\textudots
 20622 \let\ddots\textddots
 20623 \let\barin\textbarin
 20624 \let\diameter\textdiameter
 20625 \let\backneg\textbackneg
 20626 \let\wasylounge\textwasylounge
 20627 \let\invbackneg\textinvbackneg
 20628 \let\clock\textclock
 20629 \let\ulcorner\textulcorner
 20630 \let\urcorner\texturcorner
 20631 \let\llcorner\textllcorner
 20632 \let\lrcorner\textlrcorner
 20633 \let\frown\textfrown
 20634 \let\smile\textsmile
 20635 \let\Keyboard\textKeyboard
 20636 \let\langle\textlangle
 20637 \let\rangle\textrangle
 20638 \let\APLinv\textAPLinv
 20639 \let\Tumbler\textTumbler
 20640 \let\notslash\textnotslash
 20641 \let\notbackslash\textnotbackslash
 20642 \let\boxbackslash\textboxbackslash
 20643 \let\APLleftarrowbox\textAPLleftarrowbox
 20644 \let\APLrightarrowbox\textAPLrightarrowbox
 20645 \let\APLuparrowbox\textAPLuparrowbox
 20646 \let\APLdownarrowbox\textAPLdownarrowbox
 20647 \let\APLinput\textAPLinput
 20648 \let\Request\textRequest
 20649 \let\Beam\textBeam

20650 \let\hexagon\texthexagon
 20651 \let\APLbox\textAPLbox
 20652 \let\ForwardToIndex\textForwardToIndex
 20653 \let\RewindToIndex\textRewindToIndex
 20654 \let\bbslash\textbbslash
 20655 \let\CircledA\textCircledA
 20656 \let\CleaningF\textCleaningF
 20657 \let\CleaningFF\textCleaningFF
 20658 \let\CleaningP\textCleaningP
 20659 \let\CleaningPP\textCleaningPP
 20660 \let\CuttingLine\textCuttingLine
 20661 \let\UParrow\textUParrow
 20662 \let\bigtriangleup\textbigtriangleup
 20663 \let\Forward\textForward
 20664 \let\triangleright\texttriangleright
 20665 \let\RHD\textRHD
 20666 \let\DOWNarrow\textDOWNarrow
 20667 \let\bigtriangledown\textbigtriangledown
 20668 \let\Rewind\textRewind
 20669 \let\triangleleft\texttriangleleft
 20670 \let\LHD\textLHD
 20671 \let\diamond\textdiamond
 20672 \let\lozenge\textlozenge
 20673 \let\LEFTCIRCLE\textLEFTCIRCLE
 20674 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 20675 \let\openbullet\textopenbullet
 20676 \let\boxbar\textboxbar
 20677 \let\bigcircle\textbigcircle
 20678 \let\Cloud\textCloud
 20679 \let\FiveStar\textFiveStar
 20680 \let\FiveStarOpen\textFiveStarOpen
 20681 \let\Phone\textPhone
 20682 \let\boxempty\textboxempty
 20683 \let\Checkedbox\textCheckedbox
 20684 \let\Crossedbox\textCrossedbox
 20685 \let\Coffeecup\textCoffeecup
 20686 \let\HandCuffLeft\textHandCuffLeft
 20687 \let\HandCuffRight\textHandCuffRight
 20688 \let\HandLeft\textHandLeft
 20689 \let\HandRight\textHandRight
 20690 \let\Radioactivity\textRadioactivity
 20691 \let\Biohazard\textBiohazard
 20692 \let\Ankh\textAnkh
 20693 \let\YinYang\textYinYang
 20694 \let\frownie\textfrownie
 20695 \let\smiley\textsmiley
 20696 \let\blacksmiley\textblacksmiley
 20697 \let\sun\textsun
 20698 \let\leftmoon\textleftmoon
 20699 \let\rightmoon\textrightmoon
 20700 \let\mercury\textmercury
 20701 \let\earth\textearth
 20702 \let\male\textmale
 20703 \let\jupiter\textjupiter
 20704 \let\saturn\textsaturn
 20705 \let\uranus\texturanus
 20706 \let\neptune\textneptune

20707 \let\pluto\textpluto
 20708 \let\aries\textaries
 20709 \let\taurus\texttaurus
 20710 \let\gemini\textgemini
 20711 \let\cancer\textcancer
 20712 \let\leo\textleo
 20713 \let\virgo\textvirgo
 20714 \let\libra\textlibra
 20715 \let\scorpio\textscorpio
 20716 \let\sagittarius\textsagittarius
 20717 \let\capricorn\textcapricorn
 20718 \let\aquarius\textaquarius
 20719 \let\pisces\textpisces
 20720 \let\quarternote\textquarternote
 20721 \let\twonotes\texttwonotes
 20722 \let\sixteenthnote\textsixteenthnote
 20723 \let\flat\textflat
 20724 \let\natural\textnatural
 20725 \let\sharp\textsharp
 20726 \let\recycle\textrecycle
 20727 \let\Wheelchair\textWheelchair
 20728 \let\Flag\textFlag
 20729 \let\MineSign\textMineSign
 20730 \let\ds\textds
 20731 \let\dsmedical\textdsmedical
 20732 \let\dsjuridical\textdsjuridical
 20733 \let\dschemical\textdschemical
 20734 \let\dsbiological\textdsbiological
 20735 \let\dscommercial\textdscommercial
 20736 \let\manstar\textmanstar
 20737 \let\danger\textdanger
 20738 \let\FemaleFemale\textFemaleFemale
 20739 \let\MaleMale\textMaleMale
 20740 \let\FemaleMale\textFemaleMale
 20741 \let\Hermaphrodite\textHermaphrodite
 20742 \let\Neutral\textNeutral
 20743 \let\hexstar\texthexstar
 20744 \let\SunCloud\textSunCloud
 20745 \let\Rain\textRain
 20746 \let\noway\textnoway
 20747 \let\Mountain\textMountain
 20748 \let\Tent\textTent
 20749 \let\ScissorRight\textScissorRight
 20750 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 20751 \let\ScissorHollowRight\textScissorHollowRight
 20752 \let\PhoneHandset\textPhoneHandset
 20753 \let\Tape\textTape
 20754 \let\Plane\textPlane
 20755 \let\Envelope\textEnvelope
 20756 \let\Peace\textPeace
 20757 \let\WritingHand\textWritingHand
 20758 \let\PencilRightDown\textPencilRightDown
 20759 \let\PencilRight\textPencilRight
 20760 \let\PencilRightUp\textPencilRightUp
 20761 \let\NibRight\textNibRight
 20762 \let\NibSolidRight\textNibSolidRight
 20763 \let\Checkmark\textCheckmark

20764 \let\CheckmarkBold\textCheckmarkBold
 20765 \let\XSolid\textXSolid
 20766 \let\XSolidBold\textXSolidBold
 20767 \let\XSolidBrush\textXSolidBrush
 20768 \let\PlusOutline\textPlusOutline
 20769 \let\Plus\textPlus
 20770 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 20771 \let\PlusCenterOpen\textPlusCenterOpen
 20772 \let\Cross\textCross
 20773 \let\CrossOpenShadow\textCrossOpenShadow
 20774 \let\CrossOutline\textCrossOutline
 20775 \let\CrossMaltese\textCrossMaltese
 20776 \let\DavidStar\textDavidStar
 20777 \let\FourAsterisk\textFourAsterisk
 20778 \let\JackStar\textJackStar
 20779 \let\JackStarBold\textJackStarBold
 20780 \let\ClowerTips\textClowerTips
 20781 \let\FourStar\textFourStar
 20782 \let\FourStarOpen\textFourStarOpen
 20783 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 20784 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 20785 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 20786 \let\FiveStarOutline\textFiveStarOutline
 20787 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 20788 \let\FiveStarConvex\textFiveStarConvex
 20789 \let\FiveStarShadow\textFiveStarShadow
 20790 \let\AsteriskBold\textAsteriskBold
 20791 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 20792 \let\EightStarTaper\textEightStarTaper
 20793 \let\EightStarConvex\textEightStarConvex
 20794 \let\SixStar\textSixStar
 20795 \let\EightStar\textEightStar
 20796 \let\EightStarBold\textEightStarBold
 20797 \let\TwelveStar\textTwelveStar
 20798 \let\SixteenStarLight\textSixteenStarLight
 20799 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 20800 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 20801 \let\Asterisk\textAsterisk
 20802 \let\SixFlowerAlternate\textSixFlowerAlternate
 20803 \let\FiveFlowerPetal\textFiveFlowerPetal
 20804 \let\FiveFlowerOpen\textFiveFlowerOpen
 20805 \let\EightFlowerPetal\textEightFlowerPetal
 20806 \let\SunshineOpenCircled\textSunshineOpenCircled
 20807 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 20808 \let\SnowflakeChevron\textSnowflakeChevron
 20809 \let\Snowflake\textSnowflake
 20810 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 20811 \let\Sparkle\textSparkle
 20812 \let\SparkleBold\textSparkleBold
 20813 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 20814 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 20815 \let\EightAsterisk\textEightAsterisk
 20816 \let\CircleShadow\textCircleShadow
 20817 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 20818 \let\SquareTopRight\textSquareTopRight
 20819 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 20820 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight

20821 `\let\DiamondSolid\textDiamondSolid`
 20822 `\let\RectangleThin\textRectangleThin`
 20823 `\let\Rectangle\textRectangle`
 20824 `\let\RectangleBold\textRectangleBold`
 20825 `\let\perp\textperp`
 20826 `\let\notperp\textnotperp`
 20827 `\let\veedot\textveedot`
 20828 `\let\wedgedot\textwedgedot`
 20829 `\let\leftspoon\textleftspoon`
 20830 `\let\lbrackdbl\textlbrackdbl`
 20831 `\let\rbrackdbl\textrbrackdbl`
 20832 `\let\circlearrowleft\textcirclearrowleft`
 20833 `\let\circlearrowright\textcirclearrowright`
 20834 `\let\longleftarrow\textlongleftarrow`
 20835 `\let\longrightarrow\textlongrightarrow`
 20836 `\let\longleftrightarrow\textlongleftrightarrow`
 20837 `\let\Longleftarrow\textLongleftarrow`
 20838 `\let\Longrightarrow\textLongrightarrow`
 20839 `\let\Longleftrightarrow\textLongleftrightarrow`
 20840 `\let\longmapsto\textlongmapsto`
 20841 `\let\Longmapsfrom\textLongmapsfrom`
 20842 `\let\Longmapsto\textLongmapsto`
 20843 `\let\nwsearrow\textnwsearrow`
 20844 `\let\neswarrow\textneswarrow`
 20845 `\let\hooknwarrow\texthooknwarrow`
 20846 `\let\rhooknearrow\texthooknearrow`
 20847 `\let\hooksearrow\texthooksearrow`
 20848 `\let\rhookswarrow\texthookswarrow`
 20849 `\let\leadsto\textleadsto`
 20850 `\let\rcurvearrowne\textrcurvearrowne`
 20851 `\let\lcurvearrowse\textlcurvearrowse`
 20852 `\let\lcurvearrowsw\textlcurvearrowsw`
 20853 `\let\rcurvearrowse\textrcurvearrowse`
 20854 `\let\lcurvearrowdown\textlcurvearrowdown`
 20855 `\let\rcurvearrowdown\textrcurvearrowdown`
 20856 `\let\rcurvearrowleft\textrcurvearrowleft`
 20857 `\let\rcurvearrowright\textrcurvearrowright`
 20858 `\let\leftrightharpoon\textleftrightharpoon`
 20859 `\let\rightleftharpoon\textrightleftharpoon`
 20860 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
 20861 `\let\updownharpoonleftright\textupdownharpoonleftright`
 20862 `\let\leftleftharpoons\textleftleftharpoons`
 20863 `\let\upupharpoons\textupupharpoons`
 20864 `\let\righttrightharpoons\textrighttrightharpoons`
 20865 `\let\downdownharpoons\textdowndownharpoons`
 20866 `\let\leftbarharpoon\textleftbarharpoon`
 20867 `\let\barleftharpoon\textbarleftharpoon`
 20868 `\let\rightbarharpoon\textrightbarharpoon`
 20869 `\let\barriightharpoon\textbarriightharpoon`
 20870 `\let\updownharpoons\textupdownharpoons`
 20871 `\let\downupharpoons\textdownupharpoons`
 20872 `\let\moo\textmoo`
 20873 `\let\llparenthesis\textllparenthesis`
 20874 `\let\rrparenthesis\textrrparenthesis`
 20875 `\let\invdiameter\textinvdiameter`
 20876 `\let\obar\textobar`
 20877 `\let\obslash\textobslash`

20878 $\backslash\text{obot}\backslash\text{textobot}$
 20879 $\backslash\text{let}\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 20880 $\backslash\text{let}\backslash\text{olessthan}\backslash\text{textolessthan}$
 20881 $\backslash\text{let}\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 20882 $\backslash\text{let}\backslash\text{boxslash}\backslash\text{textboxslash}$
 20883 $\backslash\text{let}\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 20884 $\backslash\text{let}\backslash\text{boxast}\backslash\text{textboxast}$
 20885 $\backslash\text{let}\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 20886 $\backslash\text{let}\backslash\text{boxbox}\backslash\text{textboxbox}$
 20887 $\backslash\text{let}\backslash\text{Valve}\backslash\text{textValve}$
 20888 $\backslash\text{let}\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 20889 $\backslash\text{let}\backslash\text{shuffle}\backslash\text{textshuffle}$
 20890 $\backslash\text{let}\backslash\text{uplus}\backslash\text{textuplus}$
 20891 $\backslash\text{let}\backslash\text{bigdoublewedge}\backslash\text{textbigdoublewedge}$
 20892 $\backslash\text{let}\backslash\text{bigdoublevee}\backslash\text{textbigdoublevee}$
 20893 $\backslash\text{let}\backslash\text{Join}\backslash\text{textJoin}$
 20894 $\backslash\text{let}\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 20895 $\backslash\text{let}\backslash\text{circplus}\backslash\text{textcircplus}$
 20896 $\backslash\text{let}\backslash\text{minusdot}\backslash\text{textminusdot}$
 20897 $\backslash\text{let}\backslash\text{dotimes}\backslash\text{textdotimes}$
 20898 $\backslash\text{let}\backslash\text{dtimes}\backslash\text{textdtimes}$
 20899 $\backslash\text{let}\backslash\text{odiv}\backslash\text{textodiv}$
 20900 $\backslash\text{let}\backslash\text{invneg}\backslash\text{textinvneg}$
 20901 $\backslash\text{let}\backslash\text{sqdoublecap}\backslash\text{textsqdoublecap}$
 20902 $\backslash\text{let}\backslash\text{capdot}\backslash\text{textcapdot}$
 20903 $\backslash\text{let}\backslash\text{sqdoublecup}\backslash\text{textsqdoublecup}$
 20904 $\backslash\text{let}\backslash\text{doublewedge}\backslash\text{textdoublewedge}$
 20905 $\backslash\text{let}\backslash\text{doublevee}\backslash\text{textdoublevee}$
 20906 $\backslash\text{let}\backslash\text{doublebarwedge}\backslash\text{textdoublebarwedge}$
 20907 $\backslash\text{let}\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 20908 $\backslash\text{let}\backslash\text{eqdot}\backslash\text{texreqdot}$
 20909 $\backslash\text{let}\backslash\text{neqdot}\backslash\text{textneqdot}$
 20910 $\backslash\text{let}\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 20911 $\backslash\text{let}\backslash\text{leqslant}\backslash\text{textleqslant}$
 20912 $\backslash\text{let}\backslash\text{nleqslant}\backslash\text{textnleqslant}$
 20913 $\backslash\text{let}\backslash\text{geqslant}\backslash\text{textgeqslant}$
 20914 $\backslash\text{let}\backslash\text{ngeqslant}\backslash\text{textngeqslant}$
 20915 $\backslash\text{let}\backslash\text{lessapprox}\backslash\text{textlessapprox}$
 20916 $\backslash\text{let}\backslash\text{nlessapprox}\backslash\text{textnlessapprox}$
 20917 $\backslash\text{let}\backslash\text{gtrapprox}\backslash\text{textgtrapprox}$
 20918 $\backslash\text{let}\backslash\text{ngtrapprox}\backslash\text{textngtrapprox}$
 20919 $\backslash\text{let}\backslash\text{lneq}\backslash\text{textlneq}$
 20920 $\backslash\text{let}\backslash\text{gneq}\backslash\text{textgneq}$
 20921 $\backslash\text{let}\backslash\text{lnapprox}\backslash\text{textlnapprox}$
 20922 $\backslash\text{let}\backslash\text{gnapprox}\backslash\text{textgnapprox}$
 20923 $\backslash\text{let}\backslash\text{lesseqgtr}\backslash\text{textlesseqgtr}$
 20924 $\backslash\text{let}\backslash\text{gtreqqlless}\backslash\text{textgtreqqlless}$
 20925 $\backslash\text{let}\backslash\text{eqslantless}\backslash\text{texreqslantless}$
 20926 $\backslash\text{let}\backslash\text{eqslantgtr}\backslash\text{texreqslantgtr}$
 20927 $\backslash\text{let}\backslash\text{leftslice}\backslash\text{textleftslice}$
 20928 $\backslash\text{let}\backslash\text{rightslice}\backslash\text{textrightslice}$
 20929 $\backslash\text{let}\backslash\text{preceq}\backslash\text{textpreceq}$
 20930 $\backslash\text{let}\backslash\text{npreceq}\backslash\text{textnpreceq}$
 20931 $\backslash\text{let}\backslash\text{succeq}\backslash\text{textsucceq}$
 20932 $\backslash\text{let}\backslash\text{nsucceq}\backslash\text{textnsucceq}$
 20933 $\backslash\text{let}\backslash\text{precneq}\backslash\text{textprecneq}$
 20934 $\backslash\text{let}\backslash\text{succneq}\backslash\text{textsuccneq}$

20935 \let\preceqq\textpreceqq
 20936 \let\npreceqq\textnpreceqq
 20937 \let\succeqq\textsucceqq
 20938 \let\nsucceqq\textnsucceqq
 20939 \let\precneqq\textprecneqq
 20940 \let\succneqq\textsuccneqq
 20941 \let\precapprox\textprecapprox
 20942 \let\nprecapprox\textnprecapprox
 20943 \let\succapprox\textsuccapprox
 20944 \let\nsuccapprox\textnsuccapprox
 20945 \let\precnapprox\textprecnapprox
 20946 \let\succnapprox\textsuccnapprox
 20947 \let\subseteqq\textsubseteqq
 20948 \let\nsubseteqq\textnsubseteqq
 20949 \let\supseteqq\textsupseteqq
 20950 \let\nsupseteqq\textnsupseteqq
 20951 \let\dashV\textdashV
 20952 \let\ndashV\textndashV
 20953 \let\Dashv\textDashv
 20954 \let\ndashv\textndashv
 20955 \let\DashV\textDashV
 20956 \let\ndashV\textndashV
 20957 \let\downmodels\textdownmodels
 20958 \let\ndownmodels\textndownmodels
 20959 \let\upmodels\textupmodels
 20960 \let\nupmodels\textnupmodels
 20961 \let\upspoon\textupspoon
 20962 \let\interleave\textinterleave
 20963 \let\slash\textslash
 20964 \let\pentagon\textpentagon
 20965 \let\varhexagon\textvarhexagon
 20966 \let\jinferior\textjinferior
 20967 \let\slashdiv\textslashdiv
 20968 \let\fivedots\textfivedots
 20969 \let\oo\textoo
 20970 \let\GaPa\textGaPa
 20971 \let\HaPa\textHaPa
 20972 \let\ViPa\textViPa
 20973 \let\AcPa\textAcPa
 20974 \let\SePa\textSePa
 20975 \let\ZwPa\textZwPa
 20976 \let\fullnote\textfullnote
 20977 \let\halfnote\texthalfnote
 20978 \let\Vier\textVier
 20979 \let\Acht\textAcht
 20980 \let\Sech\textSech
 20981 \let\Zwdr\textZwdr
 20982 \let\Mundus\textMundus
 20983 \let\Moon\textMoon
 20984 \let\ManFace\textManFace
 20985 \let\WomanFace\textWomanFace
 20986 \let\Fax\textFax
 20987 \let\Fire\textFire
 20988 \let\Bicycle\textBicycle
 20989 \let\Gentsroom\textGentsroom
 20990 \let\Ladiesroom\textLadiesroom
 20991 \let\ccnc\textccnc

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20992 \let\ccsa\textccsa
20993 \let\Info\textInfo
20994 \let\CESign\textCESign
20995 \let\neg\textneg
20996 \let\times\texttimes
20997 \let\div\textdiv
20998 \let\pm\textpm
20999 \let\cdot\textcdot
21000 }% \psdmapshortnames
21001 \newcommand*{\psdaliasnames}{%
21002 \let\epsdice\HyPsd@DieFace
21003 \let\fcdice\HyPsd@DieFace
21004 \let\MoonPha\HyPsd@MoonPha
21005 \let\mathdollar\textdollar
21006 \let\EyesDollar\textdollar
21007 \let\binampersand\textampersand
21008 \let\with\textampersand
21009 \let\mathunderscore\textunderscore
21010 \let\textvertline\textbar
21011 \let\mathsterling\textsterling
21012 \let\pounds\textsterling
21013 \let\brokenvert\textbrokenbar
21014 \let\mathsection\textsection
21015 \let\S\textsection
21016 \let\mathparagraph\textparagraph
21017 \let\MultiplicationDot\textperiodcentered
21018 \let\Squaredot\textperiodcentered
21019 \let\var times\textmultiply
21020 \let\MVMultiplication\textmultiply
21021 \let\eth\dh
21022 \let\crossd\textcrd
21023 \let\textbard\textcrd
21024 \let\bard\textcrd
21025 \let\textcrh\texthbar
21026 \let\crossh\texthbar
21027 \let\planck\texthbar
21028 \let\eng\ng
21029 \let\engma\ng
21030 \let\crossb\textcrb
21031 \let\textbarb\textcrb
21032 \let\barb\textcrb
21033 \let\Florin\textflorin
21034 \let\hv\texthvlig
21035 \let\hausak\texthtk
21036 \let\crossnilambda\textcrlambda
21037 \let\barlambda\textcrlambda
21038 \let\lambdabar\textcrlambda
21039 \let\lambdaslash\textcrlambda
21040 \let\textnrleg\textPUnrleg
21041 \let\textpipevar\textpipe
21042 \let\textdoublepipevar\textdoublepipe
21043 \let\textdoublebarpipevar\textdoublebarpipe
21044 \let\textcrg\textgslash
21045 \let\textdblig\textPUdblig
21046 \let\textqplig\textPUqplig
21047 \let\textcentoldstyle\textslashc
21048 \let\textbarc\textslashc

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21049 \let\inva\textturna
 21050 \let\vara\textscripta
 21051 \let\invscripta\textturnscripta
 21052 \let\rotvara\textturnscripta
 21053 \let\hookb\texthtb
 21054 \let\hausab\texthtb
 21055 \let\varopeno\textopeno
 21056 \let\curlyc\textctc
 21057 \let\taild\textrtaild
 21058 \let\hookd\texthtd
 21059 \let\hausad\texthtd
 21060 \let\er\textrhookschwa
 21061 \let\epsi\textniepsilon
 21062 \let\hookrevepsilon\texthookrevepsilon
 21063 \let\closedrevepsilon\textcloserevepsilon
 21064 \let\barj\textbardotlessj
 21065 \let\hookg\texthtg
 21066 \let\varg\textscriptg
 21067 \let\vod\textipagamma
 21068 \let\invh\textturnh
 21069 \let\udesc\textturnh
 21070 \let\hookh\texthth
 21071 \let\voicedh\texthth
 21072 \let\hookheng\texththeng
 21073 \let\ibar\textbari
 21074 \let\vari\textniota
 21075 \let\tildel\textltilde
 21076 \let\latfric\textbeltl
 21077 \let\tail\textrtail
 21078 \let\lz\textlyoghlig
 21079 \let\invm\textturnm
 21080 \let\rotm\textturnm
 21081 \let\legm\textturnmrleg
 21082 \let\labdentalnas\textltailm
 21083 \let\emgma\textltailm
 21084 \let\nj\textltailn
 21085 \let\enya\textltailn
 21086 \let\tailn\textrtailn
 21087 \let\closedniomega\textcloseomega
 21088 \let\varomega\textcloseomega
 21089 \let\invr\textturnr
 21090 \let\rotr\textturnr
 21091 \let\invlegr\textturnlonglegr
 21092 \let\tailinvr\textturnrrtail
 21093 \let\legr\textlonglegr
 21094 \let\tailr\textrtailr
 21095 \let\flapr\textfishhookr
 21096 \let\flap\textfishhookr
 21097 \let\tails\textrtails
 21098 \let\curlyesh\textctesh
 21099 \let\clickt\textturnt
 21100 \let\tailt\textrtailt
 21101 \let\ubar\textbaru
 21102 \let\rotOmega\textniupsilon
 21103 \let\invv\textturnv
 21104 \let\pwedge\textturnv
 21105 \let\invw\textturnw

21106 \let\rotw\textturnw
 21107 \let\invy\textturny
 21108 \let\roty\textturny
 21109 \let\tailz\texttrtailz
 21110 \let\curlyz\textctz
 21111 \let\curlyyogh\textctyogh
 21112 \let\ejective\textglotstop
 21113 \let\glottal\textglotstop
 21114 \let\reject\textrevglotstop
 21115 \let\clickc\textstretchc
 21116 \let\textstretchcvar\textstretchc
 21117 \let\clickb\textbullseye
 21118 \let\textObullseye\textbullseye
 21119 \let\textctjvar\textctj
 21120 \let\textturnsck\textturnk
 21121 \let\dz\textdzlig
 21122 \let\tesh\textteshlig
 21123 \let\digamma\textdigammagreek
 21124 \let\hardsign\cyrhrdsn
 21125 \let\softsign\cyrsoftsn
 21126 \let\hebsin\hebshin
 21127 \let\textsck\textPUscK
 21128 \let\textscm\textPUscm
 21129 \let\textscp\textPUscp
 21130 \let\textrevscr\textPUrevscr
 21131 \let\textrhoKa\textPURhooka
 21132 \let\textrhoKe\textPURhooke
 21133 \let\textrhoKepsilon\textPURhookepsilon
 21134 \let\textrhoKopeno\textPURhookopeno
 21135 \let\textdoublevertline\textbardbl
 21136 \let\dag\textdagger
 21137 \let\ddagger\textdaggerdbl
 21138 \let\ddag\textdaggerdbl
 21139 \let\mathellipsis\textellipsis
 21140 \let\EurDig\texteuro
 21141 \let\EURdig\texteuro
 21142 \let\EurHv\texteuro
 21143 \let\EURhv\texteuro
 21144 \let\EurCr\texteuro
 21145 \let\EURcr\texteuro
 21146 \let\EurTm\texteuro
 21147 \let\EURtm\texteuro
 21148 \let\Eur\texteuro
 21149 \let\Denarius\textDeleatur
 21150 \let\agemO\textmho
 21151 \let\EstimatedSign\textestimated
 21152 \let\Ecommerce\textestimated
 21153 \let\bindnasrepma\textinvamp
 21154 \let\parr\textinvamp
 21155 \let\MVRightArrow\textrightarrow
 21156 \let\MVRightarrow\textrightarrow
 21157 \let\MVArrowDown\textdownarrow
 21158 \let\Force\textdownarrow
 21159 \let\textglobrise\textnearrow
 21160 \let\textglobfall\textsearrow
 21161 \let\Lightning\textlightning
 21162 \let\Conclusion\textrightarrow

21163 \let\dashedleftarrow\textdashleftarrow
 21164 \let\dashedrightarrow\textdashrightarrow
 21165 \let\varnothing\textemptyset
 21166 \let\owns\textni
 21167 \let\notni\textnotowner
 21168 \let\varprop\textpropto
 21169 \let\varangle\textsphericalangle
 21170 \let\Anglesign\textsphericalangle
 21171 \let\AngleSign\textsphericalangle
 21172 \let\notdivides\textnmid
 21173 \let\varowedge\textowedge
 21174 \let\varovee\textovee
 21175 \let\varint\textint
 21176 \let\varoint\textoint
 21177 \let\downtherefore\textbecause
 21178 \let\textdotdiv\textdotminus
 21179 \let\AC\textsim
 21180 \let\wreath\textwr
 21181 \let\nthickapprox\textnapprox
 21182 \let\VHF\texttriplesim
 21183 \let\notasymp\textnasymp
 21184 \let\Doteq\textdoteqdot
 21185 \let\corresponds\texthateq
 21186 \let\Corresponds\texthateq
 21187 \let\nequal\textneq
 21188 \let\Congruent\textequiv
 21189 \let\NotCongruent\textnequiv
 21190 \let\notequiv\textnequiv
 21191 \let\LessOrEqual\textleq
 21192 \let\LargerOrEqual\textgeq
 21193 \let\apprle\textlesssim
 21194 \let\apprge\textgtrsim
 21195 \let\varoplus\textoplus
 21196 \let\varominus\textominus
 21197 \let\varotimes\textotimes
 21198 \let\varoslash\textoslash
 21199 \let\varodot\textodot
 21200 \let\ocirc\textcircledcirc
 21201 \let\varocircle\textcircledcirc
 21202 \let\varoast\textcircledast
 21203 \let\oasterisk\textcircledast
 21204 \let\rightvdash\textvdash
 21205 \let\leftvdash\textdashv
 21206 \let\nleftvdash\textndashv
 21207 \let\downvdash\texttop
 21208 \let\upvdash\textbot
 21209 \let\nperp\textnupvdash
 21210 \let\models\textvDash
 21211 \let\rightmodels\textvDash
 21212 \let\rightVdash\textVdash
 21213 \let\rightModels\textVDash
 21214 \let\nrightvdash\textnvdash
 21215 \let\nrightmodels\textnvDash
 21216 \let\nmodels\textnvDash
 21217 \let\nrightVdash\textnVdash
 21218 \let\nrightModels\textnVDash
 21219 \let\lessclosed\textlhd

21220 \let\gtrclosed\texttrhd
 21221 \let\leqclosed\textunlhd
 21222 \let\trianglelefteq\textunlhd
 21223 \let\geqclosed\textunrhd
 21224 \let\trianglerighteq\textunrhd
 21225 \let\Bowtie\textbowtie
 21226 \let\varcurlyvee\textcurlyvee
 21227 \let\varcurlywedge\textcurlywedge
 21228 \let\doublecap\textCap
 21229 \let\doublecup\textCup
 21230 \let\varsqsubsetneq\textsqsubsetneq
 21231 \let\varsqsupsetneq\textsqsupsetneq
 21232 \let\nlessclosed\textntriangleleft
 21233 \let\ngtrclosed\textntriangleright
 21234 \let\Clocklogo\textclock
 21235 \let\ClockLogo\textclock
 21236 \let\baro\textstmaryrdbaro
 21237 \let\varparallelinv\textbbslash
 21238 \let\CleaningA\textCircledA
 21239 \let\Kutline\textCuttingLine
 21240 \let\CutLine\textCuttingLine
 21241 \let\Cutline\textCuttingLine
 21242 \let\MoveUp\textUParrow
 21243 \let\APLup\textbigtriangleup
 21244 \let\Bleech\textbigtriangleup
 21245 \let\MoveDown\textDOWNarrow
 21246 \let\APLdown\textbigtriangledown
 21247 \let\Diamond\textdiamond
 21248 \let\varbigcirc\textbigcircle
 21249 \let\Telefon\textPhone
 21250 \let\Box\textboxempty
 21251 \let\CheckedBox\textCheckedbox
 21252 \let\XBox\textCrossedbox
 21253 \let\CrossedBox\textCrossedbox
 21254 \let\rightpointleft\textHandLeft
 21255 \let\leftpointright\textHandRight
 21256 \let\PointingHand\textHandRight
 21257 \let\Pointinghand\textHandRight
 21258 \let\Radiation\textRadioactivity
 21259 \let\Yinyang\textYinYang
 21260 \let\YingYang\textYinYang
 21261 \let\Yingyang\textYinYang
 21262 \let\Frowny\textfrownie
 21263 \let\Smiley\textsmiley
 21264 \let\Sun\textsun
 21265 \let\Mercury\textmercury
 21266 \let\textfemale\textPUfemale
 21267 \let\female\textPUfemale
 21268 \let\venus\textPUfemale
 21269 \let\Venus\textPUfemale
 21270 \let\Female\textPUfemale
 21271 \let\Earth\textearth
 21272 \let\mars\textmale
 21273 \let\Mars\textmale
 21274 \let\Male\textmale
 21275 \let\Jupiter\textjupiter
 21276 \let\Saturn\textsaturn

21277 \let\Uranus\texturanus
 21278 \let\Neptune\textneptune
 21279 \let\Pluto\textpluto
 21280 \let\Aries\textaries
 21281 \let\Taurus\texttaurus
 21282 \let\Gemini\textgemini
 21283 \let\Cancer\textcancer
 21284 \let\Leo\textleo
 21285 \let\Virgo\textvirgo
 21286 \let\Libra\textlibra
 21287 \let\Scorpio\textscorpio
 21288 \let\Sagittarius\textsagittarius
 21289 \let\Capricorn\textcapricorn
 21290 \let\Aquarius\textaquarius
 21291 \let\Pisces\textpisces
 21292 \let\spadesuit\textspadesuitblack
 21293 \let\Heart\textheartsuitwhite
 21294 \let\heartsuit\textheartsuitwhite
 21295 \let\diamondsuit\textdiamondsuitwhite
 21296 \let\clubsuit\textclubsuitblack
 21297 \let\eighthnote\textmusicalnote
 21298 \let\Recycling\textrecycle
 21299 \let\VarFlag\textFlag
 21300 \let\textxswup\textdsmilitary
 21301 \let\textuncrfemale\textPUuncrfemale
 21302 \let\Football\textSoccerBall
 21303 \let\CutLeft\textScissorRightBrokenBottom
 21304 \let\Cutright\textScissorRightBrokenBottom
 21305 \let\RightScissors\textScissorRight
 21306 \let\Leftscissors\textScissorRight
 21307 \let\Letter\textEnvelope
 21308 \let\Writinghand\textWritingHand
 21309 \let\checkmark\textCheckmark
 21310 \let\davidstar\textDavidStar
 21311 \let\llbracket\textlbrackdbl
 21312 \let\rrbracket\textrrbrackdbl
 21313 \let\RightTorque\textlcurvearrowdown
 21314 \let\Righttorque\textlcurvearrowdown
 21315 \let\LeftTorque\textrcurvearrowdown
 21316 \let\Lefttorque\textrcurvearrowdown
 21317 \let\textvarobar\textobar
 21318 \let\circledbslash\textobslash
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21336 \let\textlhookfour\textPUlhookfour
21337 \let\textscf\textPUscf
21338 \let\textaoig\textPUaoig
21339 \let\Ganz\textfullnote
21340 \let\Halb\texthalfnote
21341 \let\Womanface\textWomanFace
21342 \let\Faxmachine\textFax
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21344 }% \psdaliasnames
21345 </psdextra>

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